2012 Groundwater Monitoring Report
Martin State Airport
701 Wilson Point Road
Middle River, Maryland

Prepared for:

Lockheed Martin Corporation

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TABLE OF CONTENTS

Section **Page**

ACRONYMS iv

1 INTRODUCTION 1-1

2 SITE OVERVIEW 2-1

2.1 MARTIN STATE AIRPORT BACKGROUND 2-1

2.2 REGIONAL GEOLOGIC AND HYDROGEOLOGIC CONDITIONS 2-1

2.3 MARTIN STATE AIRPORT SUBSURFACE CONDITIONS 2-2

2.4 DESCRIPTION OF HISTORICAL AREAS OF CONCERN 2-4

2.5 LOCKHEED MARTIN INVESTIGATIONS 2-5

3 INVESTIGATION APPROACH AND METHODOLOGY 3-1

3.1 SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS 3-1

3.2 GROUNDWATER SAMPLING 3-1

3.3 LABORATORY ANALYSES 3-3

3.4 DOCUMENTATION 3-4

3.5 EQUIPMENT DECONTAMINATION 3-5

3.6 WASTE MANAGEMENT 3-5

3.7 GENERAL SAMPLING PROCEDURES, NOMENCLATURE, AND HANDLING 3-5

3.8 DATA VALIDATION 3-6

4 RESULTS 4-1

4.1 GROUNDWATER LEVEL DATA 4-1

4.2 GROUNDWATER CHEMICAL DATA 4-2

4.2.1 VOCs 4-3

4.2.2 1,4-Dioxane 4-13

4.2.3 Metals 4-14

4.2.4 Petroleum Hydrocarbons 4-15

TABLE OF CONTENTS (continued)

Section **Page**

4.2.5 Perchlorate, Haloacetic Acids, and RDX 4-15

4.2.6 Radium-228 and Total Radium 4-16

5 SUMMARY 5-1

6 REFERENCES 6-1

APPENDICES

APPENDIX A—GROUNDWATER LEVEL RECORD SHEETS

APPENDIX B—MONITORING WELL PURGING AND SAMPLING RECORDS

APPENDIX C—ANALYTICAL DATA TABLE

APPENDIX D—DATA VALIDATION REPORTS WITH CHAIN OF CUSTODY FORMS (ON CD)

APPENDIX E—WASTE PROFILE AND DISPOSAL RECORDS

LIST OF FIGURES

Page

Figure 1-1 Martin State Airport and Dump Road Area Location Map 1-3

Figure 2-1 Martin State Airport and Surrounding Features 2-22

Figure 2-2 Geologic Fence Diagram of the Dump Road Area 2-23

Figure 2-3 Areas of Concern, Dump Road and Runway Area 2-24

Figure 2-4 Groundwater Monitoring Well Locations, 1994–2003 2-25

Figure 2-5 Groundwater Monitoring Well Locations 2-26

Figure 3-1 Groundwater Monitoring Well Sampling Locations, 2012 3-12

Figure 4-1 Groundwater Elevation Contours—Upper Surficial Aquifer Wells, April 2012 4-83

Figure 4-2 Groundwater Elevation Contours—Intermediate Surficial Aquifer Wells, April 2012 4-84

Figure 4-3 Groundwater Elevation Contours—Lower Surficial Aquifer Wells, April 2012 4-85

Figure 4-4 Groundwater Elevation Contours—Deep Confined Aquifer Wells, April 2012 4-86

TABLE OF CONTENTS (continued)

LIST OF FIGURES (continued)

Page

Figure 4-5 Trichloroethene, Cis-1,2-Dichloroethene and Vinyl Chloride Detected in Groundwater—Upper Surficial Aquifer, 2012 4-87

Figure 4-6 Trichloroethene, Cis-1,2-Dichloroethene and Vinyl Chloride Detected in Groundwater—Intermediate Surficial Aquifer, 2012 4-88

Figure 4-7 Trichloroethene, Cis-1,2-Dichloroethene and Vinyl Chloride Detected in Groundwater—Lower Surficial and Deep Confined Aquifers, 2012 4-89

Figure 4-8 Benzene Detected in Groundwater—Surficial and Deep Confined Aquifers, 2012 4-90

Figure 4-9 Time Series Plots of Major Chlorinated VOCs—Source Area Wells DMW-7S and MW-5 4-91

Figure 4-10 Time Series Plots of Major Chlorinated VOCs—Source Area Wells DMW-7I and DMW-7D 4-92

Figure 4-11 Time Series Plots of Major Chlorinated VOCs—Source Area Wells DMW-9S, DMW-9I, and DMW-9D 4-93

Figure 4-12 Time Series Plots of Major Chlorinated VOCs—Source Area Wells DMW-11S and DMW-1A 4-94

Figure 4-13 Time Series Plots of Major Chlorinated VOCs—Source Area Wells DMW-5S, DMW-4I, and DMW-4D 4-95

Figure 4-14 Time Series Plots of Major Chlorinated VOCs—Source Area Wells DMW-3S and DMW-3I 4-96

Figure 4-15 1,4-Dioxane Detected in Groundwater—Surficial and Deep Confined Aquifers, 2012 4-97

Figure 4-16 Cadmium, Nickel, and Vanadium Exceedances in Groundwater—Surficial and Deep Confined Aquifers, 2012 4-98

Figure 4-17 Petroleum Hydrocarbon Exceedances in Groundwater—Upper Surficial Aquifer, 2012 4-99

TABLE OF CONTENTS (continued)

LIST OF TABLES

Page

Table 3-1 List of Sampled Groundwater Monitoring Wells and Chemical Analyses, April-May 2012 3-9

Table 4-1 Groundwater Levels and Elevations, April 16, 2012 4-18

Table 4-2 Statistical Summary of Groundwater Sampling Results, 2012 4-21

Table 4-3 Analytes Detected in Groundwater Samples, 2012 4-24

Table 4-4 Volatile Organic Compounds, Degradation Products, and Natural Attenuation Parameters, 2012 4-76

Table 4-5 Results of Low Flow and Passive Diffusion Bag Samples, MW-4 and MW-5 4-79

Table 4-6 Metals Exceeding Maryland Groundwater Standards, 2012 4-81

ACRONYMS

bgs	below ground surface
BTEX	benzene, toluene, ethylbenzene, and xylenes
CAH(s)	chlorinated aliphatic hydrocarbon(s)
CD	compact disc
cis-1,2-DCE	*cis*-1,2-dichloroethene
COC	chain of custody
COPC	chemical(s) of potential concern
cVOCs	chlorinated volatile organic compounds
DCE	dichloroethene
DO	dissolved oxygen
DPT	direct push technology
DRA	Dump Road Area
DRO	diesel-range organics
ECD	electron capture device
ERA	ecological risk assessment
GRO	gasoline-range organics
HHRA	human health risk assessment
IDW	investigation derived waste
Lockheed Martin	Lockheed Martin Corporation
MAA	Maryland Aviation Administration
MCL	maximum contaminant level
MDANG	Maryland Air National Guard
MDE	Maryland Department of the Environment
MES	Maryland Environmental Service
µg/L	microgram(s) per liter
µg/kg	microgram(s) per kilogram
mg/kg	milligram(s) per kilogram
mg/L	milligram(s) per liter (i.e., parts per million)
MIP	membrane interface probe
MIP/CPT	membrane-interface probe/cone penetrometer tests
mL/min	milliliter(s) per minute
NAA	natural attenuation assessment

MDANG	Maryland Air National Guard
MSA	Martin State Airport
msl	mean sea level
NTU	nephelometric turbidity unit
ORP	oxidation reduction potential
PA	preliminary assessment
PAH	polycyclic aromatic hydrocarbon
PCBs	polychlorinated biphenyls
pCi/L	picocurie(s) per liter
PDBs	passive diffusion bags
PPE	personal protective equipment
RDX	cyclotrimethylene trinitramine (also known as Royal Demolition Explosive)
RI	remedial investigation
RPD	relative percent difference
SVOC	semivolatile organic compound
Tetra Tech	Tetra Tech, Inc.
TB	trip blank
TCE	trichloroethene
TIC	tentatively identified compound
TPH	total petroleum hydrocarbon
USDOT	U.S. Department of Transportation
USEPA	U.S. Environmental Protection Agency
VC	vinyl chloride
VOC	volatile organic compound

Section 1
Introduction

This report summarizes groundwater sampling procedures and chemical results for the 2012 sampling at the Dump Road Area (DRA) of Martin State Airport (MSA) in Middle River, Maryland. Figure 1-1 shows the locations of Martin State Airport and the Dump Road Area, where the monitoring wells sampled are located. Tetra Tech, Inc. (Tetra Tech) prepared this report on behalf of Lockheed Martin Corporation (Lockheed Martin) in accordance with the *Martin State Airport 2012 Groundwater Monitoring Work Plan* (Tetra Tech, Inc., 2012a). Sampling objectives are to:

- provide a current round of groundwater data for selected monitoring wells
- better understand the nature and extent of contamination in groundwater
- evaluate time trends of on-site groundwater plumes
- evaluate the natural attenuation of the chemicals of concern in groundwater at Martin State Airport
- evaluate interaction between shallow groundwater and Frog Mortar Creek
- provide information to update the modeling of shallow groundwater flow patterns and discharge to Frog Mortar Creek
- address the Maryland Department of Environment's (MDE's) request for multi-level sampling of selected wells with long screen intervals
- compare low-flow sampling results and those obtained using passive diffusion bags (PDBs) that could be employed in future sampling efforts

These data, in conjunction with previously collected site data, will update the numerical modeling of shallow groundwater flow patterns and subsequent discharge to Frog Mortar Creek, and to provide the scientific and engineering basis to select and implement a cost effective and state-approved site remedial alternative.

Groundwater samples were chemically analyzed for volatile organic compounds (VOCs), 1,4-dioxane, total and dissolved metals, and perchlorate (a propellant constituent). Selected groundwater samples were also analyzed for total petroleum hydrocarbon (TPH) diesel-range organics (DRO), TPH gasoline-range organics (GRO), radium-228, total radium, haloacetic acids, cyclotrimethylene trinitramine (also known as Royal Demolition Explosive [RDX]), and natural attenuation assessment (NAA) parameters. The report below is organized as follows:

Section 2—Site Overview: Briefly describes site and subsurface conditions observed in the field during previous investigations, including regional and site-specific geology and hydrogeology, as determined from site soil borings and available scientific literature.

Section 3—Investigation Approach and Methodology: Presents the technical approach to the groundwater monitoring and describes the field methodology employed for the study.

Section 4—Results: Presents the investigation results.

Section 5—Summary: Summarizes the investigation findings.

Section 6—References: Cites references used to compile this report.

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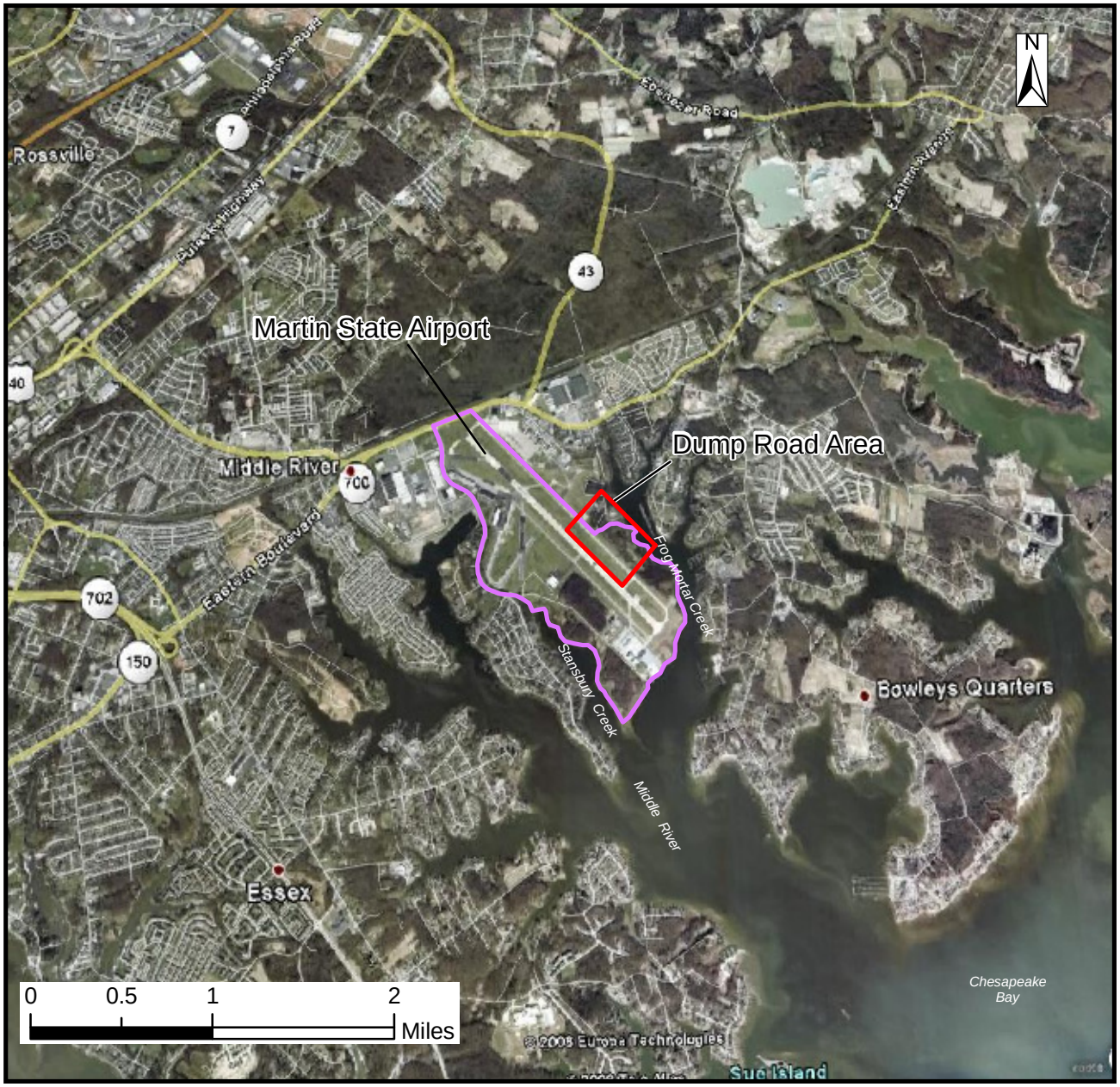

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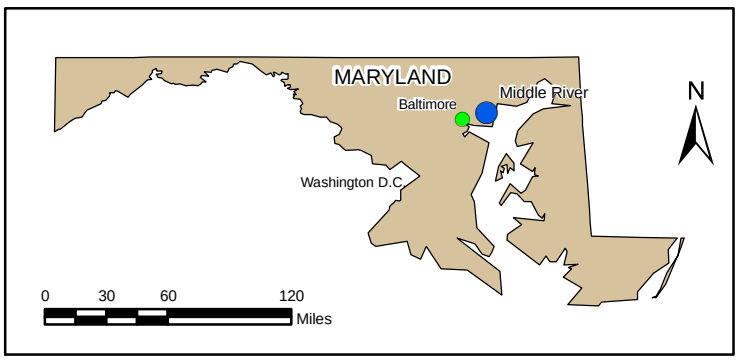

FIGURE 1-1

MARTIN STATE AIRPORT AND DUMP ROAD AREA LOCATION MAP

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

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Section 2
Site Overview

2.1 MARTIN STATE AIRPORT BACKGROUND

Martin State Airport (MSA) is at 701 Wilson Point Road in Middle River, Maryland. It is bounded by Frog Mortar Creek to the east and Stansbury Creek to the west (Figure 2-1). Both creeks join Chesapeake Bay south of the airport. The Dump Road Area (DRA) under investigation is in the southeastern portion of MSA, bounded by Frog Mortar Creek to the east and the main airport runway to the west.

Environmental investigations of MSA began in the mid-1980s, when the Maryland Department of the Environment (MDE) conducted site inspections related to stored drums and a reported chemical dump. In 1989, MDE conducted a preliminary assessment (PA) of MSA that identified fill areas and ponds, the latter of which were reportedly used to dispose of spent battery acid, acid-type strippers, and other acidic solutions in the 1930s through the 1960s. Detailed investigations of the DRA began after July 1991, when the Maryland Aviation Administration (MAA) encountered four buried drums adjacent to Taxiway Tango during trenching to install an electrical cable. Discovery of these drums led to investigation of the surrounding area for possible soil and groundwater contamination, as required by MDE in its letters of January 6, 1992 and January 14, 1997 to MAA (MDE, 1992; 1997).

2.2 REGIONAL GEOLOGIC AND HYDROGEOLOGIC CONDITIONS

MSA is in the western shore of the Coastal Plain physiographic province. Regional and local studies (Vroblesky and Fleck, 1991; Chapelle, 1985) indicate that MSA lies on the Patapsco geologic formation. This formation consists of complex and interbedded mixtures of gray, brown, and red sands, silts, and clays, originating from sediment deposition in a low coastal plain traversed by low-gradient meandering streams. Below the Patapsco Formation lies a regionally

extensive, thick, clay confining unit known as the Arundel Formation, a massive, impermeable unit underlying the site and surrounding area.

The Arundel Formation outcrops northwest of the site and dips and thickens to the southeast, extending as far east as Cambridge, Maryland, where it is more than 600 feet thick. Regional lithologic information indicates that the Arundel Formation may be as much as 100–150 feet thick at MSA (Vroblesky and Fleck, 1991; Chapelle, 1985). The formation most likely acts as an impermeable barrier to the downward movement of any constituents found in the surficial aquifer. Southwest of MSA, the base of the Arundel Formation (where it lies upon the top surface of the deeper Patuxent Formation) has been mapped at 170–300 feet below mean sea level (msl) (Vroblesky and Fleck, 1991; Chapelle, 1985). These regional studies indicate that the base of the Arundel Formation may occur at 250–300 feet below msl. Consequently, the depth to the base of the Arundel Formation may range from 270–320 feet below ground surface (bgs) at MSA.

The Patuxent Formation, a multi-aquifer unit, comprises various interbedded layers of sand, silt, and clay, with abrupt changes of deposited material types over short distances. Permeable, sand-rich units range from bounded sand sheets to isolated sand bodies (Glaser, 1969). In the MSA area, groundwater flows to the south and southwest, in response to industrial wells withdrawing water southwest and west of the site (Chapelle, 1985; Curtin, 2006).

2.3 MARTIN STATE AIRPORT SUBSURFACE CONDITIONS

At MSA, numerous shallow and deep soil borings have been advanced to collect soil samples for lithologic information and chemical analyses. A fence diagram of the site geology is shown in Figure 2-2. Previous site studies indicate that the subsurface geology at MSA consists of highly heterogeneous mixtures of unconsolidated sediments of gravels, sands, silts, and clays. A layer of fill consisting of heterogeneous sands, silts, and clays overlies native soils.

Boring logs for groundwater monitoring wells MW-5, DMW-7S, and MW-7 indicate that a heterogeneous mixture of clay, silt, and some silty sand predominates to a depth of approximately 25 feet bgs (five feet below msl), which is underlain by poorly graded fine sand, with occasional silt lenses, to a depth of approximately 32–42 feet bgs (11–21 feet below msl). At groundwater monitoring wells DMW-7S and MW-7, silt and clay predominate from 32 to 39 feet deep (11–19 feet below msl). At well MW-5, the geology consists predominantly of

poorly graded, fine sand to 42 feet bgs (19 feet below msl) at its termination point. (Refer to Section 3 for groundwater monitoring well locations.)

Groundwater monitoring wells are screened in the surficial aquifer system (the Patapsco Formation) at different elevations to provide hydrologic and chemical data across the entire water bearing zone. For data evaluation and correlation, the aquifer is divided into upper, intermediate, and lower surficial aquifer zones. Twenty-seven groundwater monitoring wells (DMW-lS through DMW-11S, MW-3 through MW-7, MW-15S through MW-18S, MW-20S, MW-23S through MW-26S, RW-1S, and OW-1S) are screened in the upper surficial aquifer, which is the portion of the surficial aquifer from the ground surface to approximately 15 feet below msl.

Generally, the upper surficial aquifer consists of fill that occurs in the uppermost 10–20 feet bgs, with native soils beneath the fill materials. Locally (i.e., DMW-7S and MW-7), an eight-foot thick low-permeability zone (i.e., an aquiclude) lies between the upper surficial aquifer and the intermediate surficial aquifer. The aquiclude restricts groundwater flow and retards contaminant movement between the upper and intermediate surficial aquifer zones in some areas of the site. However, the low-permeability zone is localized and limited in extent; it was not encountered at MW-5, thus providing a direct pathway for migration to deeper zones from surface released chlorinated solvents.

Twenty-nine groundwater monitoring wells (DMW-1A, DMW-2A, MW-1, MW-2, DMW-3I through DMW-11I, MW-14I through MW-26I, MW-28I, RW-1I, and OW-1I) are screened in the intermediate surficial aquifer, between 15–45 feet below msl. Twenty groundwater monitoring wells (DMW-1B, DMW-2B, DMW-3D through DMW-9D, MW-14D through MW-23D, and MW-26D) are screened in the lower surficial aquifer, from approximately 45–73 feet below msl. At approximately 45 feet below msl, a thin clay aquitard lies between the intermediate and lower surficial aquifers.

Four wells (MW-27D, MW-29D, MW-30D, and MW-31D) are screened in deep confined aquifers underlying the lower surficial aquifer. The deep well logs indicate that alternating sand and silt aquifers and clay aquitards lie beneath the lower surficial aquifer. Lithologic data from the four deep wells indicate six to 40 feet of clay beneath the lower surficial aquifer. Beneath this clay bed is a series of alternating sand and clay layers, with top surfaces at approximately

120-130 feet below msl (sand), 140–160 feet below msl (clay), 190 feet below msl (sand), 197-205 feet below msl (clay), and 245 feet below msl (sand at MW-29D only).

A series of alternating sand and silt aquifers and clay aquitards was encountered beneath the lower surficial aquifer. Permeability tests on the aquitard clays indicate low vertical permeabilities, ranging from 2.2×10^{-08} to 13×10^{-08} centimeters per second. A single well, directional, heat pulse technique successfully estimated groundwater flow directions at groundwater monitoring wells MW-27D and MW-29D. These results were used to locate downgradient groundwater monitoring wells MW-30D and MW-31D. Groundwater in the deep confined aquifers flows in a southeasterly direction, from MW-27D through MW-31D, toward MW-29D. Groundwater elevations for groundwater monitoring wells MW-28I and MW-27D indicate an upward hydraulic gradient of 0.0035.

2.4 DESCRIPTION OF HISTORICAL AREAS OF CONCERN

MAA conducted several investigations at the southeast portion of MSA from 1992 to 1996. These include a geophysical survey of Taxiway Tango (Handex, 1992), a preliminary site investigation of Taxiway Tango (Maryland Environmental Service [MES], 1994), a confirmation investigation of Taxiway Tango (MES, 1995), and an expanded investigation of Taxiway Tango (MES, 1996). Frog Mortar Creek was first investigated by MAA in 1998. These investigations identified four areas of concern (Figure 2-3):

1) *Taxiway Tango Median Anomaly Area*—After four buried drums were removed in 1991, a geophysical survey was conducted throughout the area adjacent to Taxiway Tango. Several anomalous zones were identified as possibly containing buried metal.

2) *Drum Area*—Several drums were uncovered when surface vegetation was cleared during a 1996 site investigation.

3) *Two ponds*—Historical records indicate that acids may have been discharged at the present location of these ponds (approximately 450 feet and 600 feet northeast of Taxiway Tango, respectively) sometime during the 1930s through the 1960s. (A third pond is shown in the area on a U.S. Geological Survey topographic map [photo-revised in 1985] used for the PA, but MDE could not locate a third pond during the 1989 site visits. This third pond was not identified as part of the MAA studies that identified these four areas of concern.)

4) *Petroleum Hydrocarbon Area*—Petroleum hydrocarbons were encountered while drilling a soil boring during a 1996 site investigation. The Petroleum Hydrocarbon Area is approximately 200 feet west of the ponds.

These four areas became the focus of subsequent studies when chemical constituent impacts to soil, pond sediment, and groundwater became apparent.

Trichloroethene (TCE) and TCE-degradation daughter products were detected throughout the investigation area, with the highest concentrations appearing in the upper and intermediate surficial aquifer. At MSA, previously detected concentrations of TCE range from 0.5 to more than 100,000 micrograms per liter (µg/L). 1,4-dioxane, typically co-located with chlorinated solvents, is also considered a chemical of concern. TCE-degradation daughter products (e.g., dichloroethene [DCE], vinyl chloride [VC], etc.) are typically co-located with TCE at MSA.

2.5 LOCKHEED MARTIN INVESTIGATIONS

From 1999 to 2010, Lockheed Martin conducted a remedial investigation (RI) (Tetra Tech, 2012b) and a supplemental RI (Tetra Tech, 2011a) to further delineate the extent of soil, groundwater, and pond sediment chemical contamination indicated by the earlier studies. Through geophysical surveys, membrane interface probes (MIPs), test pits, soil borings, and chemical analyses of soil and pond sediment samples, the RI identified large areas of buried fill and debris, and surface and subsurface soil contamination in and around the buried fill material and in pond sediment. Buried fill and debris were estimated to be present over approximately 25 acres of the DRA.

Numerous additional investigations have been conducted by Lockheed Martin at the DRA from 2010 to the present. Studies of Frog Mortar Creek are not provided in this report because Frog Mortar Creek is being addressed under a separate investigational program. Lockheed Martin is also conducting environmental investigations at the Strawberry Point, Greater Strawberry Point, and Main Terminal areas of MSA (Figure 2-1). These areas are on the western side of the airport runway. The following summarizes DRA studies conducted by Lockheed Martin:

- ***March 1999: initial groundwater monitoring well sampling—***Lockheed Martin first evaluated the site in March 1999, sampling six existing groundwater monitoring wells (MW-1 through MW-6) to obtain updated chemical data on groundwater quality, elevation, and flow direction at the southeast portion of MSA (see Figure 2-4 for the locations of wells MW-1 through MW-6). TCE, *cis*-1,2-dichloroethene (*cis*-1,2-DCE), and VC were detected in select monitoring wells at concentrations exceeding the State of Maryland drinking water maximum contaminant levels (MCLs) and United States Environmental Protection Agency (USEPA) National Primary Drinking Water MCLs. A detailed description of the groundwater sampling program is in the May 1999 *Final*

Groundwater Monitoring Well Surveying and Sampling Report (Tetra Tech, 1999). Elevated concentrations of volatile organic compounds (VOCs) in the existing monitoring wells led to further investigation of the site to identify possible chemical source areas.

- ***March–May 2000: source identification and assessment program—***The second investigation was a source identification and assessment program. MAA had previously identified four specific areas as possible historical sources of released chemicals. Each of these areas of potential concern was investigated through a combination of excavations, localized trenching, drilling of soil borings, and sampling and laboratory analyses of soil, sediments, and groundwater. VOCs, petroleum hydrocarbons, and metals were detected in soil and groundwater during this investigation. VC is the only VOC detected above its USEPA Region 3 risk-based concentration (used by MDE for screening purposes) for industrial soil. Some VOCs were also detected in groundwater at levels above groundwater standards. The investigation results are documented in the September 2000 *Final Source Identification and Assessment Report* (Tetra Tech, 2000). The investigation identified VOCs in excess of published cleanup criteria; chemicals in groundwater were therefore delineated.

- ***December 2001–December 2002: partial chemical delineation and initial modeling—*** The third investigation further delineated the lateral extent of chemicals in near surface groundwater at the four source areas of concern. In addition, deep multi-level monitoring wells (DMW-1A/B and DMW-2A/B; see Figure 2-4) were installed at two locations to characterize site geology and the vertical extent of groundwater contamination. The deep groundwater monitoring wells were installed where the highest concentrations of TCE and VC had been detected during the shallow groundwater investigation. A summary of these activities is provided below and is documented in the December 2002 *Final Chemical Delineation and Groundwater Modeling Report* (Tetra Tech, 2002). Data collected during the groundwater investigation indicate that VOCs (primarily *cis*-1,2-DCE, TCE, and VC) and metals (primarily cadmium*)* were in groundwater above groundwater standards. The lateral and vertical distributions of chemicals in groundwater were not delineated during this phase of the investigation.

- ***July 2003–March 2004: data gap investigation and groundwater modeling—***The fourth investigation aimed to further delineate and characterize the chemical plumes at the site and model groundwater. Nine additional multi-level monitoring wells (DMW-3 through DMW-11), three shallow groundwater-monitoring wells (DMW-1S, DMW-2S, and MW-7), and four temporary groundwater monitoring wells (TT-11 through TT-14) were installed at the site (see Figure 2-4). The lateral and vertical distributions of chemical concentrations in groundwater indicate three possible source areas at the site, contributing to three primary groundwater plumes. These source areas and plumes are:

    - *Plume 1,* originating from the Drum Area

    - *Plume 2,* originating from the Petroleum Hydrocarbon and Pond 1 Area

    - *Plume 3,* originating from the Taxiway Tango median area

Three chlorinated VOCs (*cis*-1,2-DCE, TCE, and VC) and cadmium were reported at elevated concentrations during this investigation. The distribution of VOCs in groundwater suggests dechlorination of TCE to its daughter-products *cis*-1,2-DCE and VC. The plumes are migrating along the downgradient groundwater flow path from west to east toward Frog Mortar Creek. Although these three plumes represent the primary source areas, the chemicals have commingled to form a single contiguous area of groundwater contamination in the eastern portion of the site approaching Frog Mortar Creek.

Site-specific information was used to develop a conceptual model, including regional setting, soil lithology, aquifer characteristics, and historical and current chemical concentration data. Numerical modeling predicted groundwater flow and chemical migration in the investigation area. Summaries of the investigation and modeling are documented in the May 2004 *Final Data Gap Investigation and Modeling Report* (Tetra Tech, 2004a).

- ***2003–2004 quarterly groundwater monitoring—***Quarterly groundwater sampling was conducted for the DRA wells in September and December 2003, and in March, June, September, and December 2004. The September 2003 results are included in the *Final Data Gap Investigation and Groundwater Modeling Report* (Tetra Tech, 2004a). The results for the remaining quarterly rounds are summarized in five quarterly sampling reports (Tetra Tech, 2004b–e and 2005a).

  - In each of the first two rounds, 38 permanent wells and four temporary wells were purged and sampled using dedicated bladder pumps. The wells sampled include MW-1 through MW-7, DMW-1A/B through DMW-11S/I (see Figure 2-4). Temporary wells TT-11 through TT-14 were also sampled using low-flow peristaltic pumps. The temporary "TT" wells were not sampled after the December 2003 round. The September 2003 "baseline" samples were analyzed for VOCs, semivolatile organic compounds (SVOCs), pesticides, total metals, and dissolved metals. Subsequent rounds included VOC and metals analyses, but SVOC samples were collected only for wells with SVOCs detected in the earlier round. Pesticides were not analyzed after September 2003 because no pesticides were detected in the September 2003 round. Perchlorate was added for the wells sampled in September 2004 and for three of the wells sampled in December 2004. Thirteen wells were sampled in each of the September and December 2004 rounds. During each of these five rounds, several wells were sampled for bio-parameters consisting of nitrate, sulfate, and ferric iron.

  - Concentration contour maps for TCE, *cis*-1,2-DCE, and VC in the upper, intermediate, and lower surficial aquifer zones, and time-series trends of several wells, were generated for the reports. These quarterly sampling results are generally consistent with the September 2003 "baseline" results. Notable variations include TCE concentrations decreasing substantially at DMW-1B after the first round, and TCE decreasing from 60,000 to 20,000 µg/L at MW-5 from 1996 to 2002. TCE concentrations at MW-3 also decreased from 1995 to 2004. At several downgradient perimeter wells (e.g., DMW-2A, DMW-4S, DMW-4D), increasing TCE trends were observed until December 2003, followed by an upward spike in March 2004 (June 2004 for DMW-4S), with a subsequent return to pre-spike levels.

- ***2005 groundwater user survey—***A private potable well survey for the area around MSA (Tetra Tech, 2005b) was conducted in 2005 and repeated and updated in 2010 (Tetra Tech, 2012c). The surveys had the following objectives:

  - review relevant records and other documentation regarding historical and current public and private groundwater users in the area
  - obtain current aerial photographs of MSA and environs to identify any wells
  - evaluate plume migration from the site to the closest potable well location
  - complete a field verification study of wells identified in the records review

  The survey area was divided into three regions for field reconnaissance; survey elements include:

  - reviewing MDE and Baltimore County records to identify wells drilled and/or abandoned, to determine current well uses, and to locate well construction information and any groundwater sampling data available
  - identifying areas in the survey area with municipal potable water
  - obtaining and reviewing aerial photographs and topographic maps to identify historical and current well locations
  - flying over the site to take current aerial photographs of neighborhoods east of the site
  - summarizing pertinent regulations and policies concerning permitting, compliance, and operating requirements for private and public groundwater users in the survey area
  - performing field reconnaissance to verify the status of the wells identified in the public records and document searches (specified above), and to locate additional wells that might be in the area. All wells identified in public records were checked in the field; however, wells east of Frog Mortar Creek were the main focus.

  The study findings are as follows:

  - Most user survey area residences and businesses around MSA are supplied by Baltimore County public water. Three reservoirs (Loch Raven, Pretty Boy, and Liberty) in the central, northern, and western parts of the county are surface water impoundments for the public water supply. Water from these reservoirs is piped to the City of Baltimore reservoir, which serves the survey area. Only a limited number of private potable wells appear to be in use.
  - Data from off-site well logs indicate that most wells are screened in the Patapsco formation. Depths for these wells range from 57 to 140 feet below the ground surface. South of Eastern Boulevard, wells extending into the Patuxent Formation generally range in depth from 176 to 224 feet. North of Eastern Boulevard, two wells in the

survey area (ranging in depth from 105 to 135 feet) are described as being screened in the Patuxent Formation.

- Eighty-four wells in the survey area were documented as possibly being in use. The study indicated that most of these wells are likely associated with properties that have been connected to public water, so these wells may no longer exist. Properties (with records of wells) that apparently had not been connected to public water are located beyond public lines at the ends of roads or peninsulas.

- The former well at 3301 Edwards Lane (i.e., the closest well to the site) is no longer used for drinking water since the property was supplied by public water. Other locations in this area, such as the residence at 800 Middle Road, the Brigadoon Marine Facility, and houses on Claire's Lane, likely have water supply wells. Residences to the north, on Bengies Road, Bourque Avenue, Hillpine Road, and Gladway Road, are not supplied by public water. Residences to the west at the end of Punte Road and Weber Avenue are likewise beyond the area supplied by public water. Most other residences with well records on file, lying east of Frog Mortar Creek and west of Middle River, are likely connected to public water. The survey findings suggest that no potable wells are now in use near the site. The 3301 Edwards Lane well is the closest potable well to the site; however, it is no longer used and has reportedly been abandoned.

- ***2005 additional soil and sediment sampling—***At MDE's request, additional soil samples were collected from Taxiway Tango excavations in areas where elevated total chromium (e.g., 9,300 milligrams per kilogram [mg/kg]) levels had been detected in previous soil samples at Excavation 2. Twelve soil samples (six from a one-foot depth and six from a four-foot depth) were collected in May 2005 and analyzed for total chromium and hexavalent chromium (Tetra Tech, 2005c). Four pond sediment samples were also collected from Pond 1 to supplement previous sediment chemical data collected from this area of the site. The pond sediment samples were analyzed for VOCs, SVOCs, metals, polychlorinated biphenyls (PCBs), hexavalent chromium, and simultaneously extracted metals/acid volatile sulfides. Samples were collected to complete human health and ecological risk assessments for the site.

  Relative to total chromium concentrations, hexavalent chromium was detected at low concentrations in six samples, with concentrations ranging from 0.36 to 1.4 mg/kg. Five of the six hexavalent chromium detections were in the one-foot samples. Three sediment samples had low to moderate concentrations of VOCs, SVOCs, metals, and PCBs. TCE was detected at a concentration of 270,000 µg/kg in EP1-SD5. High concentrations of benzene (215 µg/kg), toluene (350,000 µg/kg), ethylbenzene (30,400 µg/kg), and xylenes (86,500 µg/kg) were also detected in EP1-SD5. Hexavalent chromium was not detected in any pond sediment samples.

- ***August 2006: groundwater monitoring—*** Groundwater samples were collected from 36 wells in August 2006 to provide a then current round of water quality data for the DRA. The wells sampled include MW-2 through MW-6, and DMW-1A/B through DMW-11S/I (Figure 2-4). The temporary "TT" wells were not sampled in 2006. Samples were analyzed for VOC, 1,4-dioxane, perchlorate, total and dissolved metals, and hexavalent

chromium. Additionally, DMW-3S and DMW-9S were analyzed for SVOCs. Sampling results indicate that concentrations of chlorinated VOCs (cVOCs) exceed MDE's groundwater standards throughout a large portion of the investigation area, and at multiple depths. The maximum TCE concentration observed in a 2006 monitoring well sample was 41,000 µg/L, reported for upper surficial aquifer well DMW-11S. 1,4-dioxane and perchlorate were detected in 34 and 17 groundwater samples, respectively. Hexavalent chromium was not detected in these samples. Low concentrations of several SVOCs were detected at DMW-3S and DMW-9S. The results of this investigation were not presented in a report but are included in the site database.

- ***Fall/winter 2007: additional on-site soil and groundwater characterization***—Additional on-site soil and groundwater characterization in September 2007 further delineated and characterized the chemical plumes and provided data supporting the evaluation of remedial alternatives. The program included advancing 52 membrane interface probe/cone penetrometer tests (MIP/CPT) and installing and subsequently sampling 12 new and multi-level (nested) surficial aquifer groundwater monitoring wells. Thirty-one monitoring wells were installed, including shallow, intermediate, and deep monitoring wells (see Figure 2-5). The screens of the nested wells were installed at three separate depth intervals of approximately 30, 50, and 80 feet bgs. Two shallow and two intermediate wells were installed as recovery and observation wells in support of aquifer hydraulics testing.

  The existing and newly installed nested wells were sampled for target contaminants analysis. MIP/CPT screening provided a vertical profile of electric conductivity and VOCs in subsurface soils and groundwater, and identified the source areas of contamination. The overall objectives of these field activities were to characterize the subsurface soil in the vadose and saturated zones, delineate the lateral boundaries of contamination in soil and groundwater, and delineate the vertical extent of contamination in soil and groundwater.

  The study also used electromagnetic and gamma surveys to identify anomalies in the subsurface that could represent buried waste and any possible contaminant source(s). Test pits were excavated at locations identified by the geophysical survey as being either anomalous or non-anomalous, to determine depth of fill, visually identify buried debris, and collect soil samples for laboratory analysis. A summary of this investigation is provided below and documented in the June 2008 *Soils and Groundwater Data Report* (Tetra Tech, 2008):

  - Elevated electron capture device (ECD) responses indicate chlorinated aliphatic hydrocarbons (CAHs) at 19 of the 52 MIP locations. The contamination appears bounded on the north, south, and west. Significant shallow vadose zone soil contamination was observed at two locations (MIP-57 and MIP-58) between Taxiway Tango and the runway.

  - Soil and groundwater samples collected from the direct push technology (DPT) sampling locations confirm CAHs in those borings exhibiting elevated ECD response. The maximum TCE concentration in soil was 7,680 micrograms per kilogram (µg/kg), at MIP-58 (10 feet bgs). Soil samples from a limited number of locations minimally

exceed MDE residential soil standards. The maximum concentration of TCE in groundwater was 68,600 µg/L (at MIP-28, 34–36 feet bgs). A range of other CAHs and petroleum hydrocarbons were also detected in these samples.

- Groundwater was found to flow generally northeast, toward Frog Mortar Creek.

- VOCs (CAHs and petroleum hydrocarbons), metals, and 1,4-dioxane are present throughout a large portion of the investigation area, at multiple depths, and at high concentrations.

- The maximum TCE concentration observed in a monitoring well sample is 41,400 µg/L (DMW-11I). TCE contamination extends north to an area north of Pond 2, south to DMW-7I, and west to the area between Taxiway Tango and the runway. The contamination appears delineated, except for the area north–northwest of MW-15 and MW-26 and south of MW-19 (Figure 2-5).

- The maximum 1,4-dioxane concentration observed in a monitoring well sample is 1,800 µg/L (DMW-3S). Most of the 1,4-dioxane contamination appears isolated to the central portion of the site, extending north to MW-18, south to DMW-7, and west to DMW-9.

- The maximum perchlorate concentration observed in a monitoring well sample is 8 µg/L (DMW-7I); perchlorate in groundwater is generally confined to the area southeast of Pond 2. Groundwater samples from new monitoring wells were not analyzed for perchlorate.

- A wide range of metals exceeds MDE standards at locations throughout the site. Exceedances were observed for arsenic, barium, beryllium, cadmium, chromium, lead, nickel, selenium, vanadium, and zinc.

- The geophysical investigation found suspected waste over approximately 19 acres of the site. Including areas inaccessible to the investigation, but suspected of containing waste (e.g., the areas of Ponds #1 and #2 and east of the ponds), the area suspected of containing waste is estimated at approximately 25 acres. The investigation appears to have delineated the extent of the waste in all directions.

- The test pit excavations confirm the presence of waste that had been identified by the geophysical survey. Soil sampling associated with the test pits shows SVOCs, PCBs, and metals concentrations above MDE residential standards in many of the test pits excavated in the waste areas. Lesser concentrations of these contaminants are also found in areas not containing waste.

- ***June 2008–January 2009: deep groundwater investigation—***This investigation sought to determine whether VOCs detected in surficial aquifer groundwater at MSA have migrated vertically through clay-rich sediments to the next underlying aquifer. Four groundwater monitoring wells were installed into a confined aquifer lying beneath the groundwater contamination previously characterized in the surficial aquifer at MSA. A shallow well (MW-28I) was also installed in the surficial aquifer at a hydraulically upgradient location near well MW-27D (see Figure 2-5). As part of this investigation,

groundwater levels were measured in the newly installed groundwater monitoring wells to determine groundwater flow direction in the deeper confined aquifer. Groundwater samples were collected for chemical analyses to assess VOCs. The following summarizes the investigation and its findings (Tetra Tech, 2009a):

- Four deep soil borings were advanced to depths of 218–268 feet bgs. A fifth boring for an intermediate surficial aquifer well was advanced to a depth of 50 feet. Continuous soil coring was used at each borehole to record lithologic descriptions. Four clay/soil samples from deep borings were collected for geotechnical analyses.

- A series of alternating sand and silt aquifers and clay aquitards were encountered beneath the lower surficial aquifer, beginning at approximately 100 feet bgs. Permeability tests on the underlying clay indicate low vertical permeabilities of 2.2×10^{-08} to 13×10^{-08} centimeters per second.

- A single well, directional, heat pulse technique successfully estimated groundwater flow directions at groundwater monitoring wells MW-27D and MW-29D. Results of these tests were used to identify drilling locations for downgradient groundwater monitoring wells MW-30D and MW-31D (see Figure 2-5). Groundwater levels recorded in January 2009 show that these wells are hydraulically downgradient of VOC contamination in the lower surficial aquifer.

- Five two-inch-diameter monitoring wells were installed to monitor groundwater quality and levels in the intermediate surficial aquifer and the deep confined aquifers beneath the lower surficial aquifer. Well bottom completion depths range from 50 to 207 feet bgs. Groundwater samples were collected and analyzed for VOCs, SVOCs, and metals.

- Groundwater in the deep confined aquifer was found to flow southeasterly from MW-27D toward MW-29D through MW-31D. Investigators determined that contaminants possibly introduced into the lower confined aquifer from the lower surficial aquifer (i.e., in the area of groundwater monitoring wells DMW-1B, DMW-8D, and DMW-4D) could be monitored effectively by downgradient groundwater-monitoring wells MW-29D, MW-30D, and MW-31D. Groundwater elevations for groundwater monitoring wells MW-28I and MW-27D indicate an upward hydraulic gradient of 0.0035 feet per feet.

- TCE, DCE, and VC were detected in the groundwater sample from newly installed intermediate surficial aquifer well MW-28I at concentrations exceeding drinking water MCLs and MDE groundwater standards. MW-28I was installed at a depth of 50 feet bgs at a location northeast and hydraulically upgradient of the areas where (historically) high concentrations of TCE have occurred.

- VOC-degradation products, cVOCs, and 1,4-dioxane detected in the lower surficial aquifer groundwater across the site were not detected in the deep well groundwater samples. VOCs and SVOCs reported for the deep well samples are either common laboratory contaminants or constituents of petroleum fuels. Concentrations of the VOCs and SVOCs detected are less than MCLs and MDE groundwater standards.

- ***August–September 2008: groundwater monitoring—***The 2008 monitoring provided a then current round of groundwater data for older existing groundwater monitoring wells, and a second round of groundwater data for newly installed monitoring wells at MSA. These data describe then current groundwater quality conditions at the facility that support evaluation of time based trends of groundwater contaminants, and evaluation of remedial actions in subsequent studies. Groundwater samples were chemically analyzed for cVOCs, 1,4-dioxane, metals, and several water quality indicators. The following summarizes the August–October 2008 groundwater sampling and analyses (Tetra Tech, 2009b):

    - Groundwater flow in the upper, intermediate, and lower surficial aquifer zones is generally northeast toward Frog Mortar Creek. However, data indicate local variations in the hydrology of the intermediate and lower surficial aquifer zones that cause divergent flow north toward the Maryland Air National Guard (MDANG) property and south toward the southern end of the MSA peninsula.

    - Concentrations of cVOCs exceed MDE groundwater standards throughout a large portion of the investigation area and at multiple depths. The maximum TCE concentration observed in a then current monitoring well sample is 29,000 µg/L, reported for upper surficial aquifer well DMW-11S. Multiple VOC sources at the site resulted in VOC-contaminated groundwater extending to areas north of Pond 2, south to DMW-6I and DMW-7I, and west to the area between Taxiway Tango and the runway.

    - Chlorinated VOCs were detected at concentrations exceeding MDE's groundwater standards in samples from monitoring wells then recently installed north and east of Pond 2 and south of pre-existing groundwater monitoring wells.

    - Concentrations of cVOCs in groundwater had decreased substantially as compared to the 2004 chemical results for MSA. The TCE concentration reduction for 2008, and high concentrations of its chemical daughter products *cis*-1,2-DCE, VC, and chloroform, indicate that TCE-degradation is occurring at the site.

    - VOC contamination was not fully delineated north–northwest of well clusters MW-14, MW-17, and MW-28; east of well clusters MW-14, MW-18, DMW-3, DMW-2, DMW-4, and DMW-5; west of DMW-11S; and south of well clusters MW-19 and MW-24.

    - 1,4-Dioxane was detected primarily in groundwater samples from the upper and intermediate surficial-aquifer zones. 1,4-dioxane was co-located in areas containing the highest concentrations of cVOCs and was detected in samples collected primarily near Pond 1 and the area east of Pond 1. The highest concentrations of 1,4-dioxane are 590 µg/L at well MW-16S (northwest of Pond 2) and 490 µg/L at well DMW-2A (east of Pond 1 near Frog Mortar Creek).

    - Concentrations of 12 metals exceeded groundwater standards in one or more groundwater samples. Concentrations of manganese and iron most frequently exceed standards (89% and 79% of samples, respectively), with their maximum

concentrations exceeding standards by more than a factor of 100 (i.e., two orders of magnitude). Concentrations of cadmium exceed the standard in 20% of samples, with the maximum concentration exceeding the groundwater standard by more than two orders of magnitude. The greatest concentrations of cadmium are co-located with high levels of VOCs in the intermediate surficial aquifer, at groundwater monitoring wells DMW-1A, DMW-2A, DMW-8I, and DMW-3I south and east of Pond 1. Concentrations of metals such as chromium, hexavalent chromium, lead, mercury, and zinc exceed standards in less than 10% of samples, ranging from one exceedance each for mercury and zinc to five exceedances for lead. Dissolved lead and mercury concentrations do not exceed standards.

- ***August 2009 additional well installation—***Three new two-level well clusters (MW-32S/I, MW-33S/I, and MW-34S/I) were installed at the DRA site in August 2009 (see Figure 2-5) to further characterize the horizontal and vertical extent of groundwater contamination in the northern, northwestern, and southern portions of the site, where the boundaries of VOC contamination had not been delineated. The installed wells include three upper zone wells and three intermediate zone wells. These wells were installed as nested wells in a single borehole. Drilling, well installation, and well development followed procedures discussed previously for the 2007 well installation program.

- ***August–September 2009: groundwater monitoring—***The 2009 monitoring provided a new round of groundwater data for older existing groundwater monitoring wells and newly installed wells. These data describe then current groundwater quality conditions at the facility and were used in subsequent studies to evaluate time based groundwater contaminant trends and remedial actions. Groundwater samples were chemically analyzed for cVOCs, 1,4-dioxane, metals, and several water quality indicators. The following summarizes the August–September 2009 groundwater sampling and analyses (Tetra Tech, 2010a):

  - Groundwater in the upper, intermediate, and lower surficial aquifer zones was generally found to flow northeast toward Frog Mortar Creek. However, local variations in the hydrogeology of the upper, intermediate, and lower surficial aquifer zones provide divergent flow north and northwest, and south toward the southern end of the MSA peninsula.

  - Concentrations of cVOCs exceed MDE groundwater standards throughout a large portion of the investigation area and at multiple depths. The maximum TCE concentration observed in a then current monitoring well sample is 36,000 µg/L, reported for upper surficial aquifer well DMW-11S. Multiple VOC sources at the site have resulted in VOC-contaminated groundwater extending to areas north of Pond 2, south to DMW-6I and DMW-7I, and west to the area between Taxiway Tango and the runway.

  - cVOCs were detected at concentrations exceeding MDE groundwater standards in samples from monitoring wells MW-33S and MW-34I, recently installed northwest of Pond 2. TCE was not detected in two new wells installed south of the Drum Area plume (wells MW-32S and MW-32I).

- Concentrations of cVOCs in groundwater are consistent with the 2008 results and decreased substantially as compared to the 2004 chemical results for MSA. The TCE concentration reduction observed in 2009, and the high concentrations of the chemical daughter products *cis*-1,2-DCE, VC, and chloroform, indicate that TCE-degradation is occurring at the site.

- VOC contamination had not been fully delineated west and northwest of well MW-15 and MW-33; north of well clusters MW-14 and MW-17; east of well clusters MW-14, MW-18, DMW-3, DMW-2, DMW-4, and DMW-5; and west of DMW-11S.

- 1,4-Dioxane was detected primarily in groundwater samples from the upper and intermediate surficial-aquifer zones. 1,4-Dioxane was co-located in areas containing the highest concentrations of chlorinated VOCs, detected primarily near Pond 1 and the area east of Pond 1. The highest concentrations of 1,4-dioxane are 1,100 µg/L at well DMW-3I (east of Pond 1 near Frog Mortar Creek) and 790 µg/L at well MW-16S (north of Pond 2).

- Concentrations of 11 metals exceed groundwater standards in one or more groundwater samples. Concentrations of manganese and iron exceed standards most frequently, with the maximum concentrations exceeding standards by more than a factor of 100. Concentrations of cadmium exceed the standard in nearly 20% of samples, with the maximum concentration exceeding the groundwater standard by more than two orders of magnitude. Concentrations of metals such as chromium, lead, mercury, and selenium exceed standards in less than 10% of samples, ranging from one exceedance for selenium to three for lead. Dissolved lead and mercury concentrations do not exceed standards.

- ***2010 remedial investigation report*—**An RI completed in early 2010 (Tetra Tech, 2012b) evaluated the nature and extent of soil and groundwater contamination, assessed the fate and transport of contaminants in soil and groundwater, and presented a human health risk assessment (HHRA) and an ecological risk assessment (ERA). The RI is based on physical and chemical data for soil collected from 2000 to 2009 and groundwater chemical data from 2007 to 2009. The RI findings are summarized below:

  - Chemical analyses of numerous soil samples and several pond sediment samples indicate VOCs, SVOCs, PCBs, and several metals in soil and pond bottom sediment at concentrations exceeding USEPA human health and ecological risk-based screening levels and MDE soil cleanup standards. The primary VOCs detected in soil and pond sediment samples are TCE, TCE-degradation products (such as *cis*-1,2-DCE and VC), and benzene, toluene, ethylbenzene, and xylenes (BTEX). SVOCs detected in soil and sediment includes polycyclic aromatic hydrocarbons (PAHs). A subset of the 19 metals detected in soil and pond sediment at the site includes antimony, arsenic, cadmium, copper, chromium, lead, mercury, nickel, and zinc.

  - Groundwater samples collected in 2007–2009 were analyzed for VOCs, 1,4-dioxane, perchlorate, total and dissolved metals, and hexavalent chromium. Upper surficial aquifer wells were analyzed in 2009 for total petroleum hydrocarbon (TPH)-diesel-range organics (DRO) and TPH-gasoline-range organics (GRO).

Selected wells were analyzed for natural attenuation assessment (NAA) parameters such as alkalinity, chemical oxygen demand, dissolved gasses (methane, ethane, ethene, hydrogen, oxygen, and carbon dioxide), anions, total organic carbon, etc. Approximately 200 groundwater samples were collected between 2007 and 2009 from the upper, intermediate, and lower surficial aquifer and deep confined aquifer.

- Concentrations of cVOCs (such as TCE and *cis*-1,2-DCE) exceed federal and MDE groundwater standards throughout a large portion of the investigation area and at multiple depths. Multiple VOC sources at the site have resulted in VOC-contaminated groundwater extending west to the airport runway, north to well MW-34 (north of Pond 2), east near the Frog Mortar Creek shoreline at wells MW-14, DMW-5, and south to well MW-24 (Figure 2-5).

- Concentrations of cVOCs in groundwater generally decreased as compared to the 2004 MSA chemical results. The reduction in TCE concentrations and the high concentrations of the chemical daughter products *cis*-1,2-DCE, VC, and ethene indicate that TCE-degradation has occurred at the site and may continue.

- 1,4-Dioxane was detected primarily in groundwater samples from the upper and intermediate surficial aquifer zones. 1,4-Dioxane is generally co-located in areas containing the highest concentrations of cVOCs, which occur primarily near Pond 1 and the area east.

- Concentrations of cadmium exceed the standard in 20% of the samples. The greatest concentrations of cadmium are associated with high levels of VOCs in the intermediate surficial aquifer at wells DMW-1A, DMW-2A, DMW-8I, and DMW-3I, south and east of Pond 1.

- BTEX was detected less frequently and at lower concentrations (with respect to groundwater standards) than were the chlorinated aromatic hydrocarbons. Well DMW-9S, near the Petroleum Hydrocarbon Area, had the greatest concentrations of BTEX.

- In 2009, groundwater samples from the upper surficial aquifer were analyzed for TPH-DRO, which had been detected in more than half of the samples. Its greatest concentration was reported for well MW-20S, in the upper surficial aquifer south of the Petroleum Hydrocarbon Area. TPH-GRO was detected in nearly all groundwater samples. The highest GRO concentration was reported in well DMW-9S, south of the Petroleum Hydrocarbon Area, and screened in the upper surficial aquifer. Substantially lower concentrations of TPH-DRO and TPH-GRO were reported for wells at the Drum Area Plume and Taxiway Tango plume area.

- Groundwater modeling supported development of remedial alternatives to address VOC and 1,4-dioxane contamination in groundwater. These remedial alternatives focused on controlling and capturing contaminated groundwater at the site. Additional simulations examined the effects of placing injection and extraction wells in the plumes' high concentration zones.

- An HHRA produced in accordance with USEPA and MDE guidelines evaluated risk to potential human receptors under current and likely future land uses. The HHRA considered receptor exposure under non-residential (e.g., industrial, recreational) and residential land use scenarios. The predominant chemicals of potential concern (COPC) for human health resulting from evaluation of the direct contact exposure scenarios are reported as cVOCs (in soils, groundwater, sediments), BTEX (in soils and groundwater), substituted benzene compounds (in soils and groundwater), PAHs (in soils and sediments), and several heavy metals (e.g., cadmium, lead, copper, chromium, nickel). Only one chemical was detected in surface water, and no COPC for surface water were selected in the HHRA. Risks associated with trespasser exposures to surface water were not quantitatively evaluated in this HHRA. Groundwater was not and is not currently used as a source of potable or industrial water at the site, nor is such use likely in the future. The groundwater user survey also indicated the possibility of wells near MSA, but these wells, if they exist, would be upgradient of MSA.

- An ERA produced in accordance with USEPA guidelines evaluated risk to potential ecological receptors in surface soil, sediment, and groundwater (evaluated as surface water). The central area of the site northwest of Pond 1 appears to be the area of largest ecological risk, based on then current sampling data. The ERA identified surface soil ecological COPC for invertebrates and plants, including TCE, *cis*-1,2-DCE, antimony, chromium, copper, manganese, molybdenum, and zinc. PAHs are COPC only for soil invertebrates, whereas cadmium, lead, nickel, and selenium are considered COPC only for plants. VOCs, PAHs, PCBs, and several metals are considered COPC for Pond 1 sediment. Evaluation of surface soil identified several metals (mercury, cadmium, lead, and molybdenum) as risks to wildlife (e.g., quails, shrews, robins).

- ***2010 off-site piezometer installation—***In March 2010, six off-site piezometers were installed on two privately owned properties at 3300–3301 Edwards Lane on the Bowleys Quarters peninsula, east of the DRA and on the eastern shoreline of Frog Mortar Creek (see Figure 2-5; Tetra Tech, 2010c). Groundwater levels in these six piezometers and three DRA wells, as well as creek levels in Frog Mortar Creek, were monitored and recorded for one month. The results of this study were used to better understand off-site groundwater characteristics, including the extent to which the surficial aquifer at those monitoring points is tidally influenced, and to identify vertical hydraulic gradients and their relationship to DRA groundwater characteristics. These data were used to model DRA groundwater. The following summarizes the off-site piezometer investigation:

  - The piezometers were screened at depths of approximately five- to 15-feet (shallow zone), 29–39 feet (intermediate zone) and 42–52 or 46–56 feet (deep zone) below grade. Screened intervals for the piezometers were set at elevations nearly equivalent to wells installed in the eastern portion of the DRA. Piezometer locations and casing elevations were surveyed by a Maryland-licensed surveying firm.

  - The six newly installed piezometers and three DRA wells (DMW-4S, DMW-4I, and DMW-4D) were fitted with electronic water level data loggers to record water level data. A data logger was also placed in a locked, perforated, steel standpipe installed at 3300–3301 Edwards Lane to record creek levels during the same period. A barometric

pressure data logger was also installed in well DMW-8S at the DRA to record fluctuations during the monitoring period.

- Groundwater levels, surface water levels, and barometric pressure were recorded for one month from June 2–4 to July 6, 2010. The study results indicate that groundwater levels in the surficial aquifer are influenced by both tides and barometric pressure.

- ***July 2010: groundwater monitoring—***The July 2010 monitoring provided a new round of groundwater data for older groundwater monitoring wells and newly installed wells. These data describe then current groundwater quality conditions at the facility and were used in support of evaluating time based groundwater contaminant trends and to evaluate remedial actions in subsequent studies. Groundwater samples were chemically analyzed for chlorinated VOCs, 1,4-dioxane, metals, and several water quality indicators. The following summarizes the findings of the July 2010 groundwater and surface water sampling and analyses (Tetra Tech, 2010b):

  - Groundwater in the upper, intermediate, and lower surficial aquifer zones was found to flow northeast toward Frog Mortar Creek.

  - Concentrations of cVOCs exceed MDE groundwater standards throughout a large portion of the investigation area and at multiple depths. The maximum TCE concentration observed in a then current monitoring well sample was 36,000 µg/L, reported for upper surficial aquifer well DMW-11S. Multiple VOC sources at the site have resulted in VOC-contaminated groundwater extending to areas north of Pond 2, south to DMW-6I and DMW-7I, and west to the area between Taxiway Tango and the airport runway.

  - Concentrations of cVOCs in groundwater are consistent with the 2009 results. Time-series plots of VOCs in source areas and downgradient locations indicate a general decrease in VOC concentrations since the early 2000s. VOC concentrations in the source area for the Taxiway Tango Median Area plume (DMW-11S) remained steady or had increased slightly since 2003.

  - At six wells where groundwater samples were analyzed for natural attenuation parameters, evidence of anaerobic reductive dechlorination is indicated by the TCE-breakdown product *cis*-1,2-DCE, VC, methane, and ethene, and elevated chloride concentrations. These data indicate that complete dechlorination may have been readily occurring in the upper and intermediate surficial aquifer zones at the DRA. However, lower relative concentrations of VC, methane, ethene, low groundwater pH, and high oxidation reduction potential (ORP) indicate that slow or incomplete reductive dechlorination of lower order cVOCs may have been occurring in the lower surficial aquifer zone.

  - VOC groundwater contamination was found at concentrations greater than groundwater standards at then currently delineated areas to the north (wells MW-14I, MW-15S/I, MW-16S/I, MW-17I, and MW-28I), east (wells MW-14I, MW-18I/S, DMW-3S/I, DMW-4S/I/D, and DMW-5S/I), and west (wells MW-24I, DMW-11S,

and MW-33S). See Figure 2-5 for well locations. Additional investigation is proceeding in areas to the north and west.

- Sampling results for wells DMW-6I/D and MW-32S/I indicate that the VOC groundwater contamination is bounded along the southern portion of the site.

- The SVOC 1,4-dioxane was primarily detected in groundwater samples from the upper and intermediate surficial aquifer zones. 1,4-Dioxane is co-located in areas containing the highest concentrations of cVOCs, primarily near Pond 1 and the area to the east. The highest concentrations of 1,4-dioxane are detected east of Pond 1 near Frog Mortar Creek at wells DMW-2A (590 µg/L), DMW-3S (480 µg/L), and DMW-3I (390 µg/L). 1,4-Dioxane was detected at a concentration of 1.8 µg/L at Frog Mortar Creek in surface water sample SW38, nearest the DRA.

- TPH-DRO was detected in 70% of the 2010 upper surficial aquifer groundwater samples at concentrations ranging from 78 to 2,000 µg/L (averaging 473 µg/L). TPH-GRO was detected in slightly more than half (59%) of the 2010 upper surficial aquifer groundwater samples at concentrations ranging from 34 to 55,000 µg/L (averaging 4,349 µg/L). Most DRO and GRO concentrations exceed the MDE criterion of 47 µg/L. The greatest concentrations of DRO and GRO were detected in well DMW-9S in the Petroleum Hydrocarbon and Pond 1 Area. Substantially lower concentrations of TPH-DRO and TPH-GRO were reported for groundwater in the Drum Area and Taxiway Tango Median Area.

- Perchlorate and the explosive cyclotrimethylene trinitramine (also known as Royal Demolition Explosive [RDX]) were not detected in DRA groundwater samples.

- Concentrations of 11 metals exceeded groundwater standards in one or more groundwater samples. Concentrations of iron and manganese most frequently exceed standards, with the maximum concentrations of these two metals exceeding standards by more than a factor of 100. Concentrations of cadmium exceeded the standard in nearly 20% of the samples, with the maximum concentration (833 µg/L) exceeding the groundwater standard by more than two orders of magnitude. Arsenic, beryllium, nickel, and vanadium concentrations exceeded the standards; the maximum concentration of vanadium is less than two orders of magnitude more than the MDE groundwater standard, and the maximum levels of arsenic and nickel are less than 10 times the standards. Concentrations of the metals chromium, lead, mercury, and selenium exceeded standards in less than 10% of samples, ranging from four exceedances for chromium to one exceedance each for selenium and mercury. Dissolved lead and mercury concentrations from filtered samples did not exceed standards.

- Radium-228 and combined radium-226/228 concentrations exceeded MDE's groundwater standard in samples at intermediate and deep surficial aquifer wells. Radium-228 concentrations exceeded the groundwater standard of 5 picoCuries per liter (pCi/L) in samples from wells DMW-3I (7.53 pCi/L), DMW-6I (11.6 pCi/L), and DMW-6D (7.82 pCi/L). The combined radium-226/228 concentration in the sample from well DMW-3D (6.30 pCi/L) also exceeded the MDE groundwater standard. The

combined radium-226/228 concentrations in samples from wells DMW-3I, DMW-6I, and DMW-6D that exceeded the MDE groundwater standard are 8.264, 12.046, and 9.53 pCi/L, respectively. Concentrations of radium-226, radium-228, or combined radium-226/228, did not exceed the MDE groundwater standard in samples from the upper surficial aquifer (MW-3, DMW-6S, MW-16S), deep confined aquifer (MW-27D and MW-29D), or the third well sampled in the intermediate surficial aquifer (MW-16I).

- ***May–June 2011: groundwater monitoring—***Groundwater sampling of 65 DRA wells was conducted in May–June 2011 (Tetra Tech, 2012d). Groundwater was sampled to provide a then current round of groundwater quality data for selected monitoring wells, to evaluate time based trends of on-site groundwater plumes, and to evaluate the natural attenuation of the chemicals of concern in groundwater at the site. Samples were chemically analyzed for VOCs, 1,4-dioxane, total and dissolved metals, perchlorate (a propellant constituent), and field water-quality indicators. Selected groundwater samples were also analyzed for TPH-DRO, TPH-GRO, radium-224, radium-226, radium-228, haloacetic acids, and NAA parameters.

    - Data results are consistent with those of 2010. Concentrations of cVOCs, benzene, 1,4-dioxane, metals, TPH-DRO, and TPH-GRO exceeded MDE groundwater standards or other groundwater criteria (the California action level for 1,4-dioxane was used in the absence of an MDE action level) throughout a large portion of the investigation area, and at multiple depths.

    - Hexavalent chromium was detected in only three samples, at concentrations below the MDE groundwater standard of 2.6 µg/L. Haloacetic acids were not detected in the three groundwater samples analyzed. Concentrations of radium-226 in all samples analyzed are less than its groundwater standard. Radium-228 and combined radium-226/228 concentrations exceeded the groundwater standard in one sample each from the intermediate and deep surficial-aquifer at wells DMW-6I and DMW-6D (see Figure 2-5).

- ***June–July 2011 investigation of the Dump Road and Runway Areas of MSA—***This round of monitoring sought to identify contaminants in six newly installed monitoring wells MW-30I and MW-35S through MW-39S at MSA (see Figure 2-5 for well locations). Groundwater samples were collected from six newly installed monitoring wells and analyzed for VOCs, SVOCs, PCBs, total metals, TPH-DRO, and TPH-GRO. Two wells (MW-30I and MW-39S) had TCE, VC, and naphthalene concentrations in excess of MDE screening criteria. TPH-DRO were detected at newly installed groundwater monitoring well MW-39S at a concentration (3,000 µg/L) exceeding its MDE groundwater standard by more than a factor of 60. Detected TPH-DRO concentrations also exceeded the MDE standard in groundwater samples from MW-35S and MW-37S. The GRO concentration detected in MW-30I also exceeds its MDE groundwater standard.

Lockheed Martin received comments from MDE in a letter dated August 4, 2011 regarding MSA Dump Road Area reports. In these comments, MDE requested the use of passive diffusion bags

(PDBs) rather than low-flow pumps when sampling older wells or wells with 10-foot well screens. MDE believes the use of PDBs under these conditions will more accurately characterize the vertical distribution of concentrations in the cVOC plumes. Accordingly, Lockheed Martin agreed to consider the use of PDBs in future sampling events.

However, during a follow-up conversation with Mr. Brian Dietz of MDE on March 22, 2012, Tetra Tech and CDM Smith discussed an alternative approach to addressing MDE's comment. This approach includes using the existing dedicated bladder pumps in monitoring wells MW-4 and MW-5 (Figures 2-4 and 2-5) to collect samples from three distinct depth intervals per well, followed by deployment and collection of PDBs across the same intervals. This will allow Lockheed Martin to acquire data comparing collection techniques (passive diffusion bags vs. low flow pump sampling) and aid in the decision regarding the use of PDBs in future sampling events. Mr. Dietz agreed with this approach.

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Source: Google Earth Pro, 2010

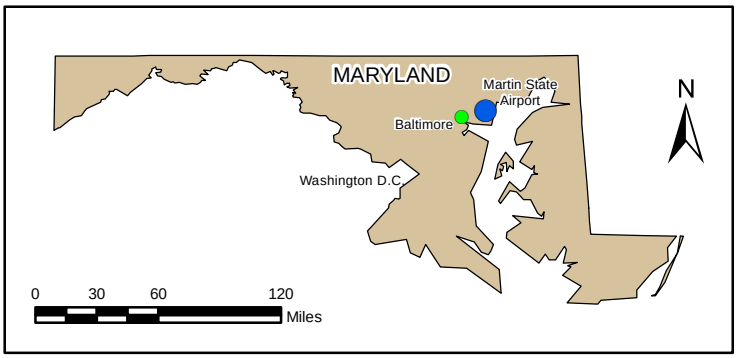

FIGURE 2-1

MARTIN STATE AIRPORT AND SURROUNDING FEATURES

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

DATE MODIFIED:	CREATED BY:
1/13/12	MP

TETRA TECH

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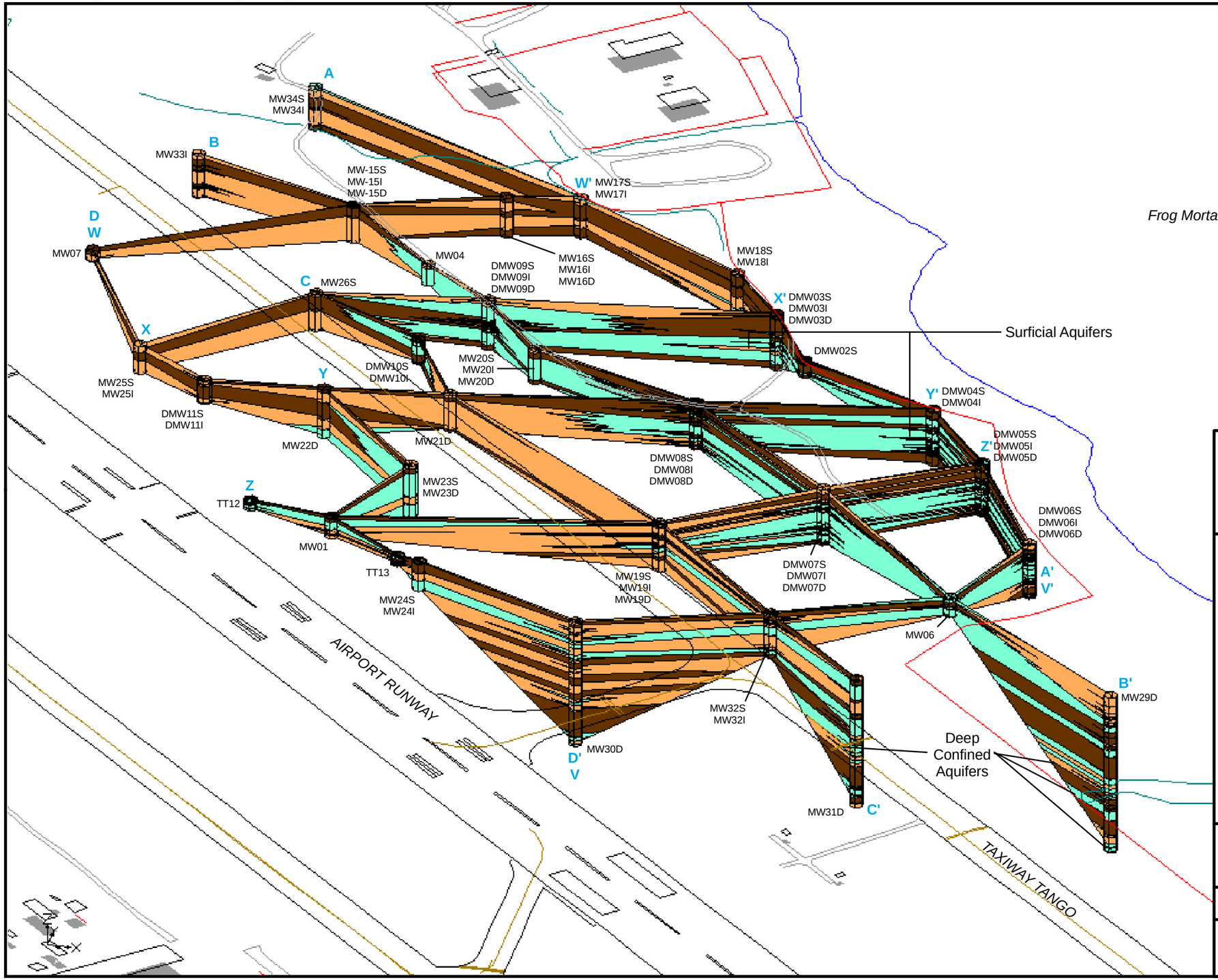

FIGURE 2-2

GEOLOGIC FENCE DIAGRAM OF THE DUMP ROAD AREA

LEGEND

MATERIALS

- HIGHER PERMEABILITY (TYPICALLY >10 FT/DAY): SAND AND SAND & GRAVEL
- MEDIUM PERMEABILITY (TYPICALLY 1-10 FT/DAY): MIXTURE OF SAND, SILT, AND/OR SOME CLAY
- LOWER PERMEABILITY (TYPICALLY <1 FT/DAY): CLAY AND SILT & CLAY

Hydrostratigraphic units were interpreted from lithology information of boring logs and slug test results.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

DATE MODIFIED: 10/06/11

CREATED BY: JEE

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\MSA Dump Road Features Fig 2-1_revised 1 13 12.mxd)
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FIGURE 2-3

AREAS OF CONCERN
DUMP ROAD AND RUNWAY AREA

LEGEND

POND

MARYLAND AIR NATIONAL GUARD BOUNDARY

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 1/13/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater monitoring wells installed 1995 to 2003.mxd)
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FIGURE 2-4

GROUNDWATER MONITORING WELL LOCATIONS 1994 - 2003

LEGEND

- GROUNDWATER MONITORING WELL INSTALLED IN 1994 AND 1996
- GROUNDWATER MONITORING WELL INSTALLED IN 2002
- GROUNDWATER MONITORING WELL INSTALLED IN 2003
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 5/17/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater monitoring wells locations through 2011_revised.mxd)
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FIGURE 2-5

GROUNDWATER MONITORING WELL LOCATIONS

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL INSTALLED 1994 - 2003
- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL INSTALLED 2007 - 2008
- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL OR PIEZOMETER INSTALLED 2010 - 2011
- DEEP CONFINED AQUIFER WELL INSTALLED 2008
- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL INSTALLED 1994 AND 2003; CURRENTLY ABANDONED
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 10/10/12

CREATED BY: MP

TETRA TECH

Section 3
Investigation Approach and Methodology

This report summarizes the 2012 Dump Road Area (DRA) groundwater sampling program, which included synoptic groundwater level measurements and groundwater sampling for chemical analyses. The 2012 groundwater round augments data obtained from the 2003 to 2011 DRA groundwater level measurements and sampling.

3.1 SYNOPTIC GROUNDWATER LEVEL MEASUREMENTS

A synoptic round of water level measurements was conducted on April 16, 2012. Static water levels were measured using a graduated electronic sounding water level meter. The static water level was determined by lowering the meter's probe into the well until the liquid level indicator emitted an audible tone, indicating the air/water interface. The water level was read from the probe cable and recorded to the nearest 0.01 foot as the depth to water, relative to the top of the well casing. Groundwater level measurement sheets are in Appendix A.

3.2 GROUNDWATER SAMPLING

Groundwater samples were collected from 72 wells at the DRA site in April–August 2012. Additionally, groundwater samples were collected using passive diffusion bags (PDBs) at different depths to compare with the low flow-sampling results for two wells with long well screens. Wells sampled during this round are listed in Table 3-1 and shown in Figure 3-1. The following sections outline well purging, sampling, and analytical procedures.

Well purging—Monitoring wells were purged using low-flow purging techniques before sample collection. Groundwater was purged using a peristaltic pump fitted with dedicated, disposable Teflon®-lined tubing, or by using a submersible pump positioned in the center of the well's saturated screen. The pumping rate during purging ranged between 100–300 milliliters per minute (mL/min) and was constantly measured using a graduated cylinder. The purge rate was adjusted

(but not allowed to fall below 100 mL/min) to minimize groundwater drawdown from the initial static water level.

During groundwater purging, water level drawdown measurements and groundwater parameters (including pH [a measure of acidity and alkalinity], temperature, specific conductance, dissolved oxygen [DO], oxidation reduction potential [ORP], and turbidity) were collected every five to 10 minutes until purging was complete. Data were recorded in the appropriate site-specific logbook and on low flow purge data sheets. Water quality parameters were measured using an inline water quality meter. Turbidity readings were collected using a separate turbidity meter.

Purging was considered complete when the monitored water quality parameters stabilized, when three saturated well-casing volumes had been removed, or when the well had been purged dry. Stabilization was considered achieved when three consecutive readings, taken at five minute intervals, were within ±0.1 standard units for pH, ±3% for specific conductance and temperature, ±10% for DO and ORP, and less than 10 nephelometric turbidity units (NTUs) for turbidity. If the monitoring well was purged dry, the water level in the well was allowed to recover a minimum of 80% of its initial static water level before groundwater sampling. Well purging and sample record sheets are in Appendix B. All purged water was collected in U.S. Department of Transportation (USDOT)-approved 55-gallon steel drums, which were properly labeled and staged at a location approved by the Maryland Air National Guard (MDANG) and Lockheed Martin Corporation (Lockheed Martin).

Sample collection—Monitoring wells were sampled after purging using the same dedicated tubing or submersible pump as had been used during purging. Groundwater samples were collected using low-flow sampling protocols at the same pumping rate as had been used during well purging. Groundwater was pumped directly into the appropriate sample containers (including all volatile organic compound [VOC] samples), or into a certified-clean disposable container (supplied by the laboratory), which was then used to pour the collected water directly into the appropriate sample containers.

Additional sampling of monitoring wells MW-4 and MW-5—In response to the Maryland Department of the Environment's (MDE's) request to collect depth-discrete samples from two monitoring wells with long screen intervals, wells MW-4 and MW-5 were sampled for VOCs with low-flow purge and sampling methods at three different depths using the previously installed

dedicated bladder pumps. The three depth intervals for sampling included the bottom third of the screen interval, the midpoint of the screen interval, and the top third of the screen interval. Based on the reported location of the deployed bladder pumps near the bottom of the screened interval, the first sample was collected in a manner to replicate previous sampling efforts (i.e., the pump was not moved). After collecting the deepest sample, the bladder pump was slowly raised to the midpoint of the well screen to collect the second sample. The third low-flow sample was collected after moving the bladder pump to the upper third of the screened interval.

At each depth, sufficient purging was conducted with minimal drawdown to obtain stabilized water quality parameters in the field. Following the low-flow sampling at wells MW-4 and MW-5, passive diffusion bags (PDBs) were installed at the same three depths sampled via the low-flow methods. The PDBs were retrieved after a minimum of two weeks equilibration time, and water from each PDB was placed in sample containers and sent to an off-site laboratory for VOC analysis.

3.3 LABORATORY ANALYSES

Groundwater samples were collected and later analyzed at an off-site laboratory using the following methods (see Table 3-1 for details):

- VOCs plus tentatively identified compounds (TICs) Freon 22 (chlorodifluoromethane) and Freon 113 by U.S. Environmental Protection Agency (USEPA) Method 8260C (72 monitoring wells)
- two additional VOC samples from wells MW-4 and MW-5 collected via low-flow pumping in response to an MDE request for depth discrete sampling
- three additional VOC samples from wells MW-4 and MW-5 collected via PDBs for a total of six PDB VOC samples, in response to an MDE request for depth discrete sampling and PDB sampling
- 1,4-dioxane by USEPA Method 8270C SIM (72 monitoring wells)
- total and dissolved Priority Pollutant metals by USEPA Methods 6020B and 7470A (7470A used for mercury) (72 monitoring wells)
- hexavalent chromium by USEPA Method 218.6 (71 monitoring wells)
- perchlorate by USEPA SW846 Method 314 (72 monitoring wells)

- haloacetic acids by USEPA Method 552.1-552.4—three monitoring wells (DMW-2S, DMW-3S, and DMW-5S) screened in the upper surficial aquifer near Frog Mortar Creek

- total petroleum hydrocarbon (TPH)-diesel-range organics (DRO) and TPH-gasoline-range organics (TPH-GRO) by SW846 Method 8015B—31 monitoring wells screened in the upper surficial aquifer

- radium-228 and total radium by method RL-RA-001—11 monitoring wells: three wells each screened in the upper, intermediate, and deep surficial aquifer zones, and two wells screened in the deep confined aquifer

- cyclotrimethylene trinitramine (also known as Royal Demolition Explosive [RDX])—nine upper surficial aquifer monitoring wells

- natural attenuation assessment (NAA) parameters by USEPA SW846 protocols—six groundwater samples analyzed for the following NAA parameters: alkalinity, ammonia, nitrogen, total chloride, dissolved organic carbon, nitrate, nitrite, orthophosphate, sulfate, total dissolved solids, total calcium, total iron, total magnesium, total manganese, total potassium, and total sodium

- six groundwater samples for dissolved gases methane, ethane, and ethene analyzed using Microseeps® AM 20GAX protocols

Samples were analyzed by TestAmerica, Inc. of North Canton, Ohio. Hexavalent chromium was analyzed by Columbia Analytical Services of Rochester, New York. No duplicates were collected during this investigation due to acceptable analytical precision and accuracy in previous sampling rounds. Trip-blank samples were analyzed for VOCs for quality assurance and quality control purposes. Trip blanks were submitted at a rate of one per cooler of VOCs per day. Matrix spike/matrix spike duplicate samples were collected and analyzed on a 1:20 basis. A table listing the chemical results of all samples is in Appendix C. Sampling chemical results are discussed in Section 4.

3.4 DOCUMENTATION

A master site logbook was maintained as an overall record of field activities. Sample documentation consists of completed chain of custody (COC) reports and matrix specific sample log sheets. The COC report is a standardized form summarizing and documenting pertinent sample information such as sample identification and type, matrix, date and time of collection, preservation, and requested analyses. Sample custody procedures document sample acquisition and integrity. COC reports are in the data validation reports in Appendix D.

3.5 EQUIPMENT DECONTAMINATION

Reusable equipment (e.g., water level meter) was decontaminated before and after each use. Small, reusable equipment was decontaminated as follows:

- Liquinox® and potable water wash
- potable water rinse
- distilled water rinse
- air drying
- collecting decontamination solutions for disposal

Decontamination rinsate was transferred to 55-gallon drums staged at a facility-approved location. Dedicated and/or disposable equipment was used for groundwater purging and sampling and did not require decontamination.

3.6 WASTE MANAGEMENT

Investigation-derived waste (IDW) consisting of decontamination rinsate water, monitoring well purge water, and personal protective equipment (PPE) was generated during groundwater characterization. PPE was brushed off, placed in trash bags, and disposed of in a facility trash receptacle. Dedicated and disposable equipment was also rinsed off and disposed of in a facility trash receptacle. Well purge water was collected and stored in USDOT-approved 55-gallon drums. All drums were properly labeled and logged on a drum inventory form. The drums were profiled and removed from the site as nonhazardous waste. Waste forms and bills of lading are in Appendix E.

3.7 GENERAL SAMPLING PROCEDURES, NOMENCLATURE, AND HANDLING

A master site logbook was maintained at the site as an overall record of field activities. Each sample received a unique sample identification consisting of the site location, well number, and a six-digit sampling date. For example, a groundwater sample collected on April 25, 2012 from monitoring well MSA-DMW-1A was labeled "MSA-DMW1A-042512." Trip blanks (TB) were labeled with a "TB" prefix followed by a six-digit submittal date (e.g., TB-042512). Field related

sample handling considerations include selection of sample containers, preservatives, allowable holding times, and requested analyses.

Proper custody procedures were followed throughout all phases of sample collection and handling. COC protocols were used throughout sample handling to document the integrity of sample containers. Such protocols demonstrate that the samples were handled and transferred in a manner that would prevent or detect tampering.

Empty sample containers were released under signature from the laboratory and accepted under signature by the sampler or other individual responsible for maintaining custody until the sample containers were transferred to the sampling team. Groundwater samples were collected in these containers, released under signature from the sampling team, and then accepted under signature by the laboratory. Transport containers returning to the laboratory were sealed with strapping tape and a tamper resistant custody seal. The custody seal shows the signature of the individual releasing the transport container, along with the date and time.

3.8 DATA VALIDATION

Data validation involves having a party independent from the laboratory review data provided by the laboratory to ensure that specific criteria were met. These criteria concern specifications that are not sample dependent; they specify performance requirements that should be fully under a laboratory's control. For data analyses of organic chemicals, specific validation areas include blanks, performance evaluation standard materials, and instrument performance checks. For data analyses involving inorganic chemicals, specific validation areas include blanks, calibration standards, calibration verification standards, laboratory control standards, and interference check standards. The analytical laboratory supplies the chemical data as hard-copy reports and electronic databases.

Once the investigation was complete, chemical data were validated by Tetra Tech, Inc. (Tetra Tech) in accordance with established USEPA protocols to assess the reliability and accuracy of the data. This review was based on the USEPA Region 3 modifications to the *National Functional Guidelines for Data Review* (USEPA, 1993 and 1994) and the specifics of the analytical method used. Data validation reports are in Appendix D (on compact disc).

Collectively, these data are acceptable for their intended use, except for data that have been qualified as unreliable. These qualifier flags appear in the chemical results tables in Section 4 and Appendix C. For this validation, the following data qualifiers (i.e., flags) were applied to the chemical results presented in this report:

B The analyte was not detected substantially above the level reported in the laboratory or field blank (i.e., the result is considered an artifact of the laboratory analysis and is not considered a site contaminant).

U Not detected. The analyte is considered not detected at the reported value.

J The analyte is considered present in the sample. However, the value is estimated and may not be accurate or precise.

K The analyte is considered present in the sample. However, the value is biased high and the actual value is expected to be lower than the reported value.

L The analyte is considered present in the sample. However, the value is biased low and the actual value is expected to be higher than the reported value.

NJ The analyte has been tentatively identified. This qualifier indicates presumptive evidence of a compound. Special methods may be required to confirm its presence or absence in future sampling efforts.

UR The result is considered qualitatively or quantitatively unreliable.

UJ The analyte was not detected. However, the quantitation or detection limit may be inaccurate or imprecise.

UL The analyte was not detected. However, the quantitation or detection limit is likely greater than the reported value.

Common laboratory or field contaminants may occasionally be detected in the samples. Analysis of quality control blanks and other internal laboratory blanks (e.g., method blanks, etc.) helps determine the significance of the analytical results versus possible laboratory or field contaminants. Common laboratory contaminants for VOCs include acetone, methylene chloride, and 2-butanone. According to the *National Functional Guidelines*, any compound other than common laboratory contaminants that is detected in both the sample and an associated blank must be qualified (i.e., "*B*" flag) when the sample concentration is less than five times the blank concentration.

In this investigation, for the common laboratory contaminants listed above, results were qualified with a "*B*" flag when the sample concentration was less than 10 times the blank concentration. In addition to the common laboratory blanks listed above, in many instances several common metals were reported as blank contamination. Qualified results are in the chemical tables in Section 4 and Appendices C and D.

TABLE 3-1

LIST OF SAMPLED GROUNDWATER MONITORING WELLS AND CHEMICAL ANALYSES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

Monitoring Well	Analytical Requirements											
	VOCs (TICs, Freon 22, Freon 112) (EPA 8260B)	1,4-Dioxane (EPA 8270C SIM)	Perchlorate (EPA 314)	Total PPM (EPA 6020B)	Dissolved PPM (EPA 6020B)	Mercury (EPA 7471)	Hexavalent Chromium EPA 216.8	TPH-GRO and TPH-DRO (EPA 8015B)	Radium-228 and total radium (EPA 900 Series)	Haloacetic Acids (EPA 552.1, .2, .3, or .4)	Natural Attenuation Parameters (see below)	RDX (EPA 8330A)
Upper Surficial-Aquifer												
MW-3	X	X	X	X	X	X	X	X	X			
MW-4	X	X	X	X	X	X	X	X				X
MW-5	X	X	X	X	X	X	X	X				X
MW-6	X	X	X	X	X	X	X	X				
DMW-1S	X	X	X	X	X	X	X	X				
DMW-2S	X	X	X	X	X	X	X	X		X		
DMW-3S	X	X	X	X	X	X	X	X		X		X
DMW-4S	X	X	X	X	X	X	X	X				
DMW-5S	X	X	X	X	X	X	X	X		X		
DMW-6S	X	X	X	X	X	X	X	X	X			
DMW-7S	X	X	X	X	X	X	X	X				
DMW-8S	X	X	X	X	X	X	X	X				
DMW-9S	X	X	X	X	X	X	X	X			X	X
DMW-10S	X	X	X	X	X	X	X	X				
DMW-11S	X	X	X	X	X	X	X	X			X	
MW-15S	X	X	X	X	X	X	X	X				X
MW-16S	X	X	X	X	X	X	X	X	X			X
MW-17S	X	X	X	X	X	X	X	X				X
MW-18S	X	X	X	X	X	X	X	X			X	X
MW-20S	X	X	X	X	X	X	X	X				X
MW-23S	X	X	X	X	X	X	X	X				
MW-24S	X	X	X	X	X	X	X	X				
MW-25S	X	X	X	X	X	X	X	X				
MW-26S	X	X	X	X	X	X	X	X				
MW-32S	X	X	X	X	X	X	X	X				
MW-33S	X	X	X	X	X	X	X	X				
MW-34S	X	X	X	X	X	X	X	X				
MW-35S	X	X	X	X	X	X	X	X				
MW-36S	X	X	X	X	X	X		X				
MW-37S	X	X	X	X	X	X	X	X				
MW-38S	X	X	X	X	X	X	X	X				
MW-39S	X	X	X	X	X	X	X	X				

TABLE 3-1

LIST OF SAMPLED GROUNDWATER MONITORING WELLS AND CHEMICAL ANALYSES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

Monitoring Well	Analytical Requirements											
	VOCs (TICs, Freon 22, Freon 112) (EPA 8260B)	1,4-Dioxane (EPA 8270C SIM)	Perchlorate (EPA 314)	Total PPM (EPA 6020B)	Dissolved PPM (EPA 6020B)	Mercury (EPA 7471)	Hexavalent Chromium EPA 216.8	TPH-GRO and TPH-DRO (EPA 8015B)	Radium-228 and total radium (EPA 900 Series)	Haloacetic Acids (EPA 552.1, .2, .3, or .4)	Natural Attenuation Parameters (see below)	RDX (EPA 8330A)
Intermediate Surficial-Aquifer												
DMW-1A	X	X	X	X	X	X	X					
DMW-2A	X	X	X	X	X	X	X					
DMW-3I	X	X	X	X	X	X	X		X			
DMW-4I	X	X	X	X	X	X	X					
DMW-5I	X	X	X	X	X	X	X					
DMW-6I	X	X	X	X	X	X	X		X			
DMW-8I	X	X	X	X	X	X	X					
DMW-9I	X	X	X	X	X	X	X				X	
DMW-11I	X	X	X	X	X	X	X					
MW-14I	X	X	X	X	X	X	X					
MW-15I	X	X	X	X	X	X	X					
MW-16I	X	X	X	X	X	X	X		X			
MW-17I	X	X	X	X	X	X	X					
MW-18I	X	X	X	X	X	X	X				X	
MW-19I	X	X	X	X	X	X	X					
MW-20I	X	X	X	X	X	X	X					
MW-24I	X	X	X	X	X	X	X					
MW-25I	X	X	X	X	X	X	X					
MW-28I	X	X	X	X	X	X	X					
MW-30I	X	X	X	X	X	X	X					
MW-32I	X	X	X	X	X	X	X					
MW-33I	X	X	X	X	X	X	X					
MW-34I	X	X	X	X	X	X	X					
Lower Surficial-Aquifer												
DMW-1B	X	X	X	X	X	X	X					
DMW-3D	X	X	X	X	X	X	X		X			
DMW-4D	X	X	X	X	X	X	X					
DMW-6D	X	X	X	X	X	X	X		X			
DMW-8D	X	X	X	X	X	X	X					
DMW-9D	X	X	X	X	X	X	X				X	
MW-14D	X	X	X	X	X	X	X					
MW-15D	X	X	X	X	X	X	X					
MW-16D	X	X	X	X	X	X	X		X			
MW-19D	X	X	X	X	X	X	X					
MW-20D	X	X	X	X	X	X	X					
MW-22D	X	X	X	X	X	X	X					
MW-23D	X	X	X	X	X	X	X					

TABLE 3-1

LIST OF SAMPLED GROUNDWATER MONITORING WELLS AND CHEMICAL ANALYSES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

Monitoring Well	Analytical Requirements											
	VOCs (TICs, Freon 22, Freon 112) (EPA 8260B)	1,4-Dioxane (EPA 8270C SIM)	Perchlorate (EPA 314)	Total PPM (EPA 6020B)	Dissolved PPM (EPA 6020B)	Mercury (EPA 7471)	Hexavalent Chromium EPA 216.8	TPH-GRO and TPH-DRO (EPA 8015B)	Radium-228 and total radium (EPA 900 Series)	Haloacetic Acids (EPA 552.1, .2, .3, or .4)	Natural Attenuation Parameters (see below)	RDX (EPA 8330A)
Deep Wells												
MW-27D	X	X	X	X	X	X	X		X			
MW-29D	X	X	X	X	X	X	X		X			
MW-30D	X	X	X	X	X	X	X					
MW-31D	X	X	X	X	X	X	X					

EPA - Environmental Protection Agency (U.S.)
DRO - diesel-range organics
GRO - gasoline-range organics
PPM - Priority Pollutant metals
RDX - royal demolition explosive
SIM - selected ion monitoring
TICs - tentatively identified compounds
TPH - total petroleum hydrocarbons
VOCs - volatile organic compounds
Natural Attenuation Parameters: nitrate, nitrite, ammonium nitrogen, phosphate, sulfate, total alkalinity, dissolved organic carbon, total iron, total calcium, total manganese, total potassium, total manesium, total chloride, total silica, and total dissolved soilds. Methane, ethane, and ethene.

Wells not Sampled:
RW1S
OW1S
MW2
DMW7I
MW10I
MW21I
MW23I
MW26I
DMW2B
DMW5D
DMW7D
MW17D

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater monitoring well locs_figure 3-1 073012.mxd)
7/30/2012 -- 10:43:25 AM



FIGURE 3-1

GROUNDWATER MONITORING WELL SAMPLE LOCATIONS, 2012

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL SAMPLED
- DEEP CONFINED AQUIFER WELL SAMPLED
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

(not sampled) - Indicates well not sampled if symbol is obscured for this well.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 7/30/12

CREATED BY: MP

TETRA TECH

Section 4
Results

This section presents the groundwater elevation data and chemical analytical results for the 2012 groundwater sampling and analysis program at the Dump Road Area (DRA) of Martin State Airport (MSA) in Middle River, Maryland. Sixty-eight upper, intermediate, and lower surficial aquifer monitoring wells and four deep confined aquifer monitoring wells were sampled in this round. These results were screened against the Maryland Department of the Environment's (MDE's) current groundwater standards (MDE, 2008) and other state standards/criteria where MDE has not established standards.

At present, MDE has not established an advisory level or standard for 1,4-dioxane in drinking water or groundwater. Several states (e.g., California, Colorado, Connecticut, Florida, Maine, Massachusetts, Michigan, and North Carolina) have established drinking water standards or action levels for 1,4-dioxane. These values range from California's action level of 3 micrograms per liter (µg/L) to Michigan's drinking water standard of 85 µg/L (U.S. Environmental Protection Agency [USEPA], 2006 and 2009). USEPA has also published a risk-based preliminary remedial goal of 6.1 µg/L for 1,4-dioxane in tap water (USEPA, 2011). In this report, the current advisory level or standard that is most protective of human health is used as a comparison criterion to evaluate groundwater concentrations of 1,4-dioxane at the Dump Road Area (DRA) site. Therefore, the California Department of Health Services advisory level of 3 µg/L for 1,4-dioxane is used herein as the groundwater screening level for 1,4-dioxane.

4.1 GROUNDWATER LEVEL DATA

Table 4-1 presents the April 2012 groundwater level measurements and computed groundwater elevations for the DRA wells sampled. Figures 4-1 through 4-3 show the April 2012 groundwater-elevation contour maps for the upper, intermediate, and lower surficial aquifer zones, respectively. Figure 4-4 shows a groundwater elevation contour map for the deep confined aquifer zone. As presented in Table 4-1, static groundwater levels measured in these groundwater monitoring wells are reported at depths measured from the top of the well casings. Accounting

for well casing stick up for the aboveground well casing risers, and well stick down for flush mounted well designs, depth to groundwater ranges from approximately five to 19 feet below grade in each of the upper, intermediate, and lower surficial aquifer wells. Shallow groundwater is encountered in the western part of the site near the airport runway; deeper groundwater is found in the eastern portion of the site.

As shown in Figures 4-1 through 4-3, groundwater in the upper, intermediate, and lower surficial aquifer generally flows east–northeast from the runway and taxiway to Frog Mortar Creek. Elevated groundwater at DMW-3S and MW-39S (Figure 4-1) indicates local groundwater mounding east and northeast of Pond 1. Wells DMW-3S and MW-39S are installed in a clay-rich zone above the more permeable sands where the surrounding wells are installed. Therefore, groundwater levels in these wells may reflect localized perched groundwater in this portion of the DRA. Groundwater in the deep confined aquifer (Figure 4-4) flows southeast. The southeasterly flow in the deep confined aquifer is consistent with previous rounds of groundwater level data collected for these wells, except for the 2011 levels that indicated an easterly flow.

4.2 GROUNDWATER CHEMICAL DATA

Groundwater samples were collected from 72 wells in 2012 to evaluate the horizontal and vertical extent of contamination and contaminant trends at the DRA, and to evaluate the use of passive diffusion bag (PDB) samplers. Analytical results and validated data are in Appendices C and D, respectively. Validated groundwater chemical data were used to generate a statistical summary table (Table 4-2), showing only those chemical analytes detected in the 2012 DRA groundwater samples and, for each analytical group, listing them from most to least frequently detected. Table C-1 in Appendix C is similar to Table 4-2, but it summarizes both detected and non-detected results. For wells MW-4 and MW-5, sampling results for only the deepest low-flow samples are included in Table 4-2, which is consistent with summary tables for previous sampling rounds. The results of the additional low-flow samples and PDB samples for MW-4 and MW-5 are provided in a separate section below.

A positive detections (or “hits”) table was also generated from these data (Table 4-3). Gray shading in Table 4-3 indicates results exceeding MDE groundwater standards or the California advisory level of 3 µg/L for 1,4-dioxane. Table C-2 in Appendix C presents all analytical data,

including non-detects. Data validation reports and chain of custody forms are on compact disc (CD) in Appendix D. The following sections discuss the results of the groundwater chemical analyses.

4.2.1 VOCs

Table 4-2 shows that a wide range of volatile organic compounds (VOCs) was detected in groundwater. Tables 4-2 and 4-3 show that *cis*-1,2-dichloroethene (*cis*-1,2-DCE), trichloroethene (TCE), and vinyl chloride (VC) are the most frequently detected VOCs in groundwater; these chlorinated VOCs (cVOCs) were detected in 67%, 64%, and 60% of the samples collected, respectively. The maximum detected concentrations of TCE (16,000 micrograms per liter [µg/L]), *cis*-1,2-DCE (27,000 µg/L), and VC (11,000 µg/L) are several orders of magnitude greater than their groundwater standards of 5 µg/L, 70 µg/L, and 2 µg/L, respectively. Petroleum-related VOCs (such as benzene, toluene, ethylbenzene, and xylenes [BTEX]) were detected less frequently in 3% (ethylbenzene) to 31% (benzene) of samples, and at lower concentrations relative to their groundwater standards than the cVOCs (e.g., maximum benzene at 280 µg/L with a standard of 5 µg/L).

The 2012 results for the three predominant cVOCs in groundwater are shown in Figures 4-5, 4-6, and 4-7 for the upper, intermediate, and lower surficial aquifer zones, respectively. Concentrations of benzene detected in groundwater for all wells sampled are shown in Figure 4-8. Benzene is shown on Figure 4-8 because it is the most frequently detected petroleum VOC in groundwater at the DRA. *cis*-1,2-DCE, VC, and BTEX were not detected in the deep confined aquifer zone (i.e., wells MW-27D, MW-29D, MW-30D, and MW-31D); therefore, these VOCs for the deep confined aquifer wells are not shown in a figure herein. At deep confined aquifer well MW-29D, TCE was detected at a low concentration of 0.47 µg/L, which is below the groundwater standard of 5 µg/L.

Results of the current round of sampling and analyses confirm those of previous groundwater sampling rounds, with some variations in contaminant concentrations. The lateral and vertical distributions of cVOC concentrations in groundwater (as shown in Figures 4-5 through 4-7) indicate several source areas at the site contributing to three primary groundwater plumes and various smaller or lower concentration plumes, as discussed in Section 2. These plumes include

the Drum Area plume, the Petroleum Hydrocarbon and Pond 1 Area plume, and the Taxiway Tango Median Area plume (see Figure 2-1 for locations of these areas).

4.2.1.1 Drum Area Plume

This VOC plume is in the southern portion of the site between wells MW-2/MW-19, MW-5/DMW-7, and DMW-4, DMW-5, and DMW-6. In the areas of MW-2/MW-19, MW-5/DMW-7, and DMW-5, the greatest concentrations of VOCs are reported for the upper surficial aquifer wells, which have one or more of the three primary cVOCs (TCE, *cis*-1,2-DCE, and VC) in excess of groundwater standards (see Figures 4-5 through 4-7 and Table 4-2). Well DMW-7S typically has had the highest historical total concentration of the three cVOCs found in this area (e.g., 33,400 µg/L in 2007). In 2012, well DMW-7S had a TCE concentration of 4,700 µg/L, and the highest total cVOC concentration (21,900 µg/L) detected in the Drum Area.

The three primary VOCs were also detected in the intermediate surficial aquifer wells (Figure 4-6) at concentrations generally less than in the upper surficial aquifer wells and at levels exceeding groundwater standards. One exception to this is well DMW-4I, where the concentrations of the three cVOCs in the intermediate surficial aquifer are two to 56 times greater than those of the upper surficial aquifer. Historically, VOC concentrations detected in the lower surficial aquifer wells are generally lower and less widespread than in the intermediate surficial aquifer zone in this area. An exception to this is DMW-4D, where TCE was detected at a concentration of 4,700 µg/L (Figure 4-7), which is slightly greater than the TCE concentration detected at intermediate surficial aquifer well DMW-4I (4,100 µg/L); these results are comparable to TCE concentrations reported for several wells in the upper surficial aquifer in this area.

As shown in Table 4-2 and Figures 4-5 through 4-7, TCE concentrations detected in the Drum Area plume range from 0.57 µg/L at DMW-6S to 7,500 µg/L at DMW-5S. For *cis*-1,2-DCE, concentrations detected in the Drum Area plume range from 1.4 µg/L at DMW-6S to 15,000 µg/L at DMW-7S. Concentrations of VC detected in the Drum Area plume range from 6.6 µg/L at DMW-5I to 2,200 µg/L at DMW-7S (Figures 4-5 and 4-6). Benzene was detected at intermediate surficial aquifer well MW-19I (0.74 µg/L) at a concentration less than the MDE groundwater standard of 5 µg/L (Figure 4-8).

4.2.1.2 Petroleum Hydrocarbon and Pond 1 Area Plume

This VOC plume is in the central portion of the site in the area of well DMW-9 and Pond 1 (Figures 4-5 through 4-7). The downgradient wells for this plume extend eastward to Frog Mortar Creek to well clusters DMW-2 and DMW-3. Contamination at well cluster DMW-4 is likely caused by the overlap of the Petroleum Hydrocarbon and Pond 1 Area plume and the Drum Area plume. In the Petroleum Hydrocarbon and Pond 1 Area plume, the greatest concentrations of VOCs are reported for the intermediate surficial aquifer wells (Figures 4-5 through 4-7; Table 4-2), where most wells have concentrations of TCE, *cis*-1,2-DCE, and VC in excess of groundwater standards. However, some of the higher concentrations of *cis*-1,2-DCE (4,400 µg/L), and VC (11,000 µg/L) detected in this plume area are at well DMW-9S, in the upper surficial aquifer zone. TCE was detected at high concentrations in wells DMW-9S, DMW-9I, and DMW-9D (120 µg/L, 1,000 µg/L, and 2,500 µg/L, respectively) in comparison to surrounding wells in the Petroleum Hydrocarbon Area.

TCE was reported at concentrations in excess of the MDE groundwater standard at several wells north and west of Pond 2. This includes concentrations of TCE ranging from 50 to 830 µg/L reported for wells MW-14I through MW-17I (Figure 4-6). Detected concentrations of *cis*-1,2-DCE and VC at MW-34S/I, and TCE concentrations at MW-33S, MW-15S, and MW-15I, suggest an extension of this contaminant plume northwest of wells DMW-9S/I/D. Results from wells MW-14I, MW-16I, and MW-17I (Figure 4-6) indicate that VOC contamination at concentrations exceeding groundwater standards likely extends north beneath the Maryland Air National Guard Armory area.

As shown in Figure 4-8, the maximum benzene concentration for the DRA was detected in the Petroleum Hydrocarbon and Pond 1 Area plume at well DMW-9S (280 µg/L); this concentration is more than 50 times higher than the groundwater standard of 5 µg/L. Other wells in this area with benzene exceedances are MW-20S (23 µg/L), DMW-9I (21 µg/L), MW-26S (18 µg/L), MW-14I (12 µg/L), DMW-9D (11 µg/L), MW-16S (8.9 µg/L), and MW-28I (8 µg/L). Benzene was not detected in wells DMW-2S, DMW-2A, DMW-3S/I/D, and MW-18S/I, all east and hydraulically downgradient of DMW-9S/I/D.

4.2.1.3 Taxiway Tango Median Area Plume

The Taxiway Tango Median Area plume is in the western portion of the site in the upper surficial aquifer, near well DMW-11S (Figures 4-5 through 4-7; Table 4-2). The downgradient extent of this plume appears both horizontally and vertically limited. However, the upgradient boundary of this area of TCE contamination had been undetermined until 2011, when new wells (MW-37S and MW-38S) were installed southwest of DMW-11S in June 2011.

In 2012, TCE, *cis*-1,2-DCE, and VC are reported at well DMW-11S at concentrations of 16,000 µg/L, 27,000 µg/L, and 4,200 µg/L, respectively (Figure 4-5). The TCE and *cis*-1,2-DCE concentrations are lower than the 2004 concentrations of these contaminants (52,000 µg/L and 53,000 µg/L for TCE and *cis*-1,2-DCE, respectively); however, the VC concentration of 4,200 µg/L is nearly double its 2004 concentration of 2,400 µg/L. These results indicate that natural attenuation is occurring in this area of the DRA. Only trace to low concentrations of *cis*-1,2-DCE and VC (below MDE groundwater standards) are reported in the intermediate well DMW-11I in this area (Figure 4-6). However, a TCE concentration of 19 µg/L detected in this well indicates a substantial increase from previous rounds, when TCE concentrations were typically less than 1 µg/L. At MW-3 (the closest well downgradient of DMW-11S), concentrations of TCE and VC also decreased from 2004 to 2012: concentrations in 2004 of TCE (100 µg/L) and VC (2,400 µg/L) have decreased significantly in 2012 (to 5.4 µg/L and 14 µg/L, respectively). Only a trace concentration of TCE (0.24 µg/L) was detected at MW-22D (Figure 4-7), which is the lower surficial aquifer well co-located as a cluster with MW-3.

As shown in Figure 4-8, the maximum benzene concentration for the Taxiway Tango Median Area was detected at well DMW-1B (16 µg/L); this concentration is three times greater than the groundwater standard of 5 µg/L. Benzene was also detected at wells MW-23S (2.5 µg/L) and MW-24S (0.17 µg/L), but at concentrations below its groundwater standard (Figure 4-8). Benzene was not detected at MW-3, MW-36S, MW-25S/I, DMW-11S/I, MW-22D, MW-37S, MW-38S, MW-24I, MW-30I, and DMW-1A. MW-22I and MW-23I were not sampled this round because prior sampling results indicate VOCs at concentrations below groundwater standards.

4.2.1.4 Deep Confined Aquifer Wells

Results for the first set of groundwater samples collected in 2008 from the deep confined aquifer wells (wells MW-27D, MW-29D, MW-30D, and MW-31D) indicated trace concentrations of

BTEX less than groundwater standards. However, TCE, *cis*-1,2-DCE, VC, and other cVOCs were not detected in the 2008 samples. The deep wells were resampled in 2009 and 2010. BTEX, TCE, *cis*-1,2-DCE, VC, and other cVOCs were not detected in the 2009 and 2010 deep well samples. The 2011 sampling results confirm those of 2009 and 2010. In 2011, BTEX, TCE, *cis*-1,2-DCE, VC, and other VOCs were not detected in the deep confined aquifer wells MW-27D, MW-30D, MW-29D, and MW-31D. TCE was detected in 2012 at a trace concentration of 0.47 µg/L at MW-29D (Figure 4-7 and Table 4-3).

4.2.1.5 Concentration Trends for Primary Chlorinated VOCs

Figures 4-9 through 4-14 are long-term time-series plots of TCE, *cis*-1,2-DCE, and VC for 14 selected wells. These wells represent conditions for the Drum Area plume (Figures 4-9, 4-10, and 4-13; wells DMW-7S, MW-5, DMW-7I, DMW-7D, DMW-4I, DMW-4D, and DMW-5S), the Petroleum Hydrocarbon and Pond 1 Area plume (Figures 4-11 and 4-14; wells DMW-9S, DMW-9I, DMW-9D, DMW-3S, and DMW-3I), the Taxiway Tango Median Area plume (Figure 4-12; DMW-11S), and an area of high VOC concentrations south of Pond 1 (Figure 4-12; DMW-1A).

As shown in Figure 4-9, source area concentrations of TCE and *cis*-1,2-DCE for the Drum Area plume (wells DMW-7S and MW-5) decreased substantially from 2004 to 2006–2007. TCE increased sharply at DMW-7S from 2006 to 2007 and at MW-5 from 2007 to 2008. At DMW-7S, the 2012 results indicate decreased TCE and *cis*-1,2-DCE concentrations. At MW-5, TCE fluctuated below 100 µg/L, and *cis*-1,2-DCE increased slightly from 2007 to 2012. VC concentrations at MW-5 increased somewhat over the monitoring period, in response to the degradation of *cis*-1,2-DCE, as indicated by the decreasing *cis*-12-DCE concentrations over time. At MW-5, concentrations of TCE (the parent VOC) declined from levels as high as 35,000 µg/L (in 2004) to concentrations near the standard (5 µg/L) in 2007 through 2010 (i.e., 8.9 µg/L in 2007, and it was not detected in 2009–2010 using a detection limit of 11 µg/L). In 2012, TCE was again not detected at MW-5.

Likewise, in well DMW-7S, TCE concentrations decreased from more than 35,000 µg/L in 2004 to less than 10,000 µg/L in 2007. The concentration of TCE at MW-5 increased from not detected in 2009–2010 (detection limit of 11 µg/L) to 51 µg/L in 2011, and was not detected in 2012 (TCE was not detected in any of the three 2012 vertical profile low-flow pumping samples

or the three PDB samples collected at three depths). Concentrations of *cis*-1,2-DCE decreased in both wells from the early 2000s to 2006–2007; however, concentrations increased to near the 2005 level at DMW-7S in late 2007, while concentrations remained relatively stable at MW-5. VC concentrations have been relatively stable at DMW-7S throughout the early monitoring period 2003–2007. At DMW-7S, in 2012 VC was detected at a high concentration indicating more complete biodegradation of higher to lower chain cVOCs than was observed in 2007 and before. At well MW-5, overall VC concentrations have slightly increased.

Figure 4-10 shows moderately consistent cVOC concentrations at wells DMW-7I and DMW-7D, located in the Drum Area intermediate and lower surficial aquifer zones. VOC concentrations at DMW-7I decreased steadily after the first sampling round from September 2003 to June 2004. Concentrations of all three cVOCs increased steadily from 2006 to 2008, and reached concentrations similar to (but slightly greater than) the second and third quarterly rounds in December 2004 and March 2005. Increasing TCE concentrations observed at DMW-7I over the monitoring period never reached the maximum TCE concentration of 670 µg/L reported in the first round (September 2003). As shown in Figure 4-10, TCE was detected at 1 µg/L at DMW-7D during the first sampling round in September 2003. Chlorinated VOCs were not detected again at DMW-7D until 2006, TCE and *cis*-1,2-DCE were detected at low concentrations (less than 1 µg/L) from 2006 to 2008. VC was not detected at DMW-7D over the monitoring period.

As shown in Figure 4-11, wells in the cVOC source area for the Petroleum Hydrocarbon and Pond 1 Area (wells DMW9-S, DMW-9I, DMW-9D) generally show reductions in the concentrations of cVOCs since the 2003–2004 sampling rounds. One exception is an overall increase in VC concentrations at DMW-9S from 2004 to 2009, indicating increased biodegradation of *cis*-1,2-DCE at this VOC source area. From 2009 to 2012, VC concentrations at DMW-9S decreased steadily from 56,000 µg/L in 2009 to 11,000 µg/L in 2012. Additionally, TCE concentrations stabilized at DMW-9I from 2008 to 2011, but then increased 43% from 700 µg/L in 2011 to 1,000 µg/L in 2012. Overall, *cis*-1,2-DCE and VC trends at DMW-9S show an inverse relationship, indicating shorter term decreases in *cis*-1,2-DCE as it degrades, thereby increasing concentrations of VC.

At well DMW-11S (Figure 4-12), in the shallow source area of the Taxiway Tango Median Area plume, concentrations of TCE, *cis*-1,2-DCE, and VC have fluctuated but have generally

increased or remained somewhat constant from 2006 to 2010. TCE and *cis*-1,2-DCE at DMW-11S decreased to historically low concentrations in 2011–2012. At DMW-1A, where the maximum TCE concentration was greater than 10,000 µg/L in 2004, VOC concentrations have fluctuated, but a general decrease has occurred over time; in 2012, the TCE concentration at this well was 2,300 µg/L.

As shown in Figures 4-13 and 4-14, TCE concentrations in wells along the eastern site boundary (DMW-5S, DMW-3S/I, and DMW-4I/D) have fluctuated over time but generally decreased by less than an order of magnitude (less than a factor of 10). After an initial upward spiking of TCE concentrations in 2003–2004 at wells DMW-3S/I, DMW-4I, and DMW-5S, TCE concentrations decreased considerably in 2004. TCE concentrations then rebounded upward to approximately 50% of its initial (i.e., 2004) concentration in most of these wells in 2005 and 2006. Since the rebound peak in 2006, TCE concentrations have decreased steadily at DMW-4I (until 2012, when TCE increased), have decreased slightly at DMW-3I since 2009, and have fluctuated at approximately 5,000 µg/L (±1,000 µg/L) since 2004 at DMW-4D. At DMW-5S, TCE concentrations decreased by 50% from 2004 to 2007 but increased steadily after that, doubling from 5,000 to 10,000 µg/L between 2007 and 2010, and then decreased gradually in 2011–2012. Concentrations of *cis*-1,2-DCE and VC have fluctuated but have generally decreased or remained somewhat constant from 2006 to 2012 with the exception of well DMW-4D where *cis*-1,2-DCE doubled and well DMW-4I where VC increased by a factor of 25 between 2006 and 2012.

4.2.1.6 Natural Attenuation Assessment Parameters

In addition to the standard analyses for VOCs and BTEX, the laboratory also analyzed six groundwater samples for several natural attenuation assessment (NAA) parameters. These additional laboratory analyses include alkalinity, ammonia, chloride, dissolved organic carbon, nitrate, nitrite, orthophosphate, sulfate, total dissolved solids, calcium, iron, magnesium, manganese, potassium, sodium, and analysis for the dissolved gasses ethane, ethene, and methane. NAA parameters were also measured in the field. Field measurements include groundwater pH (a measure of acidity or alkalinity), oxidation reduction potential (ORP), dissolved oxygen (DO), and temperature. Ferrous iron was measured in the field using portable test kits. These results are in Table 4-4 and are briefly discussed in this report.

Groundwater samples for NAA parameters were collected from three wells in the upper surficial aquifer zone (DMW-9S, DMW-11S, and MW-18S), two wells in the intermediate surficial aquifer zone (DMW-9I and MW-18I), and one well in the lower surficial aquifer zone (DMW-9D). These wells are in VOC source areas (DMW-9S/I/D and DMW-11S) and a downgradient area with high parent-VOC concentrations (MW-18S/I). Well locations and major cVOC concentrations are shown in Figures 4-5 through 4-7.

As shown in Table 4-4, TCE is the primary parent cVOC at these wells. Tetrachloroethene was not detected in any of the six wells, and carbon tetrachloride was detected only at DMW-9I, at a low concentration (41 µg/L). Another parent solvent (1,1,1-trichloroethane) has been infrequently detected at the DRA at low concentrations in this and in past rounds (e.g., 130 µg/L at DMW-7S in 2012; 59 µg/L, 40 µg/L and 68 µg/L at DMW-4I in 2012, 2011 and 2009, respectively). However, 1,1,1-trichloroethane was not detected in the wells analyzed for NAA parameters. The NAA analyses, in combination with the time-series trend analyses in the previous section, evaluate whether anaerobic reductive dechlorination of cVOCs is occurring at the site and whether site conditions could be enhanced by adding electron donor and/or pH adjustments to stimulate anaerobic reductive dechlorination as part of the remedial alternatives evaluation.

Anaerobic reductive dechlorination is evident at the site, as shown by detection of the TCE breakdown product *cis*-1,2-DCE. The *cis*-1,2-DCE also appears to be degrading readily in the upper and intermediate zones, as indicated by the VC found at wells DMW-9S/I, DMW-11S, and MW-18S/I. Further, ethene concentrations greater than or near 10 µg/L at five of six wells, and elevated chloride concentrations at wells DMW-9S/I and MW-18S/I, indicate that complete mineralization of VOC contaminants is likely occurring at these locations. Methane concentrations at these wells also indicate anaerobic conditions. The presence of BTEX at DMW-9S and DMW-11S provides a carbon source that would be expected to enhance biodegradation of cVOCs at the Petroleum Hydrocarbon and Pond 1 Area plume, and to a lesser extent, the Taxiway Tango plume area.

Other NAA parameters indicate favorable conditions for reductive dechlorination in the upper and intermediate surficial aquifer zones in the areas sampled. High methane concentrations (greater than 500 µg/L) were detected at DMW-9S and DMW-9I; methane at DMW-11S (at

470 µg/L) is slightly under the favorable assessment criterion. The high methane concentrations at these locations indicate that fermentation is occurring, and that the potential for complete anaerobic dechlorination exists. Ferrous iron and nitrate concentrations at all wells, and groundwater pH levels for five of the wells (all but DMW-9D), indicate favorable conditions for degradation at the site. However, high ORP, high DO, high sulfate, and low temperatures at most locations may inhibit dechlorination reactions.

Concentrations of VC and ethene at DMW-9D also indicate breakdown of cVOC contaminants in the lower surficial aquifer zone, but the lower concentrations of VC and ethene relative to their higher chain VOCs suggest that slow or incomplete reductive dechlorination may be occurring there. The lower potential for reductive dechlorination in the lower surficial aquifer zone is also indicated by relatively low chloride, alkalinity, low pH and temperature, and high ORP and DO.

4.2.1.7 Tentatively Identified Compounds

Analysis of VOCs may sometimes indicate additional organic compounds not on the standard USEPA VOC *Target Compound List*. These additional compounds are shown as peaks on the chromatogram generated by the laboratory analysis. The laboratory attempts to identify the highest peaks using a computerized search of a library containing chemical mass spectra. When the mass spectra match, to a specific degree, the compound or general class of compounds is named and termed a tentatively identified compound (TIC). The assigned identity is, in most cases, highly uncertain. When no match can be made, the peak is labeled as an unknown TIC. No further evaluation is possible without identifying the chemical class of compounds to which it may belong. Soil and sediment samples typically contain the greatest number of TICs because soil and sediment can be composed of many complex organic compounds. However, groundwater and surface water samples can also contain a variety of TICs.

Tables 4-2 and 4-3 summarize the VOC TICs reported for the groundwater samples. (Table 4-2 does not include TICs for all PDB samplers and for shallow low-flow samples from MW-4 and MW-5; Table 4-3 includes TICS for these samples.) Appendix C lists the reported TICs by sample identifier and by the TIC name. More than 20 TICs were detected in the VOC samples collected for the 2012 investigation. TICs for this study are reported with the “NJ” data qualifier, indicating that these compounds are presumptively present but their exact identity is questionable. Furthermore, the concentrations reported for TICs are semi-quantitative. TICs were

detected infrequently, with any single TIC detected in only one sample or at most in 13 samples (Table 4-2). Most TICs were detected at low to trace concentrations. Cyclohexane and diethyl ether, two of the TICs detected, are solvents commonly used in laboratory analyses.

4.2.1.8 Low-Flow and Passive Diffusion Bag Samples

Table 4-5 shows the results of the low-flow purge and PDB samplers for wells MW-4 and MW-5. The relative percent differences (RPD) are shown for each VOC for the samples collected at the three depths in each well. Low-flow purge and PDB samples were collected near the top of each well screen, the midpoint of each well screen, and bottom of each well screen to evaluate potential vertical contaminant distributions that can occur when formation materials of varying permeability are screened or when long well screens are used.

The results in Table 4-5 generally indicate comparable results for detected VOCs at the three sampling depths in each well, and between samples collected via low-flow purging and the PDB samplers. TCE was not detected in any of the low-flow and PDB samples from MW-4 and MW-5. Low concentrations of benzene and several cVOCs were detected in the MW-4 samples for both methods. Higher concentrations of *cis*-1,2-DCE and VC were detected in MW-5 than in MW-4. Acetone and 2-butanone are common laboratory contaminants and were not used in the comparison.

All low-flow samples and the PDB-midpoint and screen bottom samples indicate similar concentrations at the various sampling depth interval in each well, and do not indicate substantial vertical profiling of VOCs at either well. However, VOC concentrations in the screen top PDB samples from MW-4 and MW-5 were consistently lower than the low-flow samples collected at the same depth, and were consistently lower than both deeper low-flow and PDB samples. At MW-4, the PDB-midpoint and bottom samples show VOC concentrations two to six times higher than the screen-top sample. At MW-5, concentrations of *cis*-1,2-DCE and VC for the midpoint and bottom samples were 1.3–2.3 times greater than the PDB screen-top sample. Similar constituent concentrations for the low-flow screen-top samples and deeper samples may be due to mixing of the water column and homogenization of chemical constituents in the screened interval when purging.

For the screen-top samples, the low-flow samples generally provide higher VOC concentrations that the PDB samples. However, for the midpoint and bottom samples from both wells, the PDB

samples generally provided VOC concentrations up to 70% higher than the low-flow samples collected. The low-flow and PDB results compare more favorably for higher VOC concentrations, as shown by generally lower RPDs for *cis*-1,2-DCE, trans-1,2-dichloroethene, and for VC at MW-5.

4.2.2 1,4-Dioxane

As shown in Table 4-2, 1,4-dioxane was detected in more than half (56%) of the 2012 groundwater samples, at concentrations ranging from 0.6 to 300 µg/L. The average 1,4-dioxane concentration detected is 53.6 µg/L. As shown in Figure 4-15, the highest concentrations occur primarily in the upper and intermediate surficial aquifer zones, with the highest concentrations occurring east of Pond 1 (DMW-2A at 300 µg/L and DMW-3I at 230 µg/L), west of Pond 1 (MW-20S at 240 µg/L and DMW-9I at 150 µg/L), and in the northernmost portion of the site (MW-16S at 210 µg/L). Substantially lower concentrations of 1,4-dioxane were reported for wells at the Drum Area plume (ranging from 1.3 to 89 µg/L at wells MW-6, DMW-5I, MW-5, MW-19I, DMW-5S, DMW-4S/I/D, and DMW-7S), and at the Taxiway Tango Median Area plume (1.9 to 93 µg/L at DMW-1S, MW-23S, MW-3, MW-11S, DMW-1B, and DMW-1A). 1,4-Dioxane was not detected in the deep confined aquifer groundwater samples (MW-27D, MW-29D, MW-30D, and MW-31D).

Concentrations of 1,4-dioxane in high concentration areas have generally decreased from 2009 to 2012. The greatest decrease is at well DMW-1A, where the 2009 concentration of 490 µg/L decreased to 91 µg/L in 2010; it remained steady in 2011 (93 µg/L) and then decreased again in 2012 (68 µg/L). At DMW-2A, the 1,4-dioxane concentration has decreased from 890 µg/L (2009) to 590 µg/L (2010) to 420 µg/L (2011) to 300 µg/L (2012). Substantial decreases in concentrations of 1,4-dioxane have also occurred at DMW-3I (from 1,100 µg/L [2009] to 390 µg/L [2010] to 300 µg/L [2011] to 230 µg/L [2012] and at MW-16S (from 790 µg/L [2009] to 330 µg/L [2010] to 220 µg/L [2011] to 210 µg/L [2012]).

1,4-Dioxane was also detected in lower surficial aquifer groundwater samples in an area co-located with the highest concentrations of VOCs. 1,4-Dioxane was detected south and southwest of Pond 1 along the VOC-plume longitudinal axis extending eastward from well DMW-1B (38 µg/L) to wells DMW-8D (47 µg/L) and DMW-4D (29 µg/L). The greatest concentration of 1,4-dioxane in this area is at well DMW-1B (68 µg/L). Well DMW-1A appears

to be near or in the source area for 1,4-dioxane in this area. 1,4-Dioxane was not detected in the lower surficial aquifer wells north and northwest of Pond 2, or in the lower surficial aquifer wells in the Taxiway Tango Median Area plume (e.g., MW-22D and MW-23D), and only at DMW-4D (29 µg/L) in the Drum Area plume. DMW-5D was not sampled in 2012, but 1,4-dioxane was not detected there in the 2007 and 2008 samples.

4.2.3 Metals

Table 4-2 summarizes detections of total metals (analysis of unfiltered groundwater samples) and dissolved metals (analysis of filtered groundwater samples). Table 4-6 summarizes metals concentrations that exceed MDE groundwater standards. As shown in Table 4-6, concentrations of 10 metals exceed groundwater standards in one or more groundwater samples.

As shown in Table 4-6, concentrations of total iron, total manganese, vanadium, arsenic, nickel, and cadmium exceed standards most frequently, with the maximum concentrations of total iron, total manganese, vanadium, and cadmium exceeding the standards by more than one order of magnitude. The maximum nickel concentrations (total and dissolved) exceed the standard by a factor of nearly eight. Concentrations of vanadium exceed the standard in 14.1–32.4% of the dissolved/total samples, with the maximum concentration of 210 µg/L exceeding the groundwater standard by more than one order of magnitude at well MW-24S.

Dissolved cadmium exceeds its standard in 16.9% (12 samples) of all samples, whereas dissolved nickel exceeds its standard in 23.9% (17 samples) of all samples. Figure 4-16 shows the maximum of the dissolved (filtered) and total (unfiltered) exceedances for cadmium, nickel, and vanadium. The greatest concentrations of cadmium (72–1,100 µg/L) are associated with high levels of VOCs in the surficial aquifer at wells DMW-1A (maximum of 1,100 µg/L), DMW-1B, DMW-8I, DMW-8D, DMW-2A, DMW-2S, MW-18I, and DMW-3I, all south and east of Pond 1.

Concentrations of metals such as beryllium, chromium, selenium, and zinc exceed the standards in 12% or less of the samples, ranging from one exceedance each for selenium and zinc to eight exceedances for beryllium. Dissolved chromium and dissolved zinc concentrations do not exceed the standards. No exceedances of hexavalent chromium were found out of 71 samples (well MW-36S was not sampled for hexavalent chromium due to an inadvertent field error). In the deep confined aquifer wells (MW-27D, MW-29D, MW-30D, and MW-31D), the only sample

with an exceedance was from MW-31D, where total vanadium was detected above its standard (Table 4-3). However, the vanadium concentration in the filtered sample from MW-31D did not exceed the standard.

4.2.4 Petroleum Hydrocarbons

As shown in Table 4-2, total petroleum hydrocarbon diesel-range organics (TPH-DRO) were detected in 22% of the 2012 upper surficial aquifer groundwater samples, at concentrations ranging from 240 to 4,400 µg/L. TPH-gasoline-range organics (TPH-GRO) were detected in 50% of the 2012 upper surficial aquifer groundwater samples, at concentrations ranging from 32 to 24,000 µg/L. Results for TPH-DRO and TPH-GRO are shown in Figure 4-17. A number of TPH-DRO results were flagged with a "*B*" data qualifier in the validation process, indicating the presence of TPH-DRO in the laboratory blanks. The *B*-qualified results are not considered detections, are not included in the statistical analyses of "detected" samples, and are not shown in Figure 4-17.

The average of the TPH-DRO detections is 1,514 µg/L, with the greatest concentration reported for well MW-20S (4,400 µg/L) east of Pond 1 and southeast of the main portion of the Petroleum Hydrocarbon Area (well DMW-9S/I/D area). The average TPH-GRO concentration is 3,969 µg/L; the highest concentrations are reported for well DMW-11S (24,000 µg/L) in the upper surficial aquifer of the Taxiway Tango Median Area plume, and DMW-9S (19,000 µg/L) in the upper surficial aquifer of the Petroleum Hydrocarbon Area. Substantially lower concentrations of TPH-GRO are reported for wells at the Drum Area plume (TPH-GRO of 7,500 µg/L at well DMW-7S) and east of Pond 1 (TPH-GRO of 2,200 µg/L at well DMW-2S).

4.2.5 Perchlorate, Haloacetic Acids, and RDX

As shown in Table 4-2, all 72 groundwater samples were analyzed for perchlorate. Haloacetic acids were analyzed in three upper surficial aquifer samples (DMW-2S, DMW-3S, and DMW-5S). These three wells are in areas of high VOC concentrations in the upper surficial aquifer and in areas of the DRA fill. These wells are also near Frog Mortar Creek, which would indicate that concentrations of these analytes are possibly entering the creek via groundwater. Cyclotrimethylene trinitramine (also known as royal demolition explosive [RDX]) was analyzed in 10 groundwater samples collected from upper surficial aquifer monitoring wells distributed throughout the site. Wells analyzed for RDX include those with high concentrations of VOCs

near source areas, those at downgradient locations (DMW-9S, MW-4, MW-20S, MW-5, DMW-3S, and DMW-18S), those along the current northern boundary of the DRA near the Maryland Air National Guard (MDANG) armory (MW-15S, MW-16S, and MW-17S), and between Pond 1 and the Drum Area VOC source areas (DMW-8S).

Perchlorate was detected in 14 groundwater samples at concentrations ranging from 0.11 to 4.6 µg/L. Perchlorate was detected in samples from wells located along the eastern perimeter of the DRA (DMW-18I, DMW-2S, DMW-2A, DMW-4I/D, DMW-5S, and DMW-6D), along the northern perimeter of the DRA (MW-15I/D, MW-16D, and MW-17I), and near the southern perimeter of the DRA (MW-24I). Only the maximum perchlorate concentration of 4.6 µg/L at well DMW-4D exceeds the MDE groundwater standard of 2.6 µg/L. The second highest perchlorate concentration (1.3 µg/L at DMW-4I) is 50% of the standard. Excluding the two highest levels, perchlorate concentrations in the remaining 12 samples range from 0.11 to 0.72 µg/L, which are well below the groundwater standard.

Contrary to prior results, perchlorate was detected in two deep confined aquifer groundwater samples (MW-29D and MW-30D) at a concentration of 0.12 µg/L in each. Previously, perchlorate had been detected in only three surficial-aquifer wells during the 2011 sampling episode, and was not detected in 2010. Haloacetic acids (three groundwater samples analyzed) and RDX (nine groundwater samples analyzed) were not detected in the 2012 samples.

4.2.6 Radium-228 and Total Radium

As shown in Table 4-2, radium-228 and total radium were detected in eight of 11 groundwater samples. Total radium concentrations range from 0.283 to 15.4 picocuries per liter (pCi/L). The average of the detected surficial aquifer radium-228 concentrations is 4.9 pCi/L (2.7 pCi/L if non-detects are included), with the greatest concentration reported in well DMW-6I (15.4 pCi/L), in the intermediate surficial aquifer in the southeastern part of the site.

Concentrations of radium-228 for DMW-3I (9.06 pCi/L), DMW-6I (15.4 pCi/L), and DMW-6D (9.16 pCi/L) exceed the groundwater standard of 5 pCi/L. Total radium concentrations in samples from wells DMW-6I (15.4 pCi/L) and DMW-6D (8.84 pCi/L) also exceed the groundwater standard. The radium-228 results for DMW-6I and DMW-6D are similar to the 2011 results for these wells (DMW-6I at 11.8 pCi/L, and DMW-6D at 7.58 pCi/L).

Concentrations of radium-228 and total radium do not exceed the groundwater standard in samples collected from the upper surficial aquifer (MW-3, DMW-6S, DMW-16S), other sampled locations of the intermediate and lower surficial aquifer (DMW-3D, MW-16I, and MW-16D), and the deep confined aquifer (MW-27D, and MW-29D).

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, APRIL 16, 2012
DUMP ROAD AREA
MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 1 OF 3

Well ID	Aquifer Level	Elevation Top of Well Casing NAVD88 Feet	Depth to Groundwater Top of Well Casing 4/16/2012 Feet	Groundwater Elevation NAVD88 4/16/2012 Feet
DMW-1S	S	11.08	8.68	2.40
DMW-2S	S	21.75	20.93	0.82
MW-3	S	11.19	8.70	2.49
DMW-3S	S	16.52	10.10	6.42
MW-4	S	10.34	7.74	2.60
DMW-4S	S	20.52	19.95	0.57
MW-5	S	22.65	21.35	1.30
DMW-5S	S	21.34	20.75	0.59
MW-6	S	15.72	14.50	1.22
DMW-6S	S	18.62	18.00	0.62
MW-7	S	10.90	6.80	4.10
DMW-7S	S	21.84	20.90	0.94
DMW-8S	S	15.80	14.02	1.78
DMW-9S	S	11.45	9.32	2.13
MW-10S	S	10.29	7.68	2.61
MW-11S	S	9.20	4.97	4.23
MW-15S	S	8.60	6.05	2.55
MW-16S	S	10.20	9.00	1.20
MW-17S	S	7.61	6.45	1.16
MW-18S	S	8.89	7.94	0.95
MW-20S	S	12.44	10.35	2.09
MW-23S	S	10.01	7.60	2.41
MW-24S	S	7.72	4.17	3.55
MW-25S	S	9.69	5.75	3.94
MW-26S	S	11.72	8.92	2.80
MW-32S	S	7.27	5.74	1.53
MW-33S	S	9.97	7.05	2.92
MW-34S	S	7.44	4.51	2.93
MW-35S	S	12.63	9.25	3.38
MW-36S	S	11.88	7.45	4.43
MW-37S	S	10.70	6.83	3.87
MW-38S	S	10.81	NM	--
MW-39S	S	15.70	12.30	3.40

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, APRIL 16, 2012
DUMP ROAD AREA
MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

Well ID	Aquifer Level	Elevation Top of Well Casing NAVD88 Feet	Depth to Groundwater Top of Well Casing 4/16/2012 Feet	Groundwater Elevation NAVD88 4/16/2012 Feet
OW1-S	S	19.17	NM	--
RW1-S	S	19.09	NM	--
TT-11[(1)]	S	11.16	NA	NA
TT-12[(1)]	S	11.51	NA	NA
TT-13[(1)]	S	9.55	NA	NA
TT-14[(1)]	S	10.31	NA	NA
MW-1[(1)]	I	10.69	NA	NA
DMW-1A	I	12.05	9.88	2.17
MW-2	I	8.40	6.87	1.53
DMW-2A	I	21.65	20.89	0.76
DMW-3I	I	16.45	15.55	0.90
DMW-4I	I	20.48	19.75	0.73
DMW-5I	I	21.39	20.80	0.59
DMW-6I	I	18.64	18.03	0.61
DMW-7I	I	21.90	20.95	0.95
DMW-8I	I	16.30	15.03	1.27
DMW-9I	I	11.40	9.42	1.98
MW-10I	I	10.27	7.99	2.28
MW-11I	I	9.15	6.43	2.72
MW-14I	I	11.72	10.99	0.73
MW-15I	I	8.79	6.55	2.24
MW-16I	I	10.06	8.00	2.06
MW-17I	I	7.68	5.40	2.28
MW-18I	I	8.91	8.21	0.70
MW-19I	I	7.90	6.63	1.27
MW-20I	I	12.39	10.34	2.05
MW-21I	I	10.83	8.68	2.15
MW-22I	I	11.01	8.75	2.26
MW-23I	I	10.07	7.80	2.27
MW-24I	I	7.68	5.40	2.28
MW-25I	I	9.72	6.97	2.75
MW-26I	I	11.67	8.97	2.70

TABLE 4-1

GROUNDWATER LEVELS AND ELEVATIONS, APRIL 16, 2012
DUMP ROAD AREA
MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

Well ID	Aquifer Level	Elevation Top of Well Casing NAVD88 Feet	Depth to Groundwater Top of Well Casing 4/16/2012 Feet	Groundwater Elevation NAVD88 4/16/2012 Feet
MW-28I	I	8.65	6.35	2.30
MW-30I	I	7.52	NM	--
MW-32I	I	7.28	5.65	1.63
MW-33I	I	10.02	7.11	2.91
MW-34I	I	7.37	4.81	2.56
OW1-I	I	18.05	NM	--
RW1-I	I	18.44	NM	--
DMW-1B	D	12.04	10.15	1.89
DMW-2B	D	21.66	20.61	1.05
DMW-3D	D	16.46	15.39	1.07
DMW-4D	D	20.44	19.90	0.54
DMW-5D	D	21.38	20.85	0.53
DMW-6D	D	18.51	18.02	0.49
DMW-7D	D	21.94	20.90	1.04
DMW-8D	D	16.35	15.03	1.32
DMW-9D	D	11.41	9.69	1.72
MW-15D	D	8.77	6.38	2.39
MW-16D	D	10.22	8.15	2.07
MW-17D	D	7.56	5.55	2.01
MW-18D	D	8.88	8.05	0.83
MW-19D	D	7.94	6.53	1.41
MW-20D	D	12.40	10.82	1.58
MW-21D	D	10.78	8.89	1.89
MW-22D	D	11.02	8.90	2.12
MW-23D	D	10.03	8.21	1.82
MW-26D	D	11.66	9.00	2.66
MW-14D	D1	11.56	7.09	4.47
MW-27D	DD	8.39	2.42	5.97
MW-29D	DD	11.43	8.10	3.33
MW-30D	DD	8.26	4.27	3.99
MW-31D	DD	6.95	3.55	3.40

1 Well has been sealed and abandoned in accordance with state regulations and is no longer in use

NA - Not available

NM - Not measured

S - Upper surficial aquifer

I - Intermediate surficial aquifer

D - Lower surficial aquifer

D1 - Clay unit underlying lower surficial aquifer

DD - Deep confined aquifer below the lower surficial aquifer

NAVD88 = North American Vertical Datum of 1988.

TABLE 4-2

STATISTICAL SUMMARY OF GROUNDWATER SAMPLING RESULTS, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 1 OF 3

Chemical	Frequency of Detection		Mininum Non Detected	Maximum Non Detected	Mininum Detected	Maximum Detected	Location of Maximum Detected	Sample of Maximum Detected	Mean of Positive Detects	Mean of All Samples	Standard Deviation
	Number	Percent									
VOLATILES (ug/l)											
CIS-1,2-DICHLOROETHENE	48/72	67	0.17	4.9	0.41 J	27000	MSA-DMW-11S	DMW11S-051112	1641	1094	3697
TRICHLOROETHENE	46/72	64	0.17	28	0.24 J	16000	MSA-DMW-11S	DMW11S-051112	1901	1215	3001
VINYL CHLORIDE	43/72	60	0.22	55	0.33 J	11000	MSA-DMW-09S	MSA-DMW9S-050912	835	500	1538
BENZENE	22/72	31	0.13	130	0.13 J	280 J	MSA-DMW-09S	MSA-DMW9S-050912	18.9	9.15	33.9
TRANS-1,2-DICHLOROETHENE	12/72	17	0.19	190	0.3 J	250	MSA-DMW-03S	MSA-DMW3S-051412	43.7	11.9	34.9
1,2-DICHLOROETHANE	11/72	15	0.22	220	0.22 J	23 J	MSA-DMW-02S	MSA-DMW2S-051012	4.90	7.42	16.6
1,1-DICHLOROETHENE	9/72	13	0.19	79	0.2 J	220 J	MSA-DMW-11S	DMW11S-051112	65.0	11.8	35.2
CHLOROBENZENE	9/72	13	0.15	150	0.24 J	250	MSA-MW-20S	MSA-MW20S-042012	73.7	13.5	44.0
TOLUENE	9/72	13	0.13	54	0.24 J	1800	MSA-DMW-09S	MSA-DMW9S-050912	265	35.4	217
ACETONE	7/72	10	1.1	1100	1.2 J	4.5 J	MSA-MW-04	MSA-MW4-051512-25	2.41	34.9	82.3
CHLOROFORM	6/72	8	0.16	67	0.2 J	220 J	MSA-DMW-11S	DMW11S-051112	63.9	9.09	30.9
1,2,4-TRICHLOROBENZENE	5/72	7	0.15	150	2.6 J	540	MSA-DMW-03I	MSA-DMW3I-051412	230	19.5	83.2
CARBON DISULFIDE	4/72	6	0.13	130	0.17 J	0.57 J	MSA-MW-31D	MSA-MW31D-051012	0.28	4.10	9.69
1,2-DICHLOROBENZENE	3/72	4	0.13	130	0.18 J	4.3 J	MSA-MW-16S	MSA-MW16S-050912	1.58	4.15	9.68
CARBON TETRACHLORIDE	3/72	4	0.13	130	6.4 J	41 J	MSA-DMW-09I	MSA-DMW9I-050912	19.1	4.82	10.6
M+P-XYLENES	3/72	4	0.24	240	0.61 J	6900	MSA-DMW-09S	MSA-DMW9S-050912	2303	103	813
O-XYLENE	3/72	4	0.14	140	0.4 J	450	MSA-DMW-09S	MSA-DMW9S-050912	151	10.4	53.5
TOTAL XYLENES	3/72	4	0.28	280	1 J	7400	MSA-DMW-09S	MSA-DMW9S-050912	2470	111	871
1,1,1-TRICHLOROETHANE	2/72	3	0.22	220	59 J	130 J	MSA-DMW-07S	MSA-DMW7S-050312	94.5	8.71	22.3
1,1-DICHLOROETHANE	2/72	3	0.15	150	0.84 J	51 J	MSA-DMW-04I	MSA-DMW4I-050312	25.9	5.32	12.5
1,2,3-TRICHLOROBENZENE	2/72	3	0.17	170	66 J	130 J	MSA-MW-18I	MSA-MW18I-051012	98.0	7.27	20.3
ETHYLBENZENE	2/72	3	0.17	170	0.21 J	1100	MSA-DMW-09S	MSA-DMW9S-050912	550	20.2	130
METHYLENE CHLORIDE	2/72	3	0.33	330	28 J	49 J	MSA-DMW-01A	MSA-DMW1A-050212	38.5	11.1	25.2
1,2,3-TRIMETHYLBENZENE	1/72	1	0.0059	5.9	34 J	34 J	MSA-DMW-09S	MSA-DMW9S-050912	34.0	0.65	4.01
1,2,4-TRIMETHYLBENZENE	1/72	1	0.12	120	99 J	99 J	MSA-DMW-09S	MSA-DMW9S-050912	99.0	4.87	14.2
1,3-DICHLOROBENZENE	1/72	1	0.14	140	1.7 J	1.7 J	MSA-MW-16S	MSA-MW16S-050912	1.70	4.43	10.5
1,4-DICHLOROBENZENE	1/72	1	0.13	130	2.1 J	2.1 J	MSA-MW-16S	MSA-MW16S-050912	2.10	4.11	9.69
2-BUTANONE	1/72	1	0.57	570	0.73 J	0.73 J	MSA-MW-22D	MSA-MW22D-051512	0.73	18.0	42.9
HEXACHLOROBUTADIENE	1/72	1	0.3	300	210 J	210 J	MSA-MW-18I	MSA-MW18I-051012	210	11.7	32.4
METHYL TERT-BUTYL ETHER	1/72	1	0.17	170	0.22 J	0.22 J	MSA-MW-35S	MSA-MW35S-042012	0.22	5.34	12.7
NAPHTHALENE	1/72	1	0.24	240	2.1	2.1	MSA-MW-39S	MSA-MW39S-041912	2.10	7.57	17.9
TERT-BUTYLBENZENE	1/72	1	0.13	130	0.33 J	0.33 J	MSA-MW-23S	MSA-MW23S-051112	0.33	4.09	9.69
DISSOLVED GASSES (ug/l)											
ETHENE	6/6	100			4.9	1900	MSA-DMW-09S	MSA-DMW9S-050912	375	375	751
METHANE	6/6	100			180	1000	MSA-DMW-09S	MSA-DMW9S-050912	465	465	324
ETHANE	5/6	83	0.1	0.1	0.74	56	MSA-DMW-11S	DMW11S-051112	22.2	18.5	26.1
SEMIVOLATILES (ug/l)											
1,4-DIOXANE	40/72	56	0.47	0.49	0.6 J	300	MSA-DMW-02A	MSA-DMW2A-050312	53.6	29.9	62.6
TOTAL METALS (ug/l)											
CALCIUM	6/6	100			9100	200000	MSA-MW-18S	MSA-MW18S-051012	80183	80183	63738
IRON	6/6	100			11000	170000	MSA-MW-18S	MSA-MW18S-051012	50167	50167	60562
MAGNESIUM	6/6	100			6600	210000	MSA-MW-18S	MSA-MW18S-051012	64933	64933	74033
MANGANESE	6/6	100			950	5000	MSA-DMW-09I	MSA-DMW9I-050912	3125	3125	1345

TABLE 4-2

STATISTICAL SUMMARY OF GROUNDWATER SAMPLING RESULTS, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 2 OF 3

Chemical	Frequency of Detection		Mininum Non Detected	Maximum Non Detected	Mininum Detected	Maximum Detected	Location of Maximum Detected	Sample of Maximum Detected	Mean of Positive Detects	Mean of All Samples	Standard Deviation
	Number	Percent									
SILICON DIOXIDE	6/6	100			4000	36000	MSA-MW-18I	MSA-MW18I-051012	17167	17167	14095
SODIUM	6/6	100			11000	590000	MSA-MW-18S	MSA-MW18S-051012	184167	184167	213285
COBALT	70/72	97	0.5	1.3	0.12 J	570	MSA-DMW-02A	MSA-DMW2A-050312	77.23	75.1	113
NICKEL	69/72	96	0.2	2.8	0.97 J	570	MSA-MW-24S	MSA-MW24S-050712	56.99	54.6	85.6
ARSENIC	67/72	93	0.4	2.7	0.52 J	49	MSA-MW-24S	MSA-MW24S-050712	8.86	8.29	9.89
BARIUM	64/72	89	11	20	4.9 J	1300	MSA-MW-26S	MSA-MW26S-050112	59.0	53.3	152
CHROMIUM	62/72	86	0.71	0.71	0.71 J	150	MSA-DMW-02A	MSA-DMW2A-050312	13.8	11.9	29.4
VANADIUM	61/72	85	0.44	5.8	0.5 J	210	MSA-MW-24S	MSA-MW24S-050712	10.9	9.37	28.1
POTASSIUM	5/6	83	1000	1000	5800	43000	MSA-MW-18S	MSA-MW18S-051012	16000	13417	15030
ZINC	49/72	68	2.3	39	6.2 J	6800	MSA-MW-32I	MSA-MW32I-050112	523	358	951
LEAD	48/72	67	0.18	1.5	0.19 J	14	MSA-MW-31D	MSA-MW31D-051012	2.56	1.77	2.68
COPPER	46/72	64	0.29	3.7	1 J	700	MSA-DMW-05I	MSA-DMW5I-050412	57.4	36.9	101
BERYLLIUM	38/72	53	0.2	4	0.2 J	16	MSA-MW-16S	MSA-MW16S-050912	2.71	1.52	3.00
BERYLLIUM	38/72	53	0.2	4	0.2 J	16	MSA-MW-18I	MSA-MW18I-051012	2.71	1.52	3.00
SELENIUM	38/72	53	0.57	0.57	0.6 J	67	MSA-MW-24S	MSA-MW24S-050712	7.39	4.04	9.60
CADMIUM	36/72	50	0.13	0.22	0.13 J	1000	MSA-DMW-01A	MSA-DMW1A-050212	81.8	40.9	156
MERCURY	15/72	21	0.12	0.26	0.12 J	1.7	MSA-DMW-06D	MSA-DMW6D-050312	0.63	0.18	0.36
ANTIMONY	14/72	19	0.13	2.6	0.13 J	1.8 J	MSA-DMW-01S	MSA-DMW1S-051012	0.45	0.22	0.31
MOLYBDENUM	6/72	8	0.093	2.4	1 J	5 J	MSA-DMW-03S	MSA-DMW3S-051412	2.80	0.46	0.84
SILVER	5/72	7	0.08	0.08	0.09 J	0.47 J	MSA-MW-31D	MSA-MW31D-051012	0.23	0.05	0.06
TUNGSTEN	2/72	3	0.37	7.4	9.9 J	14	MSA-DMW-03S	MSA-DMW3S-051412	12.0	0.74	2.02
FILTERED METALS (ug/l)											
NICKEL	69/72	96	1.2	2.5	0.34 J	570	MSA-MW-24S	MSA-MW24S-050712	56.8	54.5	86.4
COBALT	68/72	94	0.41	1.2	0.11 J	550	MSA-DMW-02A	MSA-DMW2A-050312	79.7	75.3	113
ARSENIC	63/72	88	0.4	2.4	0.55 J	48	MSA-MW-24S	MSA-MW24S-050712	8.16	7.21	9.21
BARIUM	60/72	83	3.2	19	4.7 J	1500	MSA-MW-26S	MSA-MW26S-050112	62.9	53.4	175
ZINC	45/72	63	2.3	53	2.4 J	5000	MSA-MW-32I	MSA-MW32I-050112	403	255	694
CHROMIUM	44/72	61	0.71	0.71	0.73 J	86	MSA-DMW-01A	MSA-DMW1A-050212	5.82	3.69	11.2
VANADIUM	43/72	60	0.44	2.2	0.46 J	180	MSA-MW-24S	MSA-MW24S-050712	6.94	4.25	21.2
BERYLLIUM	41/72	57	0.2	0.2	0.2 J	7.6	MSA-MW-24S	MSA-MW24S-050712	1.99	1.18	1.85
SELENIUM	33/72	46	0.57	0.73	0.64 J	66	MSA-MW-24S	MSA-MW24S-050712	7.64	3.66	9.34
COPPER	30/72	42	0.29	2.5	0.57 J	300	MSA-MW-24S	MSA-MW24S-050712	34.5	14.6	43.6
CADMIUM	28/72	39	0.13	0.54	0.13 J	1100	MSA-DMW-01A	MSA-DMW1A-050212	95.0	37.0	158
LEAD	22/72	31	0.18	3.6	0.19 J	5.6 J	MSA-DMW-08I	MSA-DMW8I-050212	1.67	0.62	1.11
ANTIMONY	4/72	6	0.13	2.6	0.14 J	1.8 J	MSA-DMW-01S	MSA-DMW1S-051012	0.57	0.16	0.27
MERCURY	2/72	3	0.12	0.16	0.12 J	0.41	MSA-DMW-06D	MSA-DMW6D-050312	0.27	0.07	0.04
TUNGSTEN	2/72	3	0.37	7.4	8.6 J	18	MSA-DMW-03S	MSA-DMW3S-051412	13.3	0.73	2.34
MOLYBDENUM	1/72	1	0.093	2.3	5.8 J	5.8 J	MSA-DMW-03S	MSA-DMW3S-051412	5.80	0.25	0.70
MISCELLANEOUS (mg/l)											
CHLORIDE	6/6	100			49	760	MSA-MW-18S	MSA-MW18S-051012	258	258	274
DISSOLVED ORGANIC CARBON	6/6	100			2.5	43	MSA-MW-18I	MSA-MW18I-051012	18.5	18.5	15.2
SULFATE	6/6	100			65	1700	MSA-MW-18S	MSA-MW18S-051012	486	486	615
TOTAL DISSOLVED SOLIDS	6/6	100			170	3300	MSA-MW-18S	MSA-MW18S-051012	1168	1168	1123
ALKALINITY	5/6	83	9.3	9.3	32	430	MSA-DMW-09S	MSA-DMW9S-050912	204	171	166
AMMONIA-N	5/6	83	0.089	0.089	0.84	17	MSA-MW-18S	MSA-MW18S-051012	5.55	4.63	6.25
ORTHOPHOSPHATE	3/6	50	0.044	0.044	0.056 J	0.19 J	MSA-DMW-09I	MSA-DMW9I-050912	0.13	0.08	0.07
NITRATE-N	2/6	33	0.023	0.023	0.032 J	0.18	MSA-MW-18S	MSA-MW18S-051012	0.11	0.04	0.07
MISCELLANEOUS (ug/l)											
PERCHLORATE	14/72	19	0.082	0.082	0.11 J	4.6	MSA-DMW-04D	MSA-DMW4D-050312	0.65	0.16	0.56
HEXAVALENT CHROMIUM	8/71	11	0.02	0.02	0.013 J	0.547	MSA-MW-30D	MSA-MW30D-051512	0.10	0.02	0.07

TABLE 4-2

STATISTICAL SUMMARY OF GROUNDWATER SAMPLING RESULTS, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 3 OF 3

Chemical	Frequency of Detection		Mininum Non Detected	Maximum Non Detected	Mininum Detected	Maximum Detected	Location of Maximum Detected	Sample of Maximum Detected	Mean of Positive Detects	Mean of All Samples	Standard Deviation
	Number	Percent									
PETROLEUM HYDROCARBONS (ug/l)											
TPH-GRO (C06-C10)	16/32	50	38	120	32 J	24000	MSA-DMW-11S	DMW11S-051112	3969	1999	5374
TPH-DRO (C10-C32)	7/32	22	230	1200	240 J	4400	MSA-MW-20S	MSA-MW20S-042012	1514	489	890
RADIONUCLIDES (pci/L)											
RADIUM-228	8/11	73	0.136	0.283	0.481 J	15.4	MSA-DMW-06I	MSA-DMW6I-050312	4.87	3.57	5.20
TOTAL RADIUM	8/11	73	0.0687	0.128	0.283 J	15.4	MSA-DMW-06I	MSA-DMW6I-050312	3.71	2.71	4.91
TENTATIVELY IDENTIFIED COMPOUNDS - VOLATILES (ug/l) [1]											
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	1/1	100			1.1 NJ	1.1 NJ	MSA-MW-35S	MSA-MW35S-042012	1.10	1.10	
1,3,5-TRIMETHYLBENZENE	1/1	100			59 NJ	59 NJ	MSA-DMW-09S	MSA-DMW9S-050912	59	59	
1,4-DIOXANE	1/1	100			360 NJ	360 NJ	MSA-MW-16S	MSA-MW16S-050912	360	360	
1-BUTANOL	2/2	100			12 NJ	14 NJ	MSA-MW-25I	MSA-MW25I-050812	13	13	1.41
2,4-DIMETHYL-1-HEPTENE	1/1	100			1.8 NJ	1.8 NJ	MSA-MW-32S	MSA-MW32S-050412	1.80	1.80	
2-HEPTENE, 2,3-DIMETHYL-	1/1	100			2.1 NJ	2.1 NJ	MSA-MW-32S	MSA-MW32S-050412	2.10	2.10	
2-METHYLBUTANE	1/1	100			1.1 NJ	1.1 NJ	MSA-MW-04	MSA-MW4-051512-25	1.10	1.10	
2-OCTANONE	1/1	100			1.8 NJ	1.8 NJ	MSA-MW-33I	MSA-MW33I-050112	1.80	1.80	
BUTANE, 2,2,3,3-TETRAMETHYL-	1/1	100			1.6 NJ	1.6 NJ	MSA-MW-23S	MSA-MW23S-051112	1.60	1.60	
CIS-3-NONENE	1/1	100			2.6 NJ	2.6 NJ	MSA-MW-32S	MSA-MW32S-050412	2.60	2.60	
CYCLOHEXANE, 1,2,3-TRIMETHYL-	1/1	100			6 NJ	6 NJ	MSA-MW-32S	MSA-MW32S-050412	6.00	6.00	
CYCLOHEXANE	5/5	100			0.13 NJ	7.7 NJ	MSA-MW14I	MSA-MW14I-050112	2.35	2.35	
CYCLOHEXANE (TIC)	2/2	100			0.38 NJ	48 NJ	MSA-MW-20S	MSA-MW20S-042012	24.2	24.2	
DIETHYL ETHER	1/1	100			0.42 NJ	0.42 NJ	MSA-MW-04	MSA-MW4-051512-25	0.42	0.42	
DI-SEC-BUTYL ETHER	1/1	100			1.9 NJ	1.9 NJ	MSA-MW-23S	MSA-MW23S-051112	1.90	1.90	
FLUORODICHLOROMETHANE	1/1	100			3.6 NJ	3.6 NJ	MSA-MW-35S	MSA-MW35S-042012	3.60	3.60	
GAMMA-BHC (LINDANE)	1/1	100			2.9 NJ	2.9 NJ	MSA-MW-39S	MSA-MW39S-041912	2.90	2.90	
ISOBUTANE	1/1	100			3.1 NJ	3.1 NJ	MSA-MW-04	MSA-MW4-051512-25	3.10	3.10	
METHYL CYCLOHEXANE	1/1	100			0.52 NJ	0.52 NJ	MSA-MW26S	MSA-MW26S-050112	0.52	0.52	
METHYL CYCLOHEXANE (TIC)	11/11	100			0.21 NJ	82 NJ	MSA-DMW-07S	MSA-DMW7S-050312	19.1	19.1	
N-BUTYL ETHER	1/1	100			1.2 NJ	1.2 NJ	MSA-MW-23S	MSA-MW23S-051112	1.20	1.20	
PENTANE, 2,3,3-TRIMETHYL-	1/1	100			1.3 NJ	1.3 NJ	MSA-MW-23S	MSA-MW23S-051112	1.30	1.30	
TETRAHYDROFURAN	4/4	100			0.44 NJ	17 NJ	MSA-MW-14I	MSA-MW14I-050112	5.42	5.42	
TETRAHYDROFURAN (TIC)	2/2	100			1.3 NJ	1.9 NJ	MSA-MW34I	MSA-MW34I-041912	1.60	1.60	

Footnotes:

1 Does not include TICs reported for shallow samples from MW-4 and MW-5 or TICS reported in samples collected using passive diffusion bag samplers. See Tables 4-3 and Table C-2 (Appendix C) for TICs from shallow MW-4/MW-5 low-flow samples and all diffusion bag samples.

For non-detects, 1/2 sample quantitation limit was used as a proxy concentration.

1/2 the detection limit was used for B qualified data.

NA - Not applicable, there are an insufficient number of samples to calculate statistics.

ug/L - micrograms per liter

mg/L - milligrams per liter

J - estimated value

NJ - tentatively identified compound

pci/L - picocuries per liter

TIC - tentatively identified compounds

Associated Samples:

DMW11I-051112	MSA-DMW5I-050712	MSA-MW15D-041812	MSA-MW20S-042312	MSA-MW30I-051512
DMW11S-051112	MSA-DMW5S-050412	MSA-MW15I-041812	MSA-MW22D-051512	MSA-MW31D-051012
MSA-DMW-01S-051012	MSA-DMW5S-050712	MSA-MW15S-041812	MSA-MW23D-051112	MSA-MW32I-050112
MSA-DMW-02S-051012	MSA-DMW6D-050312	MSA-MW16D-050912	MSA-MW23D-051412	MSA-MW32S-050212
MSA-DMW10S-051012	MSA-DMW6I-050312	MSA-MW16I-050912	MSA-MW23S-051112	MSA-MW32S-050412
MSA-DMW-10S-051012	MSA-DMW6S-050312	MSA-MW16S-050912	MSA-MW23S-051412	MSA-MW33I-050112
MSA-DMW1A-050212	MSA-DMW7S-050312	MSA-MW17I-042012	MSA-MW24I-050712	MSA-MW33S-050112
MSA-DMW1B-050212	MSA-DMW8D-050212	MSA-MW17I-042312	MSA-MW24S-050712	MSA-MW34I-041912
MSA-DMW1S-051012	MSA-DMW8I-050212	MSA-MW17S-042012	MSA-MW25I-050812	MSA-MW34S-041912
MSA-DMW2A-050312	MSA-DMW8S-050212	MSA-MW17S-042312	MSA-MW25S-050812	MSA-MW35S-042012
MSA-DMW2S-051012	MSA-DMW9D-050912	MSA-MW18I-051012	MSA-MW26S-050112	MSA-MW35S-042312
MSA-DMW3D-051412	MSA-DMW9I-050912	MSA-MW18S-051012	MSA-MW27D-050412	MSA-MW36S-080212
MSA-DMW3I-051412	MSA-DMW9S-050912	MSA-MW19D-041912	MSA-MW27D-050712	MSA-MW37S-050812
MSA-DMW3S-051412	MSA-MW06-050712	MSA-MW19I-041912	MSA-MW28I-050412	MSA-MW38S-041812
MSA-DMW3S-051512	MSA-MW-06-050712	MSA-MW20D-042012	MSA-MW28I-050712	MSA-MW39S-041912
MSA-DMW4D-050312	MSA-MW11I-051412	MSA-MW20D-042312	MSA-MW29D-051612	MSA-MW4-051512
MSA-DMW4I-050312	MSA-MW11S-051412	MSA-MW20I-042012	MSA-MW3-051512	MSA-MW4-051512-25
MSA-DMW4S-050312	MSA-MW14D-050112	MSA-MW20I-042312	MSA-MW3-051612	MSA-MW5-051412
MSA-DMW5I-050412	MSA-MW14I-050112	MSA-MW20S-042012	MSA-MW30D-051512	MSA-MW5-051412-37

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW1A-050212 5/2/2012 MSA-DMW-01A	MSA-DMW1B-050212 5/2/2012 MSA-DMW-01B	MSA-DMW-01S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW1S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW2A-050312 5/3/2012 MSA-DMW-02A	MSA-DMW-02S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW2S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW3D-051412 5/14/2012 MSA-DMW-03D
VOLATILES (ug/l)									
1,1,1-TRICHLOROETHANE	200	--	--	NA	--	--	NA	--	--
1,1-DICHLOROETHANE	90	--	--	NA	--	--	NA	--	--
1,1-DICHLOROETHENE	7	--	--	NA	--	--	NA	--	--
1,2,3-TRICHLOROBENZENE	NA	--	--	NA	--	--	NA	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	NA	--	--	NA	--	--
1,2,4-TRICHLOROBENZENE	70	--	--	NA	--	440	NA	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	NA	--	--	NA	--	--
1,2-DICHLOROBENZENE	600	--	--	NA	--	--	NA	--	--
1,2-DICHLOROETHANE	5	--	--	NA	--	--	NA	23 J	--
1,3-DICHLOROBENZENE	1.8	--	--	NA	--	--	NA	--	--
1,4-DICHLOROBENZENE	75	--	--	NA	--	--	NA	--	--
2-BUTANONE	700	--	--	NA	--	--	NA	--	--
ACETONE	550	--	--	NA	--	--	NA	--	3 J
BENZENE	5	--	16 J	NA	--	--	NA	--	--
CARBON DISULFIDE	100	--	--	NA	--	--	NA	--	--
CARBON TETRACHLORIDE	5	--	--	NA	--	--	NA	--	--
CHLOROBENZENE	100	--	--	NA	0.66 J	--	NA	--	--
CHLOROFORM	80	--	--	NA	--	--	NA	--	--
CIS-1,2-DICHLOROETHENE	70	3100	820	NA	0.84 J	3400	NA	1900	--
ETHYLBENZENE	700	--	--	NA	--	--	NA	--	--
HEXACHLOROBUTADIENE	0.86	--	--	NA	--	--	NA	--	--
M+P-XYLENES	NA	--	18 U	NA	--	--	NA	--	--
METHYL TERT-BUTYL ETHER	20	--	--	NA	--	--	NA	--	--
METHYLENE CHLORIDE	5	49 J	--	NA	--	--	NA	--	--
NAPHTHALENE	0.65	--	--	NA	--	--	NA	--	--
O-XYLENE	NA	--	--	NA	--	--	NA	--	--
TERT-BUTYLBENZENE	NA	--	--	NA	--	--	NA	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	NA	--	--	NA	--	--
TOLUENE	1000	43 J	--	NA	--	--	NA	--	--
TOTAL XYLENES	10000	--	--	NA	--	--	NA	--	--
TRANS-1,2-DICHLOROETHENE	100	23 J	--	NA	--	--	NA	--	--
TRICHLOROETHENE	5	2300	110	NA	--	11000	NA	2800	0.45 J
VINYL CHLORIDE	2	1300	2200	NA	0.33 J	810	NA	640	--

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW1A-050212 5/2/2012 MSA-DMW-01A	MSA-DMW1B-050212 5/2/2012 MSA-DMW-01B	MSA-DMW-01S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW1S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW2A-050312 5/3/2012 MSA-DMW-02A	MSA-DMW-02S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW2S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW3D-051412 5/14/2012 MSA-DMW-03D
VOLATILE GASES (UG/L)									
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)									
1,4-DIOXANE	NA	68	38	NA	1.9	300	NA	81	--
TOTAL METALS (ug/l)									
ANTIMONY	6	--	0.15 B	NA	1.8 J	--	NA	--	0.19 J
ARSENIC	10	6.3	16	NA	1.5 J	9.9	NA	8.6	2.9 J
BARIUM	2000	13	16	NA	81	33 J	NA	13 B	95
BERYLLIUM	4	0.48 J	--	NA	--	2.4	NA	4.9	0.82 J
CADMIUM	5	1000	180	NA	1.1	800	NA	230	5.3
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	130	29	NA	0.79 J	150	NA	3.7	11
COBALT	NA	49	33	NA	0.4 J	570	NA	240	44
COPPER	1300	11	16	NA	8.5	140	NA	52	93
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	0.46 J	1.5 J	NA	2.4	12 J	NA	--	5.3
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	0.2	0.87	NA	0.13 B	0.6	NA	--	--
MOLYBDENUM	NA	1.3 B	0.3 B	NA	1.1 B	3.3 J	NA	--	0.63 B
NICKEL	73	150	42	NA	1.7 J	160	NA	110	55
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	4.6 J	2.3 J	NA	--	11	NA	12	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	--	--	NA	--	0.22 J	NA	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	--	--	NA	--	--	NA	--	--
VANADIUM	3.7	--	3.4 J	NA	1.5 J	73	NA	--	15 J
ZINC	5000	440	170	NA	9.5 B	620	NA	310	280
FILTERED METALS (ug/l)									
ANTIMONY	6	--	--	NA	1.8 J	--	NA	--	--
ARSENIC	10	6.6	11	NA	1.5 J	7.5	NA	8.1	0.55 J
BARIUM	2000	13	16	NA	82	12 B	NA	13 B	68

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 3 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW1A-050212 5/2/2012 MSA-DMW-01A	MSA-DMW1B-050212 5/2/2012 MSA-DMW-01B	MSA-DMW-01S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW1S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW2A-050312 5/3/2012 MSA-DMW-02A	MSA-DMW-02S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW2S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW3D-051412 5/14/2012 MSA-DMW-03D
BERYLLIUM	4	0.46 J	--	NA	--	2.1	NA	4.7	0.73 J
CADMIUM	5	1100	170	NA	0.41 J	740	NA	220	4.9
CHROMIUM	100	86	9.9	NA	--	4.3	NA	3.4	--
COBALT	NA	51	35	NA	0.4 J	550	NA	240	46
COPPER	1300	9.6	9.5	NA	7.2	41	NA	49	82
LEAD	15	0.46 J	0.62 J	NA	0.82 J	5.3 J	NA	--	1.5 K
MERCURY	2	--	--	NA	--	--	NA	--	--
MOLYBDENUM	NA	0.2 B	0.15 B	NA	1.1 B	--	NA	--	--
NICKEL	73	150	43	NA	1.9 J	160	NA	100	55
SELENIUM	50	5	2 J	NA	--	10	NA	11	--
SILVER	100	--	--	NA	--	--	NA	--	--
TUNGSTEN	NA	--	--	NA	--	--	NA	--	--
VANADIUM	3.7	--	--	NA	1.5 J	3.9 J	NA	--	--
ZINC	5000	460	160	NA	10 J	560	NA	300	250
MISCELLANEOUS (mg/l)									
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)									
HEXAVALENT CHROMIUM	100	0.027	--	0.013 J	NA	--	--	NA	--
PERCHLORATE	2.6	--	--	NA	--	0.12 J	NA	0.11 J	--
PETROLEUM HYDROCARBONS (ug/l)									
TPH-GRO	47	NA	NA	NA	34 J	NA	NA	2200	NA
TPH-DRO	47	NA	NA	NA	380 B	NA	NA	490 B	NA
RADIONUCLIDES (pCi/L)									
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA	1.99
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA	1.82
TENTATIVELY IDENTIFIED VOLATILE (ug/l)									
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 4 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW1A-050212 5/2/2012 MSA-DMW-01A	MSA-DMW1B-050212 5/2/2012 MSA-DMW-01B	MSA-DMW-01S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW1S-051012 5/10/2012 MSA-DMW-01S	MSA-DMW2A-050312 5/3/2012 MSA-DMW-02A	MSA-DMW-02S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW2S-051012 5/10/2012 MSA-DMW-02S	MSA-DMW3D-051412 5/14/2012 MSA-DMW-03D
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	10 J	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW3I-051412 / 5/14/2012 / MSA-DMW-03I	MSA-DMW3S-051412 / 5/14/2012 / MSA-DMW-03S	MSA-DMW3S-051512 / 5/15/2012 / MSA-DMW-03S	MSA-DMW4D-050312 / 5/3/2012 / MSA-DMW-04D	MSA-DMW4I-050312 / 5/3/2012 / MSA-DMW-04I	MSA-DMW4S-050312 / 5/3/2012 / MSA-DMW-04S	MSA-DMW5I-050412 / 5/4/2012 / MSA-DMW-05I	MSA-DMW5I-050712 / 5/7/2012 / MSA-DMW-05I	MSA-DMW5S-050412 / 5/4/2012 / MSA-DMW-05S
VOLATILES (ug/l)										
1,1,1-TRICHLOROETHANE	200	--	--	NA	--	59 J	--	--	NA	--
1,1-DICHLOROETHANE	90	--	--	NA	--	51 J	--	--	NA	--
1,1-DICHLOROETHENE	7	--	--	NA	--	150	24 J	--	NA	--
1,2,3-TRICHLOROBENZENE	NA	66 J	--	NA	--	--	--	--	NA	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	NA	--	--	--	--	NA	--
1,2,4-TRICHLOROBENZENE	70	540	--	NA	--	--	--	--	NA	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	NA	--	--	--	--	NA	--
1,2-DICHLOROBENZENE	600	--	--	NA	--	--	--	--	NA	--
1,2-DICHLOROETHANE	5	--	--	NA	--	--	20 J	--	NA	--
1,3-DICHLOROBENZENE	1.8	--	--	NA	--	--	--	--	NA	--
1,4-DICHLOROBENZENE	75	--	--	NA	--	--	--	--	NA	--
2-BUTANONE	700	--	--	NA	--	--	--	--	NA	--
ACETONE	550	--	--	NA	--	--	--	--	NA	--
BENZENE	5	--	--	NA	--	--	--	--	NA	--
CARBON DISULFIDE	100	--	--	NA	--	--	--	--	NA	--
CARBON TETRACHLORIDE	5	--	--	NA	--	--	--	--	NA	--
CHLOROBENZENE	100	--	--	NA	--	--	--	--	NA	--
CHLOROFORM	80	--	--	NA	--	--	--	--	NA	--
CIS-1,2-DICHLOROETHENE	70	5800	1200	NA	530	1800	120	49	NA	1300
ETHYLBENZENE	700	--	--	NA	--	--	--	--	NA	--
HEXACHLOROBUTADIENE	0.86	--	--	NA	--	--	--	--	NA	--
M+P-XYLENES	NA	--	--	NA	--	--	--	--	NA	--
METHYL TERT-BUTYL ETHER	20	--	--	NA	--	--	--	--	NA	--
METHYLENE CHLORIDE	5	--	--	NA	--	--	--	--	NA	--
NAPHTHALENE	0.65	--	--	NA	--	--	--	--	NA	--
O-XYLENE	NA	--	--	NA	--	--	--	--	NA	--
TERT-BUTYLBENZENE	NA	--	--	NA	--	--	--	--	NA	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	NA	--	--	--	--	NA	--
TOLUENE	1000	--	44 J	NA	--	--	--	--	NA	--
TOTAL XYLENES	10000	--	--	NA	--	--	--	--	NA	--
TRANS-1,2-DICHLOROETHENE	100	--	250	NA	--	27 J	--	2.1 J	NA	--
TRICHLOROETHENE	5	10000	--	NA	4700	4100	1600	99	NA	7500
VINYL CHLORIDE	2	1900	5100	NA	--	1500	27 J	6.5	NA	--

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW3I-051412 5/14/2012 MSA-DMW-03I	MSA-DMW3S-051412 5/14/2012 MSA-DMW-03S	MSA-DMW3S-051512 5/15/2012 MSA-DMW-03S	MSA-DMW4D-050312 5/3/2012 MSA-DMW-04D	MSA-DMW4I-050312 5/3/2012 MSA-DMW-04I	MSA-DMW4S-050312 5/3/2012 MSA-DMW-04S	MSA-DMW5I-050412 5/4/2012 MSA-DMW-05I	MSA-DMW5I-050712 5/7/2012 MSA-DMW-05I	MSA-DMW5S-050412 5/4/2012 MSA-DMW-05S
VOLATILE GASES (UG/L)										
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)										
1,4-DIOXANE	NA	230	140	NA	29	29	21	2.4	NA	11
TOTAL METALS (ug/l)										
ANTIMONY	6	0.13 J	0.38 J	NA	--	--	--	--	NA	--
ARSENIC	10	4.3 J	13	NA	22	17	6.5	8.2	NA	13
BARIUM	2000	12	89	NA	19 B	23 J	11 B	18 B	NA	12 B
BERYLLIUM	4	--	--	NA	4.4	6.1	2.1	2.1 B	NA	4 B
CADMIUM	5	280	--	NA	22	14	43	5.4	NA	3.5
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	4.3	2.8	NA	3.8	21	2.5	14	NA	83
COBALT	NA	230	0.76 J	NA	150	62	87	64	NA	63
COPPER	1300	18	2.2 B	NA	65	150	9	700	NA	120
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	0.94 J	4.1	NA	1.9 J	5.2 J	3.7 J	8.3 J	NA	4.2 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	0.15 B	--	NA	1.6	--	--	0.13 J	NA	--
MOLYBDENUM	NA	0.12 B	5 J	NA	--	1 J	--	1.2 B	NA	1.7 B
NICKEL	73	74	0.97 J	NA	110	41	46	65	NA	59
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	2.8 J	--	NA	31	14	6.5	10	NA	15
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	--	--	NA	--	0.26 J	--	--	NA	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	--	14	NA	--	--	--	--	NA	3.1 B
VANADIUM	3.7	7.3 J	2 J	NA	1.5 J	30	1.8 J	4 J	NA	9.2 J
ZINC	5000	290	13 B	NA	350	200	180	250	NA	190
FILTERED METALS (ug/l)										
ANTIMONY	6	--	0.18 J	NA	--	--	--	--	NA	--
ARSENIC	10	3.9 J	13	NA	23	15	6	7.8	NA	13
BARIUM	2000	11	97	NA	17 B	9.8 B	9.1 B	13 B	NA	12 B

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW3I-051412 5/14/2012 MSA-DMW-03I	MSA-DMW3S-051412 5/14/2012 MSA-DMW-03S	MSA-DMW3S-051512 5/15/2012 MSA-DMW-03S	MSA-DMW4D-050312 5/3/2012 MSA-DMW-04D	MSA-DMW4I-050312 5/3/2012 MSA-DMW-04I	MSA-DMW4S-050312 5/3/2012 MSA-DMW-04S	MSA-DMW5I-050412 5/4/2012 MSA-DMW-05I	MSA-DMW5I-050712 5/7/2012 MSA-DMW-05I	MSA-DMW5S-050412 5/4/2012 MSA-DMW-05S
BERYLLIUM	4	--	--	NA	4.6	6.8	1.7	2.2	NA	4.3
CADMIUM	5	65	--	NA	23	11	10	3.2	NA	3
CHROMIUM	100	2.2	1.3 J	NA	1.7 J	5.6	--	5.1	NA	7.3
COBALT	NA	220	0.87 J	NA	160	67	72	67	NA	68
COPPER	1300	12	0.35 B	NA	68	59	3	11	NA	7.3
LEAD	15	0.77 J	--	NA	--	2.3 J	1.3 J	3.5 J	NA	3.2 J
MERCURY	2	--	--	NA	--	--	--	--	NA	--
MOLYBDENUM	NA	--	5.8 J	NA	--	--	--	0.19 B	NA	0.41 B
NICKEL	73	70	0.57 J	NA	120	44	39	67	NA	63
SELENIUM	50	2.4 J	--	NA	32	16	5.4	9.2	NA	16
SILVER	100	--	--	NA	--	--	--	--	NA	--
TUNGSTEN	NA	--	18	NA	--	--	--	--	NA	--
VANADIUM	3.7	5.9 J	2 J	NA	--	16 J	--	2.3 J	NA	11 J
ZINC	5000	260	--	NA	360	190	120	230	NA	190
MISCELLANEOUS (mg/l)										
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)										
HEXAVALENT CHROMIUM	100	--	0.02	NA	--	--	--	NA	--	NA
PERCHLORATE	2.6	--	--	NA	4.6	1.3	--	--	NA	0.7 J
PETROLEUM HYDROCARBONS (ug/l)										
TPH-GRO	47	NA	NA	870	NA	NA	690	NA	NA	3900
TPH-DRO	47	NA	660 B	NA	NA	NA	--	NA	NA	230 B
RADIONUCLIDES (pCi/L)										
RADIUM-228	NA	9.06	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	0.996	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)										
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW3I-051412 5/14/2012 MSA-DMW-03I	MSA-DMW3S-051412 5/14/2012 MSA-DMW-03S	MSA-DMW3S-051512 5/15/2012 MSA-DMW-03S	MSA-DMW4D-050312 5/3/2012 MSA-DMW-04D	MSA-DMW4I-050312 5/3/2012 MSA-DMW-04I	MSA-DMW4S-050312 5/3/2012 MSA-DMW-04S	MSA-DMW5I-050412 5/4/2012 MSA-DMW-05I	MSA-DMW5I-050712 5/7/2012 MSA-DMW-05I	MSA-DMW5S-050412 5/4/2012 MSA-DMW-05S
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	48 NJ	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW5S-050712 5/7/2012 MSA-DMW-05S	MSA-DMW6D-050312 5/3/2012 MSA-DMW-06D	MSA-DMW6I-050312 5/3/2012 MSA-DMW-06I	MSA-DMW6S-050312 5/3/2012 MSA-DMW-06S	MSA-DMW7S-050312 5/3/2012 MSA-DMW-07S	MSA-DMW8D-050212 5/2/2012 MSA-DMW-08D	MSA-DMW8I-050212 5/2/2012 MSA-DMW-08I	MSA-DMW8S-050212 5/2/2012 MSA-DMW-08S	MSA-DMW9D-050912 5/9/2012 MSA-DMW-09D
VOLATILES (ug/l)										
1,1,1-TRICHLOROETHANE	200	NA	--	--	--	130 J	--	--	--	--
1,1-DICHLOROETHANE	90	NA	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	7	NA	--	--	--	140 J	--	--	--	--
1,2,3-TRICHLOROBENZENE	NA	NA	--	--	--	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	NA	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	70	NA	--	--	--	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	NA	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	600	NA	--	--	--	--	--	--	--	--
1,2-DICHLOROETHANE	5	NA	--	--	--	--	--	4.9 J	0.22 J	--
1,3-DICHLOROBENZENE	1.8	NA	--	--	--	--	--	--	--	--
1,4-DICHLOROBENZENE	75	NA	--	--	--	--	--	--	--	--
2-BUTANONE	700	NA	--	--	--	--	--	--	--	--
ACETONE	550	NA	--	--	--	--	--	--	--	--
BENZENE	5	NA	--	--	--	--	2.9 J	2.2 J	--	11 J
CARBON DISULFIDE	100	NA	--	--	--	--	--	--	--	--
CARBON TETRACHLORIDE	5	NA	--	--	--	--	--	--	--	--
CHLOROBENZENE	100	NA	--	--	0.29 J	--	--	--	--	--
CHLOROFORM	80	NA	--	--	--	--	--	--	--	140
CIS-1,2-DICHLOROETHENE	70	NA	--	--	1.4	15000	530	370	1.2	350
ETHYLBENZENE	700	NA	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	0.86	NA	--	--	--	--	--	--	--	--
M+P-XYLENES	NA	NA	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	NA	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	5	NA	--	--	--	--	--	--	--	--
NAPHTHALENE	0.65	NA	--	--	--	--	--	--	--	--
O-XYLENE	NA	NA	--	--	--	--	--	--	--	--
TERT-BUTYLBENZENE	NA	NA	--	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	NA	--	--	--	--	--	--	--	--
TOLUENE	1000	NA	--	--	--	63 J	--	--	--	--
TOTAL XYLENES	10000	NA	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	NA	--	--	--	120 J	3.6 J	--	--	--
TRICHLOROETHENE	5	NA	--	--	0.57 J	4700	570	530	0.33 J	2500
VINYL CHLORIDE	2	NA	--	--	--	2200	270	210	--	35 J

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 10 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW5S-050712 5/7/2012 MSA-DMW-05S	MSA-DMW6D-050312 5/3/2012 MSA-DMW-06D	MSA-DMW6I-050312 5/3/2012 MSA-DMW-06I	MSA-DMW6S-050312 5/3/2012 MSA-DMW-06S	MSA-DMW7S-050312 5/3/2012 MSA-DMW-07S	MSA-DMW8D-050212 5/2/2012 MSA-DMW-08D	MSA-DMW8I-050212 5/2/2012 MSA-DMW-08I	MSA-DMW8S-050212 5/2/2012 MSA-DMW-08S	MSA-DMW9D-050912 5/9/2012 MSA-DMW-09D
VOLATILE GASES (UG/L)										
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	7.9
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	230
SEMIVOLATILES (ug/l)										
1,4-DIOXANE	NA	NA	--	--	--	89	47	42	13	46
TOTAL METALS (ug/l)										
ANTIMONY	6	NA	0.13 J	0.18 J	0.18 J	--	--	--	0.2 B	--
ARSENIC	10	NA	2.4 J	3.4 J	6.8	5.2	2.6 J	20	6.6	3.9 J
BARIUM	2000	NA	54	13	37	9.5	22	15 B	16	43
BERYLLIUM	4	NA	0.57 J	6.5	--	0.94 J	3.3	6.5	0.6 J	0.58 J
CADMIUM	5	NA	0.75 J	7.3	--	0.85 J	130	70	--	--
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	9100
CHROMIUM	100	NA	5.8	110	1.6 J	--	4.2	90	3.5	1.2 J
COBALT	NA	NA	27	86	4.1	22	100	150	9.7	330
COPPER	1300	NA	20	53	1.5 B	10	40	66	7.8	7
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA	12000
LEAD	15	NA	3.5	2.5	0.89 J	1 K	2.4	6.4 J	0.48 J	2 K
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	6600
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA	2500
MERCURY	2	NA	1.7	--	--	--	--	0.31	--	--
MOLYBDENUM	NA	NA	0.53 B	2.4 B	0.24 B	0.1 B	0.25 B	3.2 J	0.74 B	--
NICKEL	73	NA	41	99	2.4 K	26	58	120	17	45
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	1000 B
SELENIUM	50	NA	2.3 J	3.7 J	0.67 J	5.3	2.8 J	25	1.8 J	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	8800
SILVER	100	NA	--	--	--	--	--	--	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	30000
TUNGSTEN	NA	NA	1 B	--	--	--	--	--	0.69 B	--
VANADIUM	3.7	NA	5.8 B	--	1.9 B	--	1.4 J	10 J	1.8 J	1.9 J
ZINC	5000	NA	120	440	6.4 B	29	170	330	45	87
FILTERED METALS (ug/l)										
ANTIMONY	6	NA	--	--	0.17 J	--	--	--	--	--
ARSENIC	10	NA	1.1 J	3.8 J	7	4.5 J	2.4 J	19	5.4	3.5 J
BARIUM	2000	NA	52	13	38	9.8	22	11 B	17	42

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW5S-050712 5/7/2012 MSA-DMW-05S	MSA-DMW6D-050312 5/3/2012 MSA-DMW-06D	MSA-DMW6I-050312 5/3/2012 MSA-DMW-06I	MSA-DMW6S-050312 5/3/2012 MSA-DMW-06S	MSA-DMW7S-050312 5/3/2012 MSA-DMW-07S	MSA-DMW8D-050212 5/2/2012 MSA-DMW-08D	MSA-DMW8I-050212 5/2/2012 MSA-DMW-08I	MSA-DMW8S-050212 5/2/2012 MSA-DMW-08S	MSA-DMW9D-050912 5/9/2012 MSA-DMW-09D
BERYLLIUM	4	NA	0.58 J	7.1	--	0.93 J	3.2	6.7	0.57 J	0.58 J
CADMIUM	5	NA	0.75 J	6.9	--	0.89 J	120	72	--	--
CHROMIUM	100	NA	--	38	--	0.88 J	1.6 J	17	1.4 J	--
COBALT	NA	NA	29	91	4.2	22	100	160	9.7	330
COPPER	1300	NA	15	24	0.4 B	8.2	38	37	1.8 B	1.5 B
LEAD	15	NA	1.9 K	2 K	--	0.22 J	2.3	5.6 J	0.5 J	1.3 K
MERCURY	2	NA	0.41	--	--	--	--	--	--	--
MOLYBDENUM	NA	NA	0.17 B	0.28 B	0.23 B	0.18 B	0.22 B	0.74 B	0.36 B	--
NICKEL	73	NA	38	110	2.1 K	23	57	120	18	43
SELENIUM	50	NA	2.2 J	4.2 J	0.66 J	5.4	2.6 J	26	1.6 J	--
SILVER	100	NA	--	--	--	--	--	--	--	--
TUNGSTEN	NA	NA	--	--	--	--	--	--	--	--
VANADIUM	3.7	NA	--	--	--	--	1.6 J	2.5 J	1 J	1.1 J
ZINC	5000	NA	94	430	--	30	170	330	52	86
MISCELLANEOUS (mg/l)										
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA	9.3 B
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	0.089 B
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	49
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	2.5
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	--
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	65
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	170
MISCELLANEOUS (ug/l)										
HEXAVALENT CHROMIUM	100	--	--	--	--	--	--	--	--	--
PERCHLORATE	2.6	NA	0.13 J	--	--	--	--	--	--	--
PETROLEUM HYDROCARBONS (ug/l)										
TPH-GRO	47	NA	NA	NA	42 B	7500	NA	NA	42 B	NA
TPH-DRO	47	NA	NA	NA	430 B	770 B	NA	NA	--	NA
RADIONUCLIDES (pCi/L)										
RADIUM-228	NA	NA	9.16	15.4	0.987 J	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	8.84	15.4	1.19	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)										
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 12 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW5S-050712 5/7/2012 MSA-DMW-05S	MSA-DMW6D-050312 5/3/2012 MSA-DMW-06D	MSA-DMW6I-050312 5/3/2012 MSA-DMW-06I	MSA-DMW6S-050312 5/3/2012 MSA-DMW-06S	MSA-DMW7S-050312 5/3/2012 MSA-DMW-07S	MSA-DMW8D-050212 5/2/2012 MSA-DMW-08D	MSA-DMW8I-050212 5/2/2012 MSA-DMW-08I	MSA-DMW8S-050212 5/2/2012 MSA-DMW-08S	MSA-DMW9D-050912 5/9/2012 MSA-DMW-09D
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	82 NJ	3.5 J	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 13 OF 52

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW9I-050912 / 5/9/2012 / MSA-DMW-09I	MSA-DMW9S-050912 / 5/9/2012 / MSA-DMW-09S	MSA-DMW10S-051012 / 5/10/2012 / MSA-DMW-10S	MSA-DMW-10S-051012 / 5/10/2012 / MSA-DMW-10S	DMW11I-051112 / 5/11/2012 / MSA-DMW-11I	MSA-MW11I-051412 / 5/14/2012 / MSA-DMW-11I	DMW11S-051112 / 5/11/2012 / MSA-DMW-11S	MSA-MW11S-051412 / 5/14/2012 / MSA-DMW-11S	MSA-MW3-051512 / 5/15/2012 / MSA-MW-03
VOLATILES (ug/l)										
1,1,1-TRICHLOROETHANE	200	--	--	--	NA	--	NA	--	NA	--
1,1-DICHLOROETHANE	90	--	--	--	NA	--	NA	--	NA	--
1,1-DICHLOROETHENE	7	13 J	--	--	NA	--	NA	220 J	NA	--
1,2,3-TRICHLOROBENZENE	NA	--	--	--	NA	--	NA	--	NA	--
1,2,3-TRIMETHYLBENZENE	NA	--	34 J	--	NA	--	NA	--	NA	--
1,2,4-TRICHLOROBENZENE	70	--	--	--	NA	--	NA	--	NA	--
1,2,4-TRIMETHYLBENZENE	NA	--	99 J	--	NA	--	NA	--	NA	--
1,2-DICHLOROBENZENE	600	--	--	--	NA	--	NA	--	NA	--
1,2-DICHLOROETHANE	5	--	--	--	NA	--	NA	--	NA	--
1,3-DICHLOROBENZENE	1.8	--	--	--	NA	--	NA	--	NA	--
1,4-DICHLOROBENZENE	75	--	--	--	NA	--	NA	--	NA	--
2-BUTANONE	700	--	--	--	NA	--	NA	--	NA	--
ACETONE	550	--	--	--	NA	--	NA	--	NA	--
BENZENE	5	21 J	280 J	2.3 J	NA	--	NA	--	NA	--
CARBON DISULFIDE	100	--	--	--	NA	--	NA	--	NA	--
CARBON TETRACHLORIDE	5	41 J	--	--	NA	--	NA	--	NA	--
CHLOROBENZENE	100	--	140 J	--	NA	--	NA	--	NA	--
CHLOROFORM	80	19 J	--	--	NA	0.46 J	NA	220 J	NA	--
CIS-1,2-DICHLOROETHENE	70	2000	4400	--	NA	21	NA	27000	NA	120
ETHYLBENZENE	700	--	1100	--	NA	--	NA	--	NA	--
HEXACHLOROBUTADIENE	0.86	--	--	--	NA	--	NA	--	NA	--
M+P-XYLENES	NA	--	6900	--	NA	--	NA	--	NA	--
METHYL TERT-BUTYL ETHER	20	--	--	--	NA	--	NA	--	NA	--
METHYLENE CHLORIDE	5	28 J	--	--	NA	--	NA	--	NA	--
NAPHTHALENE	0.65	--	--	--	NA	--	NA	--	NA	--
O-XYLENE	NA	--	450	--	NA	--	NA	--	NA	--
TERT-BUTYLBENZENE	NA	--	--	--	NA	--	NA	--	NA	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	NA	--	NA	--	NA	--
TOLUENE	1000	--	1800	--	NA	--	NA	420 J	NA	--
TOTAL XYLENES	10000	--	7400	--	NA	--	NA	--	NA	--
TRANS-1,2-DICHLOROETHENE	100	--	--	--	NA	--	NA	--	NA	--
TRICHLOROETHENE	5	1000	120 J	--	NA	19	NA	16000	NA	5.4
VINYL CHLORIDE	2	700	11000	280	NA	1.4	NA	4200	NA	14

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 14 OF 52

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW9I-050912 / 5/9/2012 / MSA-DMW-09I	MSA-DMW9S-050912 / 5/9/2012 / MSA-DMW-09S	MSA-DMW10S-051012 / 5/10/2012 / MSA-DMW-10S	MSA-DMW-10S-051012 / 5/10/2012 / MSA-DMW-10S	DMW11I-051112 / 5/11/2012 / MSA-DMW-11I	MSA-MW11I-051412 / 5/14/2012 / MSA-DMW-11I	DMW11S-051112 / 5/11/2012 / MSA-DMW-11S	MSA-MW11S-051412 / 5/14/2012 / MSA-DMW-11S	MSA-MW3-051512 / 5/15/2012 / MSA-MW-03
VOLATILE GASES (UG/L)										
ETHANE	NA	4.6	48	NA	NA	NA	NA	56	NA	NA
ETHENE	NA	98	1900	NA	NA	NA	NA	220	NA	NA
METHANE	NA	680	1000	NA	NA	NA	NA	470	NA	NA
SEMIVOLATILES (ug/l)										
1,4-DIOXANE	NA	150	33	10	NA	--	NA	6.4	NA	5.6
TOTAL METALS (ug/l)										
ANTIMONY	6	0.44 B	--	--	NA	--	NA	0.13 J	NA	0.16 B
ARSENIC	10	5.8	1.9 J	17	NA	1.7 J	NA	5.3	NA	1.5 B
BARIUM	2000	46	87	20 B	NA	11	NA	50	NA	44
BERYLLIUM	4	2.2	--	--	NA	--	NA	--	NA	--
CADMIUM	5	0.72 J	--	--	NA	--	NA	--	NA	0.14 B
CALCIUM	NA	60000	69000	NA	NA	NA	NA	82000	NA	NA
CHROMIUM	100	10	1.3 J	3.8	NA	5.6	NA	--	NA	2
COBALT	NA	320	0.12 J	4.2	NA	1	NA	19	NA	3.8
COPPER	1300	21	1.3 B	1.3 B	NA	8.2	NA	0.41 B	NA	7.3
IRON	300	11000	29000	NA	NA	NA	NA	27000	NA	NA
LEAD	15	7.7	--	0.33 J	NA	2.3	NA	--	NA	1.1 B
MAGNESIUM	NA	34000	59000	NA	NA	NA	NA	21000	NA	NA
MANGANESE	50	5000	3200	NA	NA	NA	NA	950	NA	NA
MERCURY	2	0.26	0.13 J	--	NA	1.4	NA	--	NA	--
MOLYBDENUM	NA	0.98 B	--	0.19 B	NA	0.51 B	NA	0.15 B	NA	0.5 B
NICKEL	73	81	--	1.5 J	NA	2.1	NA	7	NA	2.8 B
POTASSIUM	NA	9200	11000	NA	NA	NA	NA	5800	NA	NA
SELENIUM	50	2.6 J	0.67 J	--	NA	--	NA	0.88 J	NA	--
SILICON DIOXIDE	NA	16000	5200	NA	NA	NA	NA	4000	NA	NA
SILVER	100	--	--	--	NA	--	NA	--	NA	--
SODIUM	NA	94000	170000	NA	NA	NA	NA	11000	NA	NA
TUNGSTEN	NA	0.92 B	--	--	NA	--	NA	--	NA	0.43 B
VANADIUM	3.7	13 J	11 J	2.3 J	NA	12 J	NA	--	NA	1.6 J
ZINC	5000	210	5.6 B	21 B	NA	16 B	NA	23 B	NA	66
FILTERED METALS (ug/l)										
ANTIMONY	6	--	--	--	NA	--	NA	--	NA	--
ARSENIC	10	3.6 J	1.7 J	17	NA	--	NA	5.3	NA	1.4 B
BARIUM	2000	35	84	19 B	NA	3.2 B	NA	48	NA	44

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW9I-050912 5/9/2012 MSA-DMW-09I	MSA-DMW9S-050912 5/9/2012 MSA-DMW-09S	MSA-DMW10S-051012 5/10/2012 MSA-DMW-10S	MSA-DMW-10S-051012 5/10/2012 MSA-DMW-10S	DMW11I-051112 5/11/2012 MSA-DMW-11I	MSA-MW11I-051412 5/14/2012 MSA-DMW-11I	DMW11S-051112 5/11/2012 MSA-DMW-11S	MSA-MW11S-051412 5/14/2012 MSA-DMW-11S	MSA-MW3-051512 5/15/2012 MSA-MW-03
BERYLLIUM	4	2	--	--	NA	--	NA	--	NA	--
CADMIUM	5	0.14 J	--	--	NA	--	NA	--	NA	--
CHROMIUM	100	--	1.2 J	0.81 J	NA	--	NA	--	NA	0.8 J
COBALT	NA	320	0.11 J	4.3	NA	0.76 J	NA	18	NA	3.9
COPPER	1300	2.8	--	--	NA	7.2	NA	--	NA	1.8 B
LEAD	15	1 K	--	--	NA	0.5 J	NA	--	NA	--
MERCURY	2	--	--	--	NA	0.16 B	NA	--	NA	--
MOLYBDENUM	NA	0.41 B	--	0.23 B	NA	0.11 B	NA	--	NA	0.42 B
NICKEL	73	79	0.34 J	1.4 J	NA	1.4 J	NA	6.9	NA	2.5 B
SELENIUM	50	2 J	0.79 J	--	NA	--	NA	--	NA	--
SILVER	100	--	--	--	NA	--	NA	--	NA	--
TUNGSTEN	NA	--	--	--	NA	--	NA	--	NA	--
VANADIUM	3.7	0.96 J	10 J	--	NA	--	NA	0.48 J	NA	0.46 J
ZINC	5000	150	6.4 B	11 J	NA	13 B	NA	22 B	NA	62
MISCELLANEOUS (mg/l)										
ALKALINITY	NA	110	430	NA	NA	NA	NA	140	NA	NA
AMMONIA-N	NA	4.2	2.4	NA	NA	NA	NA	0.84	NA	NA
CHLORIDE	NA	130	170	NA	NA	NA	NA	59 K	NA	NA
DISSOLVED ORGANIC CARBON	NA	6.5	20	NA	NA	NA	NA	11	NA	NA
NITRATE-N	NA	--	--	NA	NA	NA	NA	--	NA	NA
ORTHOPHOSPHATE	NA	0.19 J	--	NA	NA	NA	NA	0.14 J	NA	NA
SULFATE	NA	310	180	NA	NA	NA	NA	150	NA	NA
TOTAL DISSOLVED SOLIDS	NA	750	900	NA	NA	NA	NA	490	NA	NA
MISCELLANEOUS (ug/l)										
HEXAVALENT CHROMIUM	100	--	--	NA	--	NA	--	NA	--	--
PERCHLORATE	2.6	--	--	--	NA	--	NA	--	NA	--
PETROLEUM HYDROCARBONS (ug/l)										
TPH-GRO	47	NA	19000	97 J	NA	NA	NA	24000	NA	100 B
TPH-DRO	47	NA	3000	620 B	NA	NA	NA	1200 B	NA	--
RADIONUCLIDES (pCi/L)										
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)										
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-DMW9I-050912 5/9/2012 MSA-DMW-09I	MSA-DMW9S-050912 5/9/2012 MSA-DMW-09S	MSA-DMW10S-051012 5/10/2012 MSA-DMW-10S	MSA-DMW-10S-051012 5/10/2012 MSA-DMW-10S	DMW11I-051112 5/11/2012 MSA-DMW-11I	MSA-MW11I-051412 5/14/2012 MSA-DMW-11I	DMW11S-051112 5/11/2012 MSA-DMW-11S	MSA-MW11S-051412 5/14/2012 MSA-DMW-11S	MSA-MW3-051512 5/15/2012 MSA-MW-03
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	1.6 NJ	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	1.9 NJ	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	59 NJ	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW3-051612 5/16/2012 MSA-MW-03	MSA-MW4-051512 5/15/2012 MSA-MW-04	MSA-MW4-051512-11 5/15/2012 MSA-MW-04	MSA-MW4-051512-18 5/15/2012 MSA-MW-04	MSA-MW4-051512-25 5/15/2012 MSA-MW-04	MSA-MW4-060712-11-PDB 6/7/2012 MSA-MW-04	MSA-MW4-060712-18-PDB 6/7/2012 MSA-MW-04	MSA-MW4-060712-25-PDB 6/7/2012 MSA-MW-04	MSA-MW5-051412 5/14/2012 MSA-MW-05
VOLATILES (ug/l)										
1,1,1-TRICHLOROETHANE	200	NA	NA	--	--	--	--	--	--	NA
1,1-DICHLOROETHANE	90	NA	NA	--	--	--	--	--	--	NA
1,1-DICHLOROETHENE	7	NA	NA	--	--	--	--	--	--	NA
1,2,3-TRICHLOROBENZENE	NA	NA	NA	--	--	--	--	--	--	NA
1,2,3-TRIMETHYLBENZENE	NA	NA	NA	--	--	--	--	--	--	NA
1,2,4-TRICHLOROBENZENE	70	NA	NA	--	--	--	--	--	--	NA
1,2,4-TRIMETHYLBENZENE	NA	NA	NA	--	--	--	--	--	--	NA
1,2-DICHLOROBENZENE	600	NA	NA	0.13 J	--	--	--	--	--	NA
1,2-DICHLOROETHANE	5	NA	NA	1.2	1.1	1.1	--	1	1.1	NA
1,3-DICHLOROBENZENE	1.8	NA	NA	--	--	--	--	--	--	NA
1,4-DICHLOROBENZENE	75	NA	NA	--	--	--	--	--	--	NA
2-BUTANONE	700	NA	NA	--	--	--	3.3 J	2.8 J	2.6 J	NA
ACETONE	550	NA	NA	--	--	4.5 J	7.3 J	8.3 J	8.3 J	NA
BENZENE	5	NA	NA	1.3	0.79 J	0.65 J	--	0.82 J	0.9 J	NA
CARBON DISULFIDE	100	NA	NA	--	--	--	--	--	--	NA
CARBON TETRACHLORIDE	5	NA	NA	--	--	--	--	--	--	NA
CHLOROBENZENE	100	NA	NA	0.27 J	0.25 J	0.24 J	--	0.31 J	0.34 J	NA
CHLOROFORM	80	NA	NA	--	--	--	--	--	--	NA
CIS-1,2-DICHLOROETHENE	70	NA	NA	0.67 J	0.58 J	0.61 J	--	0.8 J	0.86 J	NA
ETHYLBENZENE	700	NA	NA	--	--	--	--	--	--	NA
HEXACHLOROBUTADIENE	0.86	NA	NA	--	--	--	--	--	--	NA
M+P-XYLENES	NA	NA	NA	--	--	--	--	--	--	NA
METHYL TERT-BUTYL ETHER	20	NA	NA	--	--	--	--	--	--	NA
METHYLENE CHLORIDE	5	NA	NA	--	--	--	--	--	--	NA
NAPHTHALENE	0.65	NA	NA	--	--	--	--	--	--	NA
O-XYLENE	NA	NA	NA	--	--	--	--	--	--	NA
TERT-BUTYLBENZENE	NA	NA	NA	--	--	--	--	--	--	NA
TERTIARY-BUTYL ALCOHOL	NA	NA	NA	--	--	--	4.8 J	6.6 J	6 J	NA
TOLUENE	1000	NA	NA	--	--	--	--	--	--	NA
TOTAL XYLENES	10000	NA	NA	--	--	--	--	--	--	NA
TRANS-1,2-DICHLOROETHENE	100	NA	NA	0.91 J	0.87 J	0.89 J	--	1.1	1.2	NA
TRICHLOROETHENE	5	NA	NA	--	--	--	--	--	--	NA
VINYL CHLORIDE	2	NA	NA	1.2	0.82 J	0.81 J	--	1.4	1.4	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 18 OF 52

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW3-051612 / 5/16/2012 / MSA-MW-03	MSA-MW4-051512 / 5/15/2012 / MSA-MW-04	MSA-MW4-051512-11 / 5/15/2012 / MSA-MW-04	MSA-MW4-051512-18 / 5/15/2012 / MSA-MW-04	MSA-MW4-051512-25 / 5/15/2012 / MSA-MW-04	MSA-MW4-060712-11-PDB / 6/7/2012 / MSA-MW-04	MSA-MW4-060712-18-PDB / 6/7/2012 / MSA-MW-04	MSA-MW4-060712-25-PDB / 6/7/2012 / MSA-MW-04	MSA-MW5-051412 / 5/14/2012 / MSA-MW-05
VOLATILE GASES (UG/L)										
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)										
1,4-DIOXANE	NA	NA	0.6 J	NA	NA	NA	NA	NA	NA	6.1
TOTAL METALS (ug/l)										
ANTIMONY	6	NA	1.4 J	NA	NA	NA	NA	NA	NA	--
ARSENIC	10	NA	2.7 B	NA	NA	NA	NA	NA	NA	2 J
BARIUM	2000	NA	40	NA	NA	NA	NA	NA	NA	19
BERYLLIUM	4	NA	--	NA	NA	NA	NA	NA	NA	--
CADMIUM	5	NA	3.6	NA	NA	NA	NA	NA	NA	--
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	NA	1.8 J	NA	NA	NA	NA	NA	NA	1 J
COBALT	NA	NA	0.5 B	NA	NA	NA	NA	NA	NA	0.32 J
COPPER	1300	NA	13	NA	NA	NA	NA	NA	NA	4.8
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	NA	4.3	NA	NA	NA	NA	NA	NA	0.92 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	--	NA	NA	NA	NA	NA	NA	--
MOLYBDENUM	NA	NA	1.7 J	NA	NA	NA	NA	NA	NA	1.6 B
NICKEL	73	NA	9.9	NA	NA	NA	NA	NA	NA	1.4 J
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	--	NA	NA	NA	NA	NA	NA	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	NA	0.092 J	NA	NA	NA	NA	NA	NA	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	NA	9.9 J	NA	NA	NA	NA	NA	NA	--
VANADIUM	3.7	NA	0.98 J	NA	NA	NA	NA	NA	NA	2.4 J
ZINC	5000	NA	300	NA	NA	NA	NA	NA	NA	10 B
FILTERED METALS (ug/l)										
ANTIMONY	6	NA	0.48 B	NA	NA	NA	NA	NA	NA	--
ARSENIC	10	NA	2.3 B	NA	NA	NA	NA	NA	NA	1.5 J
BARIUM	2000	NA	38	NA	NA	NA	NA	NA	NA	16

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW3-051612 5/16/2012 MSA-MW-03	MSA-MW4-051512 5/15/2012 MSA-MW-04	MSA-MW4-051512-11 5/15/2012 MSA-MW-04	MSA-MW4-051512-18 5/15/2012 MSA-MW-04	MSA-MW4-051512-25 5/15/2012 MSA-MW-04	MSA-MW4-060712-11-PDB 6/7/2012 MSA-MW-04	MSA-MW4-060712-18-PDB 6/7/2012 MSA-MW-04	MSA-MW4-060712-25-PDB 6/7/2012 MSA-MW-04	MSA-MW5-051412 5/14/2012 MSA-MW-05
BERYLLIUM	4	NA	--	NA	NA	NA	NA	NA	NA	--
CADMIUM	5	NA	--	NA	NA	NA	NA	NA	NA	--
CHROMIUM	100	NA	1.1 J	NA	NA	NA	NA	NA	NA	--
COBALT	NA	NA	0.41 B	NA	NA	NA	NA	NA	NA	0.13 J
COPPER	1300	NA	1.1 B	NA	NA	NA	NA	NA	NA	--
LEAD	15	NA	--	NA	NA	NA	NA	NA	NA	--
MERCURY	2	NA	--	NA	NA	NA	NA	NA	NA	--
MOLYBDENUM	NA	NA	1.5 B	NA	NA	NA	NA	NA	NA	1.4 B
NICKEL	73	NA	9.9	NA	NA	NA	NA	NA	NA	0.57 J
SELENIUM	50	NA	--	NA	NA	NA	NA	NA	NA	--
SILVER	100	NA	--	NA	NA	NA	NA	NA	NA	--
TUNGSTEN	NA	NA	8.6 J	NA	NA	NA	NA	NA	NA	--
VANADIUM	3.7	NA	--	NA	NA	NA	NA	NA	NA	--
ZINC	5000	NA	240	NA	NA	NA	NA	NA	NA	--
MISCELLANEOUS (mg/l)										
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)										
HEXAVALENT CHROMIUM	100	NA	--	NA	NA	NA	NA	NA	NA	--
PERCHLORATE	2.6	NA	--	NA	NA	NA	NA	NA	NA	--
PETROLEUM HYDROCARBONS (ug/l)										
TPH-GRO	47	NA	43 B	NA	NA	NA	NA	NA	NA	1700
TPH-DRO	47	NA	240 J	NA	NA	NA	NA	NA	NA	450 B
RADIONUCLIDES (pCi/L)										
RADIUM-228	NA	1.02	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	0.795	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)										
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW3-051612 5/16/2012 MSA-MW-03	MSA-MW4-051512 5/15/2012 MSA-MW-04	MSA-MW4-051512-11 5/15/2012 MSA-MW-04	MSA-MW4-051512-18 5/15/2012 MSA-MW-04	MSA-MW4-051512-25 5/15/2012 MSA-MW-04	MSA-MW4-060712-11-PDB 6/7/2012 MSA-MW-04	MSA-MW4-060712-18-PDB 6/7/2012 MSA-MW-04	MSA-MW4-060712-25-PDB 6/7/2012 MSA-MW-04	MSA-MW5-051412 5/14/2012 MSA-MW-05
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	1.3 NJ	NA	1.1 NJ	NA	2 NJ	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	1.2 NJ	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	0.16 NJ	0.13 NJ	0.13 NJ	NA	NA	0.14 NJ	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	0.43 NJ	0.4 NJ	0.42 NJ	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	0.92 NJ	0.75 NJ	0.95 NJ	0.76 NJ	0.97 NJ	1.1 NJ	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	0.78 NJ	2.1 NJ	2.6 NJ	NA
ISOBUTANE	NA	NA	NA	3.2 NJ	NA	3.1 NJ	NA	1.7 NJ	1.1 NJ	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 21 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW5-051412-25 5/14/2012 MSA-MW-05	MSA-MW5-051412-31 5/14/2012 MSA-MW-05	MSA-MW5-051412-37 5/14/2012 MSA-MW-05	MSA-MW5-060712-25-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-31-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-37-PDB 6/7/2012 MSA-MW-05	MSA-MW06-050712 5/7/2012 MSA-MW-06	MSA-MW-06-050712 5/7/2012 MSA-MW-06	MSA-MW14D-050112 5/1/2012 MSA-MW-14D
VOLATILES (ug/l)										
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	--	NA	--	--
1,1-DICHLOROETHANE	90	--	--	--	--	--	--	NA	--	--
1,1-DICHLOROETHENE	7	--	--	--	--	--	--	NA	--	--
1,2,3-TRICHLOROBENZENE	NA	--	--	--	--	--	--	NA	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	NA	--	--
1,2,4-TRICHLOROBENZENE	70	--	--	--	--	--	--	NA	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	NA	--	--
1,2-DICHLOROBENZENE	600	--	--	--	--	--	--	NA	--	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	--	NA	--	--
1,3-DICHLOROBENZENE	1.8	--	--	--	--	--	--	NA	--	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	NA	--	--
2-BUTANONE	700	--	--	--	--	--	--	NA	--	--
ACETONE	550	--	--	--	--	--	--	NA	--	--
BENZENE	5	--	--	--	--	--	--	NA	--	--
CARBON DISULFIDE	100	--	--	--	--	--	--	NA	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	NA	--	--
CHLOROBENZENE	100	--	--	--	--	--	--	NA	--	--
CHLOROFORM	80	--	--	--	--	--	--	NA	--	--
CIS-1,2-DICHLOROETHENE	70	2500	2400	2400	1800	2600	2400	NA	0.41 J	--
ETHYLBENZENE	700	--	--	--	--	--	--	NA	--	--
HEXACHLOROBUTADIENE	0.86	--	--	--	--	--	--	NA	--	--
M+P-XYLENES	NA	--	--	--	--	--	--	NA	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	--	NA	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--	--	NA	--	--
NAPHTHALENE	0.65	--	--	--	--	--	--	NA	--	--
O-XYLENE	NA	--	--	--	--	--	--	NA	--	--
TERT-BUTYLBENZENE	NA	--	--	--	--	--	--	NA	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	NA	--	--
TOLUENE	1000	--	--	--	--	--	--	NA	--	--
TOTAL XYLENES	10000	--	--	--	--	--	--	NA	--	--
TRANS-1,2-DICHLOROETHENE	100	58 J	56 J	53 J	34 J	54 J	56 J	NA	--	--
TRICHLOROETHENE	5	--	--	--	--	--	--	NA	--	--
VINYL CHLORIDE	2	440	440	410	230	530	520	NA	--	--

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW5-051412-25 5/14/2012 MSA-MW-05	MSA-MW5-051412-31 5/14/2012 MSA-MW-05	MSA-MW5-051412-37 5/14/2012 MSA-MW-05	MSA-MW5-060712-25-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-31-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-37-PDB 6/7/2012 MSA-MW-05	MSA-MW06-050712 5/7/2012 MSA-MW-06	MSA-MW-06-050712 5/7/2012 MSA-MW-06	MSA-MW14D-050112 5/1/2012 MSA-MW-14D
VOLATILE GASES (UG/L)										
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)										
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	1.3	--
TOTAL METALS (ug/l)										
ANTIMONY	6	NA	NA	NA	NA	NA	NA	NA	--	0.18 B
ARSENIC	10	NA	NA	NA	NA	NA	NA	NA	4.8 J	2.2 B
BARIUM	2000	NA	NA	NA	NA	NA	NA	NA	9.7	6.3
BERYLLIUM	4	NA	NA	NA	NA	NA	NA	NA	0.9 J	0.2 J
CADMIUM	5	NA	NA	NA	NA	NA	NA	NA	0.62 J	--
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	NA	NA	NA	NA	NA	NA	NA	1.1 J	2.6
COBALT	NA	NA	NA	NA	NA	NA	NA	NA	48	5.6
COPPER	1300	NA	NA	NA	NA	NA	NA	NA	6.1	5.1
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	NA	NA	NA	NA	NA	NA	NA	1.2 K	0.46 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	NA	NA	NA	NA	NA	NA	0.13 J	--
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA	--	0.19 B
NICKEL	73	NA	NA	NA	NA	NA	NA	NA	15	8.9
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	NA	NA	NA	NA	NA	NA	2.3 J	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	NA	NA	NA	NA	NA	NA	NA	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	NA	NA	NA	NA	NA	NA	NA	--	--
VANADIUM	3.7	NA	NA	NA	NA	NA	NA	NA	21	3.3 J
ZINC	5000	NA	NA	NA	NA	NA	NA	NA	56	100
FILTERED METALS (ug/l)										
ANTIMONY	6	NA	NA	NA	NA	NA	NA	NA	--	--
ARSENIC	10	NA	NA	NA	NA	NA	NA	NA	2.6 J	1 B
BARIUM	2000	NA	NA	NA	NA	NA	NA	NA	8.8	4.7 J

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW5-051412-25 5/14/2012 MSA-MW-05	MSA-MW5-051412-31 5/14/2012 MSA-MW-05	MSA-MW5-051412-37 5/14/2012 MSA-MW-05	MSA-MW5-060712-25-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-31-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-37-PDB 6/7/2012 MSA-MW-05	MSA-MW06-050712 5/7/2012 MSA-MW-06	MSA-MW-06-050712 5/7/2012 MSA-MW-06	MSA-MW14D-050112 5/1/2012 MSA-MW-14D
BERYLLIUM	4	NA	NA	NA	NA	NA	NA	NA	0.26 J	--
CADMIUM	5	NA	NA	NA	NA	NA	NA	NA	0.52 J	--
CHROMIUM	100	NA	NA	NA	NA	NA	NA	NA	--	--
COBALT	NA	NA	NA	NA	NA	NA	NA	NA	50	5.4
COPPER	1300	NA	NA	NA	NA	NA	NA	NA	0.76 B	2
LEAD	15	NA	NA	NA	NA	NA	NA	NA	--	--
MERCURY	2	NA	NA	NA	NA	NA	NA	NA	--	--
MOLYBDENUM	NA	NA	NA	NA	NA	NA	NA	NA	0.1 B	0.26 B
NICKEL	73	NA	NA	NA	NA	NA	NA	NA	15	8.4
SELENIUM	50	NA	NA	NA	NA	NA	NA	NA	1.6 J	--
SILVER	100	NA	NA	NA	NA	NA	NA	NA	--	--
TUNGSTEN	NA	NA	NA	NA	NA	NA	NA	NA	--	--
VANADIUM	3.7	NA	NA	NA	NA	NA	NA	NA	0.93 J	0.63 B
ZINC	5000	NA	NA	NA	NA	NA	NA	NA	48	98
MISCELLANEOUS (mg/l)										
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)										
HEXAVALENT CHROMIUM	100	NA	NA	NA	NA	NA	NA	--	NA	0.04
PERCHLORATE	2.6	NA	NA	NA	NA	NA	NA	NA	--	--
PETROLEUM HYDROCARBONS (ug/l)										
TPH-GRO	47	NA	NA	NA	NA	NA	NA	NA	42 B	NA
TPH-DRO	47	NA	NA	NA	NA	NA	NA	NA	280 B	NA
RADIONUCLIDES (pCi/L)										
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)										
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 24 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW5-051412-25 5/14/2012 MSA-MW-05	MSA-MW5-051412-31 5/14/2012 MSA-MW-05	MSA-MW5-051412-37 5/14/2012 MSA-MW-05	MSA-MW5-060712-25-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-31-PDB 6/7/2012 MSA-MW-05	MSA-MW5-060712-37-PDB 6/7/2012 MSA-MW-05	MSA-MW06-050712 5/7/2012 MSA-MW-06	MSA-MW-06-050712 5/7/2012 MSA-MW-06	MSA-MW14D-050112 5/1/2012 MSA-MW-14D
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	31 NJ	36 NJ	32 NJ	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW14I-050112 5/1/2012 MSA-MW-14I	MSA-MW15D-041812 4/18/2012 MSA-MW-15D	MSA-MW15I-041812 4/18/2012 MSA-MW-15I	MSA-MW15S-041812 4/18/2012 MSA-MW-15S	MSA-MW16D-050912 5/9/2012 MSA-MW-16D	MSA-MW16I-050912 5/9/2012 MSA-MW-16I	MSA-MW16S-050912 5/9/2012 MSA-MW-16S	MSA-MW17I-042012 4/20/2012 MSA-MW-17I
VOLATILES (ug/l)									
1,1,1-TRICHLOROETHANE	200	--	--	--	--	--	--	--	--
1,1-DICHLOROETHANE	90	--	--	--	--	--	--	--	--
1,1-DICHLOROETHENE	7	16 J	--	--	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	NA	--	--	--	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	70	--	--	--	--	--	--	2.6 J	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	--	--	--	--	--	--
1,2-DICHLOROBENZENE	600	--	--	--	--	--	--	4.3 J	--
1,2-DICHLOROETHANE	5	--	--	--	--	--	--	--	--
1,3-DICHLOROBENZENE	1.8	--	--	--	--	--	--	1.7 J	--
1,4-DICHLOROBENZENE	75	--	--	--	--	--	--	2.1 J	--
2-BUTANONE	700	--	--	--	--	--	--	--	--
ACETONE	550	--	--	--	--	--	--	--	--
BENZENE	5	12 J	--	--	--	--	--	8.9	--
CARBON DISULFIDE	100	--	--	2.6 U	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	--	--	--	--	--	--
CHLOROBENZENE	100	240	--	--	--	--	--	--	--
CHLOROFORM	80	--	--	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	1400	--	150	10	--	140	78	110
ETHYLBENZENE	700	--	--	--	--	--	--	--	--
HEXACHLOROBUTADIENE	0.86	--	--	--	--	--	--	--	--
M+P-XYLENES	NA	--	--	--	--	--	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	--	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	--	--	--	--	--	--
NAPHTHALENE	0.65	--	--	--	--	--	--	--	--
O-XYLENE	NA	--	--	--	--	--	--	--	--
TERT-BUTYLBENZENE	NA	--	--	--	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	--	--	--	--	--	--
TOLUENE	1000	6 J	--	--	--	--	--	--	--
TOTAL XYLENES	10000	--	--	--	--	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	14 J	--	--	--	--	--	--	--
TRICHLOROETHENE	5	50	--	580	37	0.6 J	640	--	830
VINYL CHLORIDE	2	910	--	12 J	0.5 J	--	12 J	160	9.1 J

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 26 OF 52

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW14I-050112 / 5/1/2012 / MSA-MW-14I	MSA-MW15D-041812 / 4/18/2012 / MSA-MW-15D	MSA-MW15I-041812 / 4/18/2012 / MSA-MW-15I	MSA-MW15S-041812 / 4/18/2012 / MSA-MW-15S	MSA-MW16D-050912 / 5/9/2012 / MSA-MW-16D	MSA-MW16I-050912 / 5/9/2012 / MSA-MW-16I	MSA-MW16S-050912 / 5/9/2012 / MSA-MW-16S	MSA-MW17I-042012 / 4/20/2012 / MSA-MW-17I
VOLATILE GASES (UG/L)									
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)									
1,4-DIOXANE	NA	61 K	--	--	0.65 J	--	--	210	--
TOTAL METALS (ug/l)									
ANTIMONY	6	0.3 B	--	--	0.23 J	--	0.31 J	--	--
ARSENIC	10	27	0.69 J	1.8 J	3.4 J	0.71 J	38	9.7	6.1
BARIUM	2000	16	6.4	7.3	14	7.5	33	43	11
BERYLLIUM	4	--	--	0.22 J	1.4	--	0.6 J	16	--
CADMIUM	5	--	--	--	0.98 J	--	--	--	--
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	1.9 J	0.99 J	1.7 J	5	1.4 J	1.5 J	48	--
COBALT	NA	13 L	12	21	110	7	30	100	16
COPPER	1300	1 J	5.6	2.8 B	180	4.3	2.1 B	0.73 B	1.1 B
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	0.7 J	--	0.28 J	1.3	0.35 J	3	--	0.28 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	--	--	--	--	--	--	--
MOLYBDENUM	NA	0.74 B	0.13 B	0.19 B	0.49 B	--	1.1 B	0.39 B	0.13 B
NICKEL	73	7.9 L	17	26	120	9.9	41	120	22
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	1.1 J	--	--	3.7 J	--	--	5.9	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	--	--	--	--	--	--	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	0.75 B	--	--	0.7 B	--	0.53 B	--	--
VANADIUM	3.7	1.9 B	0.5 J	1 J	2.3 J	2 J	1.9 J	96	1.1 J
ZINC	5000	7.6 J	23	48	130	39 B	68	650	35 B
FILTERED METALS (ug/l)									
ANTIMONY	6	0.24 B	--	--	--	--	--	--	--
ARSENIC	10	26	0.63 J	1.6 J	3.6 J	--	36	2.5 J	5.8
BARIUM	2000	14	5.9	6.5	16	5.3	5.4	39	10

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW14I-050112 5/1/2012 MSA-MW-14I	MSA-MW15D-041812 4/18/2012 MSA-MW-15D	MSA-MW15I-041812 4/18/2012 MSA-MW-15I	MSA-MW15S-041812 4/18/2012 MSA-MW-15S	MSA-MW16D-050912 5/9/2012 MSA-MW-16D	MSA-MW16I-050912 5/9/2012 MSA-MW-16I	MSA-MW16S-050912 5/9/2012 MSA-MW-16S	MSA-MW17I-042012 4/20/2012 MSA-MW-17I
BERYLLIUM	4	0.2 J	--	0.22 J	1.5	--	0.24 J	1.2	--
CADMIUM	5	0.13 J	--	0.15 J	0.98 J	--	--	--	--
CHROMIUM	100	0.88 J	--	1.5 J	5	--	--	2.8	--
COBALT	NA	13 L	12	22	110	7.1	21	87	17
COPPER	1300	--	5	1.7 B	190	0.9 B	--	--	0.42 B
LEAD	15	--	--	--	1.3	--	--	--	--
MERCURY	2	0.12 J	--	--	--	--	--	--	--
MOLYBDENUM	NA	0.6 B	--	--	--	--	0.44 B	0.3 B	0.094 B
NICKEL	73	7 L	17	28	130	10	28	93	21
SELENIUM	50	1 J	--	--	3.7 J	--	--	--	--
SILVER	100	--	--	--	--	--	--	--	--
TUNGSTEN	NA	0.66 B	--	--	--	--	--	--	--
VANADIUM	3.7	0.88 B	--	0.68 J	1.7 J	--	0.48 J	1.4 J	0.46 J
ZINC	5000	4 J	21 B	39 B	140	16 B	36 B	3.5 B	31 B
MISCELLANEOUS (mg/l)									
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)									
HEXAVALENT CHROMIUM	100	--	0.016 J	--	--	--	--	--	NA
PERCHLORATE	2.6	--	0.72 J	0.25 J	--	0.43 J	--	--	0.19 J
PETROLEUM HYDROCARBONS (ug/l)									
TPH-GRO	47	NA	NA	NA	62 B	NA	NA	98 J	NA
TPH-DRO	47	NA	NA	NA	330 J	NA	NA	620 B	NA
RADIONUCLIDES (pCi/L)									
RADIUM-228	NA	NA	NA	NA	NA	--	0.481 J	0.836 J	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	--	0.366 J	0.283 J	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)									
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW14I-050112 5/1/2012 MSA-MW-14I	MSA-MW15D-041812 4/18/2012 MSA-MW-15D	MSA-MW15I-041812 4/18/2012 MSA-MW-15I	MSA-MW15S-041812 4/18/2012 MSA-MW-15S	MSA-MW16D-050912 5/9/2012 MSA-MW-16D	MSA-MW16I-050912 5/9/2012 MSA-MW-16I	MSA-MW16S-050912 5/9/2012 MSA-MW-16S	MSA-MW17I-042012 4/20/2012 MSA-MW-17I
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	7.7 NJ	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	0.21 NJ	NA	NA	NA	NA	1 NJ	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	17 NJ	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	360 NJ	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW17I-042312 / 4/23/2012 / MSA-MW-17I	MSA-MW17S-042012 / 4/20/2012 / MSA-MW-17S	MSA-MW17S-042312 / 4/23/2012 / MSA-MW-17S	MSA-MW18I-051012 / 5/10/2012 / MSA-MW-18I	MSA-MW18S-051012 / 5/10/2012 / MSA-MW-18S	MSA-MW19D-041912 / 4/19/2012 / MSA-MW-19D	MSA-MW19I-041912 / 4/19/2012 / MSA-MW-19I
VOLATILES (ug/l)								
1,1,1-TRICHLOROETHANE	200	NA	--	NA	--	--	--	--
1,1-DICHLOROETHANE	90	NA	--	NA	--	--	--	--
1,1-DICHLOROETHENE	7	NA	--	NA	--	--	--	--
1,2,3-TRICHLOROBENZENE	NA	NA	--	NA	130 J	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	NA	--	NA	--	--	--	--
1,2,4-TRICHLOROBENZENE	70	NA	--	NA	160 J	8.8 J	--	--
1,2,4-TRIMETHYLBENZENE	NA	NA	--	NA	--	--	--	--
1,2-DICHLOROBENZENE	600	NA	--	NA	--	--	--	--
1,2-DICHLOROETHANE	5	NA	--	NA	--	--	--	1.3 J
1,3-DICHLOROBENZENE	1.8	NA	--	NA	--	--	--	--
1,4-DICHLOROBENZENE	75	NA	--	NA	--	--	--	--
2-BUTANONE	700	NA	--	NA	--	--	--	--
ACETONE	550	NA	--	NA	--	--	--	--
BENZENE	5	NA	0.22 J	NA	--	--	--	0.74 J
CARBON DISULFIDE	100	NA	--	NA	--	--	--	--
CARBON TETRACHLORIDE	5	NA	--	NA	--	--	--	--
CHLOROBENZENE	100	NA	--	NA	--	--	--	--
CHLOROFORM	80	NA	--	NA	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	NA	1.4	NA	1200	180	--	110
ETHYLBENZENE	700	NA	--	NA	--	--	--	--
HEXACHLOROBUTADIENE	0.86	NA	--	NA	210 J	--	--	--
M+P-XYLENES	NA	NA	--	NA	--	--	--	--
METHYL TERT-BUTYL ETHER	20	NA	--	NA	--	--	--	--
METHYLENE CHLORIDE	5	NA	--	NA	--	--	--	--
NAPHTHALENE	0.65	NA	--	NA	--	--	--	--
O-XYLENE	NA	NA	--	NA	--	--	--	--
TERT-BUTYLBENZENE	NA	NA	--	NA	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	NA	--	NA	--	--	--	--
TOLUENE	1000	NA	--	NA	--	--	--	--
TOTAL XYLENES	10000	NA	--	NA	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	NA	--	NA	--	--	--	--
TRICHLOROETHENE	5	NA	--	NA	11000	1800	8.7	39
VINYL CHLORIDE	2	NA	11	NA	540	73	--	52

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 30 OF 52

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW17I-042312 / 4/23/2012 / MSA-MW-17I	MSA-MW17S-042012 / 4/20/2012 / MSA-MW-17S	MSA-MW17S-042312 / 4/23/2012 / MSA-MW-17S	MSA-MW18I-051012 / 5/10/2012 / MSA-MW-18I	MSA-MW18S-051012 / 5/10/2012 / MSA-MW-18S	MSA-MW19D-041912 / 4/19/2012 / MSA-MW-19D	MSA-MW19I-041912 / 4/19/2012 / MSA-MW-19I
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	1.5	0.74	NA	NA
ETHENE	NA	NA	NA	NA	21	4.9	NA	NA
METHANE	NA	NA	NA	NA	230	180	NA	NA
SEMIVOLATILES (ug/l)								
1,4-DIOXANE	NA	NA	0.94 J	NA	140	45	--	7.8
TOTAL METALS (ug/l)								
ANTIMONY	6	NA	--	NA	--	0.19 J	--	--
ARSENIC	10	NA	8.3	NA	21	2.2 J	2.4 J	3.2 J
BARIUM	2000	NA	66	NA	55 J	49	61	71
BERYLLIUM	4	NA	--	NA	16	--	1.8	0.64 J
CADMIUM	5	NA	--	NA	130	--	1.5	--
CALCIUM	NA	NA	NA	NA	61000	200000	NA	NA
CHROMIUM	100	NA	1.1 J	NA	9.8	2.7	9.6	3.5
COBALT	NA	NA	0.5 J	NA	290	48	230	51
COPPER	1300	NA	0.86 B	NA	350	2.3 B	0.77 B	0.8 B
IRON	300	NA	NA	NA	52000	170000	NA	NA
LEAD	15	NA	0.25 J	NA	4.1 J	0.5 J	--	0.25 B
MAGNESIUM	NA	NA	NA	NA	59000	210000	NA	NA
MANGANESE	50	NA	NA	NA	3700	3400	NA	NA
MERCURY	2	NA	--	NA	0.26 B	--	--	--
MOLYBDENUM	NA	NA	0.5 B	NA	0.24 B	0.35 B	0.41 B	0.44 B
NICKEL	73	NA	1.8 J	NA	220	35	100	40
POTASSIUM	NA	NA	NA	NA	11000 J	43000	NA	NA
SELENIUM	50	NA	--	NA	24	0.78 J	1.5 J	0.89 J
SILICON DIOXIDE	NA	NA	NA	NA	36000	33000	NA	NA
SILVER	100	NA	--	NA	--	--	--	--
SODIUM	NA	NA	NA	NA	210000	590000	NA	NA
TUNGSTEN	NA	NA	--	NA	--	--	--	--
VANADIUM	3.7	NA	1.2 J	NA	13 J	2.3 J	4.5 J	2.3 J
ZINC	5000	NA	2.5 B	NA	490	56	280	130
FILTERED METALS (ug/l)								
ANTIMONY	6	NA	--	NA	--	0.14 J	--	--
ARSENIC	10	NA	7.6	NA	6.3	1.9 J	2.5 J	3 J
BARIUM	2000	NA	66	NA	53 J	46	61	70

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW17I-042312 4/23/2012 MSA-MW-17I	MSA-MW17S-042012 4/20/2012 MSA-MW-17S	MSA-MW17S-042312 4/23/2012 MSA-MW-17S	MSA-MW18I-051012 5/10/2012 MSA-MW-18I	MSA-MW18S-051012 5/10/2012 MSA-MW-18S	MSA-MW19D-041912 4/19/2012 MSA-MW-19D	MSA-MW19I-041912 4/19/2012 MSA-MW-19I
BERYLLIUM	4	NA	--	NA	3.7	--	1.7	0.63 J
CADMIUM	5	NA	--	NA	100	--	1.1	--
CHROMIUM	100	NA	--	NA	1.2 J	1.9 J	9.1	3
COBALT	NA	NA	0.42 J	NA	310	61	230	52
COPPER	1300	NA	0.29 B	NA	30	0.45 B	0.85 B	0.33 B
LEAD	15	NA	--	NA	--	--	--	--
MERCURY	2	NA	--	NA	--	--	--	--
MOLYBDENUM	NA	NA	0.48 B	NA	--	0.22 B	0.17 B	0.33 B
NICKEL	73	NA	1.1 J	NA	230	45	100	40
SELENIUM	50	NA	--	NA	7.7	0.69 J	1.4 J	0.87 J
SILVER	100	NA	--	NA	--	--	--	--
TUNGSTEN	NA	NA	--	NA	--	--	--	--
VANADIUM	3.7	NA	0.74 J	NA	0.53 J	1.1 J	4.3 J	1.7 J
ZINC	5000	NA	2.5 B	NA	500	57	270	110
MISCELLANEOUS (mg/l)								
ALKALINITY	NA	NA	NA	NA	32	310	NA	NA
AMMONIA-N	NA	NA	NA	NA	3.3	17	NA	NA
CHLORIDE	NA	NA	NA	NA	380	760	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	43	28	NA	NA
NITRATE-N	NA	NA	NA	NA	0.032 J	0.18	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	--	0.056 J	NA	NA
SULFATE	NA	NA	NA	NA	510	1700	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	1400	3300	NA	NA
MISCELLANEOUS (ug/l)								
HEXAVALENT CHROMIUM	100	--	NA	--	--	--	--	--
PERCHLORATE	2.6	NA	--	NA	0.16 J	--	--	--
PETROLEUM HYDROCARBONS (ug/l)								
TPH-GRO	47	NA	46 B	NA	NA	910	NA	NA
TPH-DRO	47	NA	--	NA	NA	380 B	NA	NA
RADIONUCLIDES (pCi/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW17I-042312 4/23/2012 MSA-MW-17I	MSA-MW17S-042012 4/20/2012 MSA-MW-17S	MSA-MW17S-042312 4/23/2012 MSA-MW-17S	MSA-MW18I-051012 5/10/2012 MSA-MW-18I	MSA-MW18S-051012 5/10/2012 MSA-MW-18S	MSA-MW19D-041912 4/19/2012 MSA-MW-19D	MSA-MW19I-041912 4/19/2012 MSA-MW-19I
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW20D-042012 / 4/20/2012 / MSA-MW-20D	MSA-MW20D-042312 / 4/23/2012 / MSA-MW-20D	MSA-MW20I-042012 / 4/20/2012 / MSA-MW-20I	MSA-MW20I-042312 / 4/23/2012 / MSA-MW-20I	MSA-MW20S-042012 / 4/20/2012 / MSA-MW-20S	MSA-MW20S-042312 / 4/23/2012 / MSA-MW-20S	MSA-MW22D-051512 / 5/15/2012 / MSA-MW-22D	MSA-MW23D-051112 / 5/11/2012 / MSA-MW-23D
VOLATILES (ug/l)									
1,1,1-TRICHLOROETHANE	200	--	NA	--	NA	--	NA	--	--
1,1-DICHLOROETHANE	90	--	NA	--	NA	--	NA	--	--
1,1-DICHLOROETHENE	7	--	NA	4.5 J	NA	17 J	NA	--	0.2 J
1,2,3-TRICHLOROBENZENE	NA	--	NA	--	NA	--	NA	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	NA	--	NA	--	NA	--	--
1,2,4-TRICHLOROBENZENE	70	--	NA	--	NA	--	NA	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	NA	--	NA	--	NA	--	--
1,2-DICHLOROBENZENE	600	--	NA	--	NA	--	NA	--	--
1,2-DICHLOROETHANE	5	0.43 J	NA	--	NA	--	NA	--	--
1,3-DICHLOROBENZENE	1.8	--	NA	--	NA	--	NA	--	--
1,4-DICHLOROBENZENE	75	--	NA	--	NA	--	NA	--	--
2-BUTANONE	700	--	NA	--	NA	--	NA	0.73 J	--
ACETONE	550	--	NA	--	NA	--	NA	2.5 J	1.4 J
BENZENE	5	--	NA	--	NA	23 J	NA	--	--
CARBON DISULFIDE	100	--	NA	--	NA	--	NA	--	0.19 J
CARBON TETRACHLORIDE	5	--	NA	--	NA	--	NA	--	9.9
CHLOROBENZENE	100	--	NA	27	NA	250	NA	--	--
CHLOROFORM	80	0.2 J	NA	--	NA	--	NA	--	4
CIS-1,2-DICHLOROETHENE	70	1.4	NA	510	NA	1700	NA	--	--
ETHYLBENZENE	700	--	NA	--	NA	--	NA	--	--
HEXACHLOROBUTADIENE	0.86	--	NA	--	NA	--	NA	--	--
M+P-XYLENES	NA	--	NA	--	NA	--	NA	--	--
METHYL TERT-BUTYL ETHER	20	--	NA	--	NA	--	NA	--	--
METHYLENE CHLORIDE	5	--	NA	--	NA	--	NA	--	--
NAPHTHALENE	0.65	--	NA	--	NA	--	NA	--	--
O-XYLENE	NA	--	NA	--	NA	--	NA	--	--
TERT-BUTYLBENZENE	NA	--	NA	--	NA	--	NA	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	NA	--	NA	260 UR	NA	--	--
TOLUENE	1000	--	NA	--	NA	12 J	NA	--	--
TOTAL XYLENES	10000	--	NA	--	NA	--	NA	--	--
TRANS-1,2-DICHLOROETHENE	100	--	NA	--	NA	25 J	NA	--	--
TRICHLOROETHENE	5	15	NA	60	NA	510	NA	0.24 J	1.7
VINYL CHLORIDE	2	--	NA	210	NA	920	NA	--	--

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW20D-042012 4/20/2012 MSA-MW-20D	MSA-MW20D-042312 4/23/2012 MSA-MW-20D	MSA-MW20I-042012 4/20/2012 MSA-MW-20I	MSA-MW20I-042312 4/23/2012 MSA-MW-20I	MSA-MW20S-042012 4/20/2012 MSA-MW-20S	MSA-MW20S-042312 4/23/2012 MSA-MW-20S	MSA-MW22D-051512 5/15/2012 MSA-MW-22D	MSA-MW23D-051112 5/11/2012 MSA-MW-23D
VOLATILE GASES (UG/L)									
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)									
1,4-DIOXANE	NA	1.8	NA	11	NA	240	NA	--	--
TOTAL METALS (ug/l)									
ANTIMONY	6	--	NA	--	NA	0.15 B	NA	0.41 B	--
ARSENIC	10	1.1 J	NA	5.4	NA	17	NA	17	1.3 J
BARIUM	2000	130	NA	14	NA	15	NA	45	74
BERYLLIUM	4	1	NA	--	NA	1.5 J	NA	--	1.2
CADMIUM	5	2.2	NA	--	NA	--	NA	--	2.2
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	1.9 J	NA	--	NA	3	NA	2.5	1.1 J
COBALT	NA	89	NA	16	NA	5	NA	13	38
COPPER	1300	6	NA	0.33 B	NA	0.38 B	NA	3.7 B	46
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	--	NA	--	NA	--	NA	1.1 B	0.39 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	NA	--	NA	--	NA	--	1.5
MOLYBDENUM	NA	--	NA	0.31 B	NA	0.23 B	NA	1.3 B	0.69 B
NICKEL	73	51	NA	2.7	NA	2.4	NA	10	38
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	0.67 J	NA	--	NA	7.1	NA	--	2.2 J
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	--	NA	--	NA	--	NA	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	--	NA	--	NA	--	NA	0.38 B	--
VANADIUM	3.7	--	NA	0.72 J	NA	14 J	NA	6.7 J	0.55 J
ZINC	5000	140	NA	3.7 B	NA	5.9 B	NA	1000	81
FILTERED METALS (ug/l)									
ANTIMONY	6	--	NA	--	NA	--	NA	0.34 B	--
ARSENIC	10	1 J	NA	5.3	NA	16	NA	17	--
BARIUM	2000	140	NA	15	NA	14	NA	48	74

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW20D-042012 4/20/2012 MSA-MW-20D	MSA-MW20D-042312 4/23/2012 MSA-MW-20D	MSA-MW20I-042012 4/20/2012 MSA-MW-20I	MSA-MW20I-042312 4/23/2012 MSA-MW-20I	MSA-MW20S-042012 4/20/2012 MSA-MW-20S	MSA-MW20S-042312 4/23/2012 MSA-MW-20S	MSA-MW22D-051512 5/15/2012 MSA-MW-22D	MSA-MW23D-051112 5/11/2012 MSA-MW-23D
BERYLLIUM	4	0.95 J	NA	--	NA	1.4 J	NA	--	1.2
CADMIUM	5	2.2	NA	--	NA	--	NA	--	0.93 J
CHROMIUM	100	1.5 J	NA	--	NA	2.8	NA	1.8 J	--
COBALT	NA	90	NA	16	NA	4.8	NA	13	29
COPPER	1300	2 B	NA	0.36 B	NA	--	NA	2.1 B	0.91 B
LEAD	15	--	NA	--	NA	--	NA	0.29 B	--
MERCURY	2	--	NA	--	NA	--	NA	--	--
MOLYBDENUM	NA	--	NA	0.33 B	NA	0.19 B	NA	1.3 B	--
NICKEL	73	51	NA	2.8	NA	2.3	NA	11	22
SELENIUM	50	0.77 J	NA	--	NA	7.1	NA	--	--
SILVER	100	--	NA	--	NA	--	NA	--	--
TUNGSTEN	NA	--	NA	--	NA	--	NA	--	--
VANADIUM	3.7	--	NA	0.57 J	NA	11 J	NA	5.4 J	--
ZINC	5000	140	NA	3.8 B	NA	7.5 B	NA	930	53 B
MISCELLANEOUS (mg/l)									
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)									
HEXAVALENT CHROMIUM	100	NA	--	NA	--	NA	--	--	NA
PERCHLORATE	2.6	--	NA	--	NA	--	NA	--	--
PETROLEUM HYDROCARBONS (ug/l)									
TPH-GRO	47	NA	NA	NA	NA	2200	NA	NA	NA
TPH-DRO	47	NA	NA	NA	NA	4400	NA	NA	NA
RADIONUCLIDES (pCi/L)									
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)									
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW20D-042012 4/20/2012 MSA-MW-20D	MSA-MW20D-042312 4/23/2012 MSA-MW-20D	MSA-MW20I-042012 4/20/2012 MSA-MW-20I	MSA-MW20I-042312 4/23/2012 MSA-MW-20I	MSA-MW20S-042012 4/20/2012 MSA-MW-20S	MSA-MW20S-042312 4/23/2012 MSA-MW-20S	MSA-MW22D-051512 5/15/2012 MSA-MW-22D	MSA-MW23D-051112 5/11/2012 MSA-MW-23D
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	48 NJ	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	31 NJ	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	1.3 NJ	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	12 NJ	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW23D-051412 5/14/2012 MSA-MW-23D	MSA-MW23S-051112 5/11/2012 MSA-MW-23S	MSA-MW23S-051412 5/14/2012 MSA-MW-23S	MSA-MW24I-050712 5/7/2012 MSA-MW-24I	MSA-MW24S-050712 5/7/2012 MSA-MW-24S	MSA-MW25I-050812 5/8/2012 MSA-MW-25I	MSA-MW25S-050812 5/8/2012 MSA-MW-25S
VOLATILES (ug/l)								
1,1,1-TRICHLOROETHANE	200	NA	--	NA	--	--	--	--
1,1-DICHLOROETHANE	90	NA	--	NA	--	--	--	--
1,1-DICHLOROETHENE	7	NA	--	NA	--	--	--	--
1,2,3-TRICHLOROBENZENE	NA	NA	--	NA	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	NA	--	NA	--	--	--	--
1,2,4-TRICHLOROBENZENE	70	NA	--	NA	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	NA	--	NA	--	--	--	--
1,2-DICHLOROBENZENE	600	NA	0.27 J	NA	--	--	--	--
1,2-DICHLOROETHANE	5	NA	--	NA	--	--	--	--
1,3-DICHLOROBENZENE	1.8	NA	--	NA	--	--	--	--
1,4-DICHLOROBENZENE	75	NA	--	NA	--	--	--	--
2-BUTANONE	700	NA	--	NA	--	--	--	--
ACETONE	550	NA	--	NA	--	--	--	--
BENZENE	5	NA	2.5	NA	--	0.17 J	--	--
CARBON DISULFIDE	100	NA	--	NA	--	--	--	--
CARBON TETRACHLORIDE	5	NA	--	NA	6.4 J	--	--	--
CHLOROBENZENE	100	NA	0.26 J	NA	--	--	--	--
CHLOROFORM	80	NA	--	NA	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	NA	1.9	NA	--	--	--	190
ETHYLBENZENE	700	NA	--	NA	--	--	--	--
HEXACHLOROBUTADIENE	0.86	NA	--	NA	--	--	0.3 U	--
M+P-XYLENES	NA	NA	--	NA	--	--	--	--
METHYL TERT-BUTYL ETHER	20	NA	--	NA	--	--	--	--
METHYLENE CHLORIDE	5	NA	--	NA	--	--	--	--
NAPHTHALENE	0.65	NA	--	NA	--	--	--	--
O-XYLENE	NA	NA	--	NA	--	--	--	--
TERT-BUTYLBENZENE	NA	NA	0.33 J	NA	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	NA	--	NA	--	--	--	--
TOLUENE	1000	NA	--	NA	--	--	--	--
TOTAL XYLENES	10000	NA	--	NA	--	--	--	--
TRANS-1,2-DICHLOROETHENE	100	NA	--	NA	--	--	--	5.4 J
TRICHLOROETHENE	5	NA	--	NA	180	--	0.27 J	3.3 J
VINYL CHLORIDE	2	NA	11	NA	--	--	--	7 J

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW23D-051412 5/14/2012 MSA-MW-23D	MSA-MW23S-051112 5/11/2012 MSA-MW-23S	MSA-MW23S-051412 5/14/2012 MSA-MW-23S	MSA-MW24I-050712 5/7/2012 MSA-MW-24I	MSA-MW24S-050712 5/7/2012 MSA-MW-24S	MSA-MW25I-050812 5/8/2012 MSA-MW-25I	MSA-MW25S-050812 5/8/2012 MSA-MW-25S
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)								
1,4-DIOXANE	NA	NA	4.4	NA	--	1	--	--
TOTAL METALS (ug/l)								
ANTIMONY	6	NA	0.3 J	NA	0.13 B	--	--	--
ARSENIC	10	NA	12	NA	1.2 J	49	10	6.1
BARIUM	2000	NA	120	NA	7.3	20 B	38	99
BERYLLIUM	4	NA	--	NA	0.65 J	7.5	--	--
CADMIUM	5	NA	0.29 J	NA	0.13 J	3.8	--	--
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	NA	3.5	NA	1.4 J	17	0.88 J	0.9 J
COBALT	NA	NA	4.1	NA	6.9	430	1.8	9.3
COPPER	1300	NA	3	NA	8.6	310	0.34 B	0.38 B
IRON	300	NA	NA	NA	NA	NA	NA	NA
LEAD	15	NA	1.1 K	NA	0.65 J	4.3 J	--	--
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	NA	--	NA	--	--	--	--
MOLYBDENUM	NA	NA	2 B	NA	0.33 B	--	0.56 B	0.7 B
NICKEL	73	NA	3.7	NA	2.7 K	570	1.6 J	32
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	NA	--	NA	0.88 J	67	--	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	NA	--	NA	--	--	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	NA	0.47 B	NA	0.45 B	--	--	--
VANADIUM	3.7	NA	1.8 J	NA	1 J	210	0.66 J	1.4 J
ZINC	5000	NA	5.3 B	NA	7.8 B	2000	--	11 B
FILTERED METALS (ug/l)								
ANTIMONY	6	NA	--	NA	--	--	--	--
ARSENIC	10	NA	9.4	NA	0.96 J	48	10	6.5
BARIUM	2000	NA	110	NA	7.1	13 B	39	100

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW23D-051412 5/14/2012 MSA-MW-23D	MSA-MW23S-051112 5/11/2012 MSA-MW-23S	MSA-MW23S-051412 5/14/2012 MSA-MW-23S	MSA-MW24I-050712 5/7/2012 MSA-MW-24I	MSA-MW24S-050712 5/7/2012 MSA-MW-24S	MSA-MW25I-050812 5/8/2012 MSA-MW-25I	MSA-MW25S-050812 5/8/2012 MSA-MW-25S
BERYLLIUM	4	NA	--	NA	0.65 J	7.6	--	--
CADMIUM	5	NA	--	NA	--	3.8	--	--
CHROMIUM	100	NA	1.6 J	NA	--	16	--	0.84 J
COBALT	NA	NA	3.6	NA	7.1	430	1.7	9.5
COPPER	1300	NA	0.39 B	NA	8.6	300	0.32 B	0.52 B
LEAD	15	NA	--	NA	0.24 J	--	--	--
MERCURY	2	NA	--	NA	--	--	--	--
MOLYBDENUM	NA	NA	1.3 B	NA	--	0.11 B	0.64 B	0.79 B
NICKEL	73	NA	3	NA	2.7 K	570	1.8 J	34
SELENIUM	50	NA	--	NA	--	66	--	--
SILVER	100	NA	--	NA	--	--	--	--
TUNGSTEN	NA	NA	--	NA	--	--	--	--
VANADIUM	3.7	NA	--	NA	--	180	--	1.3 J
ZINC	5000	NA	--	NA	6.4 B	2000	--	12 B
MISCELLANEOUS (mg/l)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)								
HEXAVALENT CHROMIUM	100	--	NA	--	--	--	--	--
PERCHLORATE	2.6	NA	--	NA	0.11 J	--	--	--
PETROLEUM HYDROCARBONS (ug/l)								
TPH-GRO	47	NA	76 B	NA	NA	38 B	NA	120
TPH-DRO	47	NA	480 B	NA	NA	250 B	NA	400 B
RADIONUCLIDES (pCi/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW23D-051412 5/14/2012 MSA-MW-23D	MSA-MW23S-051112 5/11/2012 MSA-MW-23S	MSA-MW23S-051412 5/14/2012 MSA-MW-23S	MSA-MW24I-050712 5/7/2012 MSA-MW-24I	MSA-MW24S-050712 5/7/2012 MSA-MW-24S	MSA-MW25I-050812 5/8/2012 MSA-MW-25I	MSA-MW25S-050812 5/8/2012 MSA-MW-25S
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	1.6 NJ	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	1.1 J	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	1.9 NJ	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	0.37 J	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	1.3 NJ	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	14 NJ	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	1.2 NJ	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW26S-050112 5/1/2012 MSA-MW-26S	MSA-MW27D-050412 5/4/2012 MSA-MW-27D	MSA-MW27D-050712 5/7/2012 MSA-MW-27D	MSA-MW28I-050412 5/4/2012 MSA-MW-28I	MSA-MW28I-050712 5/7/2012 MSA-MW-28I	MSA-MW29D-051612 5/16/2012 MSA-MW-29D	MSA-MW30D-051512 5/15/2012 MSA-MW-30D	MSA-MW30I-051512 5/15/2012 MSA-MW-30I
VOLATILES (ug/l)									
1,1,1-TRICHLOROETHANE	200	--	--	NA	--	NA	--	--	--
1,1-DICHLOROETHANE	90	--	--	NA	--	NA	--	--	--
1,1-DICHLOROETHENE	7	--	--	NA	--	NA	--	--	--
1,2,3-TRICHLOROBENZENE	NA	0.79 B	--	NA	--	NA	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	NA	--	NA	--	--	--
1,2,4-TRICHLOROBENZENE	70	0.33 B	--	NA	--	NA	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	NA	--	NA	--	--	--
1,2-DICHLOROBENZENE	600	--	--	NA	--	NA	--	--	--
1,2-DICHLOROETHANE	5	0.6 J	--	NA	--	NA	--	--	--
1,3-DICHLOROBENZENE	1.8	--	--	NA	--	NA	--	--	--
1,4-DICHLOROBENZENE	75	--	--	NA	--	NA	--	--	--
2-BUTANONE	700	--	--	NA	--	NA	--	--	--
ACETONE	550	--	--	NA	--	NA	--	--	--
BENZENE	5	18	--	NA	8 J	NA	--	--	--
CARBON DISULFIDE	100	--	--	NA	--	NA	--	--	--
CARBON TETRACHLORIDE	5	--	--	NA	--	NA	--	--	--
CHLOROBENZENE	100	--	--	NA	--	NA	--	--	--
CHLOROFORM	80	--	--	NA	--	NA	--	--	--
CIS-1,2-DICHLOROETHENE	70	10	--	NA	620	NA	--	--	--
ETHYLBENZENE	700	--	--	NA	--	NA	--	--	--
HEXACHLOROBUTADIENE	0.86	1.1 B	--	NA	--	NA	--	--	--
M+P-XYLENES	NA	--	--	NA	--	NA	--	--	--
METHYL TERT-BUTYL ETHER	20	--	--	NA	--	NA	--	--	--
METHYLENE CHLORIDE	5	--	--	NA	--	NA	--	--	--
NAPHTHALENE	0.65	--	--	NA	--	NA	--	--	--
O-XYLENE	NA	--	--	NA	--	NA	--	--	--
TERT-BUTYLBENZENE	NA	--	--	NA	--	NA	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	NA	--	NA	--	--	--
TOLUENE	1000	--	--	NA	--	NA	--	--	--
TOTAL XYLENES	10000	--	--	NA	--	NA	--	--	--
TRANS-1,2-DICHLOROETHENE	100	--	--	NA	--	NA	--	--	--
TRICHLOROETHENE	5	--	--	NA	1100	NA	0.47 J	--	840
VINYL CHLORIDE	2	61	--	NA	68	NA	--	--	--

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW26S-050112 5/1/2012 MSA-MW-26S	MSA-MW27D-050412 5/4/2012 MSA-MW-27D	MSA-MW27D-050712 5/7/2012 MSA-MW-27D	MSA-MW28I-050412 5/4/2012 MSA-MW-28I	MSA-MW28I-050712 5/7/2012 MSA-MW-28I	MSA-MW29D-051612 5/16/2012 MSA-MW-29D	MSA-MW30D-051512 5/15/2012 MSA-MW-30D	MSA-MW30I-051512 5/15/2012 MSA-MW-30I
VOLATILE GASES (UG/L)									
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)									
1,4-DIOXANE	NA	3.3	--	NA	--	NA	--	--	--
TOTAL METALS (ug/l)									
ANTIMONY	6	0.17 B	--	NA	--	NA	0.19 B	0.16 B	--
ARSENIC	10	4.1 J	0.52 J	NA	31	NA	--	0.43 B	1.3 J
BARIUM	2000	1300	16	NA	20	NA	4.9 J	14	42
BERYLLIUM	4	--	--	NA	0.45 B	NA	--	--	0.69 J
CADMIUM	5	--	--	NA	--	NA	--	0.22 B	0.21 J
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	2.6 L	--	NA	0.88 J	NA	--	3	5
COBALT	NA	0.53 J	3.9	NA	63	NA	1.3 B	6	36
COPPER	1300	2.6 L	4.2	NA	--	NA	3.1 B	2.6 B	3.2
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	0.43 J	0.19 J	NA	--	NA	--	1.5 B	0.71 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	--	--	NA	0.12 J	NA	--	--	--
MOLYBDENUM	NA	0.37 B	0.13 B	NA	--	NA	0.17 B	0.16 B	0.19 B
NICKEL	73	2.1 J	9.1	NA	79	NA	2.2 B	5.8	44
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	--	NA	--	NA	--	--	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	--	--	NA	--	NA	--	0.09 J	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	0.85 B	--	NA	--	NA	--	--	--
VANADIUM	3.7	2.6 J	0.5 J	NA	1.2 J	NA	--	1.3 J	5 J
ZINC	5000	6.2 J	32 B	NA	21 B	NA	8.6 B	190	130
FILTERED METALS (ug/l)									
ANTIMONY	6	0.14 B	--	NA	--	NA	--	--	--
ARSENIC	10	3.6 J	0.63 J	NA	30	NA	--	--	0.73 J
BARIUM	2000	1500	15	NA	20	NA	4 B	8.6	40

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 43 OF 52

SAMPLE ID: / SAMPLE DATE: / LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW26S-050112 / 5/1/2012 / MSA-MW-26S	MSA-MW27D-050412 / 5/4/2012 / MSA-MW-27D	MSA-MW27D-050712 / 5/7/2012 / MSA-MW-27D	MSA-MW28I-050412 / 5/4/2012 / MSA-MW-28I	MSA-MW28I-050712 / 5/7/2012 / MSA-MW-28I	MSA-MW29D-051612 / 5/16/2012 / MSA-MW-29D	MSA-MW30D-051512 / 5/15/2012 / MSA-MW-30D	MSA-MW30I-051512 / 5/15/2012 / MSA-MW-30I
BERYLLIUM	4	--	--	NA	0.49 J	NA	--	--	0.7 J
CADMIUM	5	--	--	NA	0.16 J	NA	--	0.14 B	--
CHROMIUM	100	2.2 L	--	NA	0.93 J	NA	--	0.84 J	2.9
COBALT	NA	0.52 J	3.3	NA	67	NA	1.1 B	1.2 B	35
COPPER	1300	0.58 J	3.3	NA	0.37 B	NA	2.1 B	1.2 B	--
LEAD	15	--	--	NA	--	NA	--	--	--
MERCURY	2	--	--	NA	--	NA	--	--	--
MOLYBDENUM	NA	0.23 B	--	NA	0.14 B	NA	0.14 B	--	--
NICKEL	73	1.3 J	7.6	NA	83	NA	1.9 B	4.9	44
SELENIUM	50	--	--	NA	--	NA	--	--	--
SILVER	100	--	--	NA	--	NA	--	--	--
TUNGSTEN	NA	0.88 B	--	NA	--	NA	--	--	--
VANADIUM	3.7	2.2 B	--	NA	1.6 J	NA	--	--	1.7 J
ZINC	5000	2.4 J	25 B	NA	20 B	NA	5.8 B	150	90
MISCELLANEOUS (mg/l)									
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)									
HEXAVALENT CHROMIUM	100	--	NA	0.016 J	NA	--	0.151	0.547	--
PERCHLORATE	2.6	--	--	NA	--	NA	0.12 J	0.12 J	--
PETROLEUM HYDROCARBONS (ug/l)									
TPH-GRO	47	120 B	NA	NA	NA	NA	NA	NA	NA
TPH-DRO	47	860	NA	NA	NA	NA	NA	NA	NA
RADIONUCLIDES (pCi/L)									
RADIUM-228	NA	NA	--	NA	NA	NA	--	NA	NA
TOTAL RADIUM	NA	NA	--	NA	NA	NA	--	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)									
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW26S-050112 5/1/2012 MSA-MW-26S	MSA-MW27D-050412 5/4/2012 MSA-MW-27D	MSA-MW27D-050712 5/7/2012 MSA-MW-27D	MSA-MW28I-050412 5/4/2012 MSA-MW-28I	MSA-MW28I-050712 5/7/2012 MSA-MW-28I	MSA-MW29D-051612 5/16/2012 MSA-MW-29D	MSA-MW30D-051512 5/15/2012 MSA-MW-30D	MSA-MW30I-051512 5/15/2012 MSA-MW-30I
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	1.2 NJ	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	0.52 NJ	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	3.3 NJ	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW31D-051012 5/10/2012 MSA-MW-31D	MSA-MW32I-050112 5/1/2012 MSA-MW-32I	MSA-MW32S-050212 5/2/2012 MSA-MW-32S	MSA-MW32S-050412 5/4/2012 MSA-MW-32S	MSA-MW33I-050112 5/1/2012 MSA-MW-33I	MSA-MW33S-050112 5/1/2012 MSA-MW-33S	MSA-MW34I-041912 4/19/2012 MSA-MW-34I	MSA-MW34S-041912 4/19/2012 MSA-MW-34S
VOLATILES (ug/l)									
1,1,1-TRICHLOROETHANE	200	--	--	NA	--	--	--	--	--
1,1-DICHLOROETHANE	90	--	--	NA	--	--	--	--	--
1,1-DICHLOROETHENE	7	--	--	NA	--	--	--	--	--
1,2,3-TRICHLOROBENZENE	NA	--	--	NA	--	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	--	NA	--	--	--	--	--
1,2,4-TRICHLOROBENZENE	70	--	--	NA	--	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	--	NA	--	--	--	--	--
1,2-DICHLOROBENZENE	600	--	--	NA	--	--	--	--	--
1,2-DICHLOROETHANE	5	--	--	NA	--	--	--	1.6	0.36 J
1,3-DICHLOROBENZENE	1.8	--	--	NA	--	--	--	--	--
1,4-DICHLOROBENZENE	75	--	--	NA	--	--	--	--	--
2-BUTANONE	700	--	--	NA	--	--	--	--	--
ACETONE	550	2.7 J	--	NA	1.6 J	--	--	--	--
BENZENE	5	--	--	NA	--	--	2.8 J	1.2 J	0.14 J
CARBON DISULFIDE	100	0.57 J	0.18 J	NA	--	--	--	--	--
CARBON TETRACHLORIDE	5	--	--	NA	--	--	--	--	--
CHLOROBENZENE	100	--	--	NA	--	--	--	--	--
CHLOROFORM	80	--	--	NA	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	--	--	NA	--	--	130	4.3	2.2
ETHYLBENZENE	700	--	--	NA	--	--	--	--	--
HEXACHLOROBUTADIENE	0.86	--	--	NA	--	--	--	--	--
M+P-XYLENES	NA	--	--	NA	--	--	--	7.7	--
METHYL TERT-BUTYL ETHER	20	--	--	NA	--	--	--	--	--
METHYLENE CHLORIDE	5	--	--	NA	--	--	--	--	--
NAPHTHALENE	0.65	--	--	NA	--	--	--	--	--
O-XYLENE	NA	--	--	NA	--	--	--	2.5	--
TERT-BUTYLBENZENE	NA	--	--	NA	--	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	--	NA	--	--	--	--	--
TOLUENE	1000	0.98 J	--	NA	--	--	--	--	--
TOTAL XYLENES	10000	--	--	NA	--	--	--	10	--
TRANS-1,2-DICHLOROETHENE	100	--	--	NA	--	--	--	--	--
TRICHLOROETHENE	5	--	--	NA	--	--	110	--	--
VINYL CHLORIDE	2	--	--	NA	--	--	16	31	1.1

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW31D-051012 5/10/2012 MSA-MW-31D	MSA-MW32I-050112 5/1/2012 MSA-MW-32I	MSA-MW32S-050212 5/2/2012 MSA-MW-32S	MSA-MW32S-050412 5/4/2012 MSA-MW-32S	MSA-MW33I-050112 5/1/2012 MSA-MW-33I	MSA-MW33S-050112 5/1/2012 MSA-MW-33S	MSA-MW34I-041912 4/19/2012 MSA-MW-34I	MSA-MW34S-041912 4/19/2012 MSA-MW-34S
VOLATILE GASES (UG/L)									
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)									
1,4-DIOXANE	NA	--	--	--	NA	--	--	--	--
TOTAL METALS (ug/l)									
ANTIMONY	6	0.77 J	0.6 B	--	NA	0.42 B	0.37 B	--	--
ARSENIC	10	4.6 J	4.7 J	7	NA	4.3 J	6.7	1.3 J	2.5 J
BARIUM	2000	43	58	30	NA	47	36	56	63
BERYLLIUM	4	0.44 J	0.53 J	0.92 J	NA	--	--	2.5	0.73 J
CADMIUM	5	2.2	0.31 J	0.19 J	NA	--	0.16 J	0.2 J	0.28 J
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	11	1.6 J	3.3	NA	--	1.8 J	--	0.98 J
COBALT	NA	10	71	120	NA	4.9	14	220	97
COPPER	1300	23	4.7	1.4 B	NA	5.2	3.9	11	8.4
IRON	300	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	15	14	1 K	0.97 J	NA	0.55 J	1.4 K	0.29 B	0.23 B
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	2	0.39	--	--	NA	--	0.12 J	--	--
MOLYBDENUM	NA	2.6 J	1.6 B	0.41 B	NA	0.78 B	0.49 B	--	0.12 B
NICKEL	73	7	10	45	NA	9.8	10	310	140
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	--	1.5 J	4.2 J	NA	--	0.6 J	--	--
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	100	0.47 J	--	--	NA	--	--	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	0.44 B	0.71 B	--	NA	--	--	--	--
VANADIUM	3.7	10 J	1.5 B	6.1 J	NA	4.5 J	2.9 J	0.83 J	23
ZINC	5000	3600	6800	380	NA	650	2400	500	290
FILTERED METALS (ug/l)									
ANTIMONY	6	0.32 B	0.3 B	--	NA	0.4 B	0.3 B	--	--
ARSENIC	10	2.4 B	3.7 J	6.6	NA	3.6 J	7	1.1 J	1.7 J
BARIUM	2000	17	54	28	NA	37	35	55	65

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW31D-051012 5/10/2012 MSA-MW-31D	MSA-MW32I-050112 5/1/2012 MSA-MW-32I	MSA-MW32S-050212 5/2/2012 MSA-MW-32S	MSA-MW32S-050412 5/4/2012 MSA-MW-32S	MSA-MW33I-050112 5/1/2012 MSA-MW-33I	MSA-MW33S-050112 5/1/2012 MSA-MW-33S	MSA-MW34I-041912 4/19/2012 MSA-MW-34I	MSA-MW34S-041912 4/19/2012 MSA-MW-34S
BERYLLIUM	4	0.25 J	0.26 J	1	NA	--	--	2.5	0.72 J
CADMIUM	5	0.54 B	--	--	NA	--	--	--	0.13 U
CHROMIUM	100	2.2	1.2 J	2.1	NA	--	1.1 J	--	0.73 J
COBALT	NA	1.2 B	68	130	NA	0.5 J	12	210	99
COPPER	1300	1 B	0.57 J	0.33 B	NA	3	2	2.5 B	0.6 B
LEAD	15	0.61 B	--	--	NA	--	0.19 J	--	--
MERCURY	2	--	--	--	NA	--	--	--	--
MOLYBDENUM	NA	2.3 B	1.2 B	0.28 B	NA	0.82 B	0.44 B	--	--
NICKEL	73	1.2 B	9.3	49	NA	6.4	9	310	140
SELENIUM	50	0.73 B	1.1 J	4.3 J	NA	--	--	--	--
SILVER	100	--	--	--	NA	--	--	--	--
TUNGSTEN	NA	0.98 B	--	--	NA	--	--	--	--
VANADIUM	3.7	2.2 J	0.87 B	3.4 J	NA	3.2 J	1.9 J	--	7 J
ZINC	5000	6.6 B	5000	240	NA	23	2600	450	200
MISCELLANEOUS (mg/l)									
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)									
HEXAVALENT CHROMIUM	100	--	--	--	NA	--	--	--	--
PERCHLORATE	2.6	--	--	--	NA	--	--	--	--
PETROLEUM HYDROCARBONS (ug/l)									
TPH-GRO	47	NA	NA	46 B	NA	NA	160	NA	38 B
TPH-DRO	47	NA	NA	--	NA	NA	--	NA	--
RADIONUCLIDES (pCi/L)									
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)									
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW31D-051012 5/10/2012 MSA-MW-31D	MSA-MW32I-050112 5/1/2012 MSA-MW-32I	MSA-MW32S-050212 5/2/2012 MSA-MW-32S	MSA-MW32S-050412 5/4/2012 MSA-MW-32S	MSA-MW33I-050112 5/1/2012 MSA-MW-33I	MSA-MW33S-050112 5/1/2012 MSA-MW-33S	MSA-MW34I-041912 4/19/2012 MSA-MW-34I	MSA-MW34S-041912 4/19/2012 MSA-MW-34S
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	1.8 NJ	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	2.1 NJ	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	2.6 NJ	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	6 NJ	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	1.9 NJ	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	1.8 NJ	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 49 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW35S-042012 4/20/2012 MSA-MW-35S	MSA-MW35S-042312 4/23/2012 MSA-MW-35S	MSA-MW-36S-080212 8/2/2012 MSA-MW-36S	MSA-MW37S-050812 5/8/2012 MSA-MW-37S	MSA-MW38S-041812 4/18/2012 MSA-MW-38S	MSA-MW39S-041912 4/19/2012 MSA-MW-39S
VOLATILES (ug/l)							
1,1,1-TRICHLOROETHANE	200	--	NA	--	--	--	--
1,1-DICHLOROETHANE	90	0.84 J	NA	--	--	--	--
1,1-DICHLOROETHENE	7	--	NA	--	--	--	--
1,2,3-TRICHLOROBENZENE	NA	--	NA	--	--	--	--
1,2,3-TRIMETHYLBENZENE	NA	--	NA	--	--	--	--
1,2,4-TRICHLOROBENZENE	70	--	NA	--	--	--	--
1,2,4-TRIMETHYLBENZENE	NA	--	NA	--	--	--	--
1,2-DICHLOROBENZENE	600	--	NA	--	--	--	0.18 J
1,2-DICHLOROETHANE	5	--	NA	--	--	--	0.41 J
1,3-DICHLOROBENZENE	1.8	--	NA	--	--	--	--
1,4-DICHLOROBENZENE	75	--	NA	--	--	--	--
2-BUTANONE	700	--	NA	--	--	--	--
ACETONE	550	1.2 J	NA	--	--	--	--
BENZENE	5	0.13 J	NA	--	--	--	1.7
CARBON DISULFIDE	100	0.17 J	NA	--	--	--	--
CARBON TETRACHLORIDE	5	--	NA	--	--	--	--
CHLOROBENZENE	100	--	NA	--	--	--	4.8
CHLOROFORM	80	--	NA	--	--	--	--
CIS-1,2-DICHLOROETHENE	70	6.4	NA	--	--	--	4.4
ETHYLBENZENE	700	--	NA	--	--	--	0.21 J
HEXACHLOROBUTADIENE	0.86	--	NA	--	--	--	--
M+P-XYLENES	NA	--	NA	--	--	--	0.61 J
METHYL TERT-BUTYL ETHER	20	0.22 J	NA	--	--	--	--
METHYLENE CHLORIDE	5	--	NA	--	--	--	--
NAPHTHALENE	0.65	--	NA	--	--	--	2.1
O-XYLENE	NA	--	NA	--	--	--	0.4 J
TERT-BUTYLBENZENE	NA	--	NA	--	--	--	--
TERTIARY-BUTYL ALCOHOL	NA	--	NA	--	--	--	--
TOLUENE	1000	--	NA	--	--	--	0.24 J
TOTAL XYLENES	10000	--	NA	--	--	--	1 J
TRANS-1,2-DICHLOROETHENE	100	--	NA	--	--	--	0.3 J
TRICHLOROETHENE	5	2.4	NA	--	--	--	5
VINYL CHLORIDE	2	2	NA	--	--	--	3.8

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 50 OF 52

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW35S-042012 4/20/2012 MSA-MW-35S	MSA-MW35S-042312 4/23/2012 MSA-MW-35S	MSA-MW-36S-080212 8/2/2012 MSA-MW-36S	MSA-MW37S-050812 5/8/2012 MSA-MW-37S	MSA-MW38S-041812 4/18/2012 MSA-MW-38S	MSA-MW39S-041912 4/19/2012 MSA-MW-39S
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA
SEMIVOLATILES (ug/l)							
1,4-DIOXANE	NA	3.2	NA	--	--	--	12
TOTAL METALS (ug/l)							
ANTIMONY	6	--	NA	--	--	--	--
ARSENIC	10	1.4 J	NA	3.3 J	0.61 J	16	41
BARIUM	2000	64	NA	25	30	51	23
BERYLLIUM	4	4	NA	0.5 J	--	0.5 J	--
CADMIUM	5	0.23 J	NA	--	--	--	--
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	100	1.5 J	NA	--	--	0.71 J	1.2 J
COBALT	NA	350	NA	110	12	17	5.5
COPPER	1300	6.1	NA	--	0.83 B	0.46 B	0.65 B
IRON	300	NA	NA	NA	NA	NA	NA
LEAD	15	0.51 B	NA	--	--	--	0.24 B
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	50	NA	NA	NA	NA	NA	NA
MERCURY	2	--	NA	--	--	--	--
MOLYBDENUM	NA	0.099 B	NA	--	0.11 B	0.58 B	0.27 B
NICKEL	73	170	NA	150	1.9 J	10	3.7 K
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	50	0.8 J	NA	--	--	--	0.8 J
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	100	--	NA	--	--	--	--
SODIUM	NA	NA	NA	NA	NA	NA	NA
TUNGSTEN	NA	--	NA	--	--	--	--
VANADIUM	3.7	1.4 J	NA	2.1 J	3.2 J	4.5 J	1.9 J
ZINC	5000	140	NA	190	3 B	13 B	4 B
FILTERED METALS (ug/l)							
ANTIMONY	6	--	NA	--	--	--	0.14 B
ARSENIC	10	1.6 J	NA	2.5 J	0.55 J	13	31
BARIUM	2000	67	NA	26	30	50	22

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW35S-042012 4/20/2012 MSA-MW-35S	MSA-MW35S-042312 4/23/2012 MSA-MW-35S	MSA-MW-36S-080212 8/2/2012 MSA-MW-36S	MSA-MW37S-050812 5/8/2012 MSA-MW-37S	MSA-MW38S-041812 4/18/2012 MSA-MW-38S	MSA-MW39S-041912 4/19/2012 MSA-MW-39S
BERYLLIUM	4	4.3	NA	0.53 J	--	0.34 J	--
CADMIUM	5	--	NA	--	--	--	--
CHROMIUM	100	1.2 J	NA	--	--	--	0.95 J
COBALT	NA	370	NA	120	11	17	5.3
COPPER	1300	0.51 B	NA	--	0.49 B	--	--
LEAD	15	--	NA	--	--	--	--
MERCURY	2	--	NA	--	--	--	--
MOLYBDENUM	NA	0.12 B	NA	--	0.28 B	0.53 B	0.2 B
NICKEL	73	180	NA	160	1.9 J	11	3.8 K
SELENIUM	50	0.88 J	NA	--	--	--	0.64 J
SILVER	100	--	NA	--	--	--	--
TUNGSTEN	NA	--	NA	--	--	--	--
VANADIUM	3.7	0.54 J	NA	0.72 J	2 J	0.53 J	0.51 J
ZINC	5000	140	NA	210	3.7 B	5.9 B	3.5 B
MISCELLANEOUS (mg/l)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS (ug/l)							
HEXAVALENT CHROMIUM	100	NA	--	NA	--	--	--
PERCHLORATE	2.6	--	NA	--	--	--	--
PETROLEUM HYDROCARBONS (ug/l)							
TPH-GRO	47	53 B	NA	--	32 J	64 B	69 B
TPH-DRO	47	780	NA	--	390 B	--	990
RADIONUCLIDES (pCi/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
TENTATIVELY IDENTIFIED VOLATILE (ug/l)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	1.1 NJ	NA	NA	NA	NA	NA

TABLE 4-3

ANALYTES DETECTED IN GROUNDWATER SAMPLES, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

SAMPLE ID: SAMPLE DATE: LOCATION:	MDE GROUNDWATER STANDARDS	MSA-MW35S-042012 4/20/2012 MSA-MW-35S	MSA-MW35S-042312 4/23/2012 MSA-MW-35S	MSA-MW-36S-080212 8/2/2012 MSA-MW-36S	MSA-MW37S-050812 5/8/2012 MSA-MW-37S	MSA-MW38S-041812 4/18/2012 MSA-MW-38S	MSA-MW39S-041912 4/19/2012 MSA-MW-39S
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	0.38 NJ
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	3.6 NJ	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	0.2	NA	NA	NA	NA	NA	2.9 NJ
METHYL CYCLOHEXANE	NA	NA	NA	NA	NA	NA	0.28 NJ
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	0.44 NJ	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	--	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	--	NA	NA	NA
1-BUTANOL	NA	NA	NA	--	NA	NA	NA
2-OCTANONE	NA	NA	NA	--	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	--	NA	NA	NA
ISOBUTANE	NA	NA	NA	--	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	--	NA	NA	NA

TABLE 4-4

VOLATILE ORGANIC COMPOUNDS, DEGRADATION PRODUCTS, AND NATURAL ATTENUATION PARAMETERS, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 1 OF 2

Analyte	Favorable Degradation Criteria	5/9/2012 MSA-DMW-09D	5/9/2012 MSA-DMW-09I	5/9/2012 MSA-DMW-09S	5/11/2012 MSA-DMW-11S	5/10/2012 MSA-MW-18I	5/10/2012 MSA-MW-18S
VOLATILES (ug/L)							
Chlorinated Parent Products							
TETRACHLOROETHENE		--	--	--	--	--	--
CARBON TETRACHLORIDE		--	41 J	--	--	--	--
TRICHLOROETHENE	Parent product or from degradation of PCE	2500	1000	120 J	16000	11000	1800
1,1,1-TRICHLOROETHANE		--	--	--	--	--	--
Degradation Products							
1,1-DICHLOROETHANE	From degradation of TCA	--	--	--	--	--	--
1,1-DICHLOROETHENE	From degradation of TCE	--	13 J	--	220 J	--	--
1,2-DICHLOROETHANE	From degradation of TCA	--	--	--	--	--	--
CIS-1,2-DICHLOROETHENE	From degradation of TCE	350	2000	4400	27000	1200	180
TRANS-1,2-DICHLOROETHENE	From degradation of TCE	--	--	--	--	--	--
VINYL CHLORIDE	From degradation of DCE	35 J	700	11000	4200	540	73
CHLOROFORM	From degradation of carbon tetrachloride	140	19 J	--	220 J	--	--
CHLOROMETHANE	From degradation of chloroform						
CHLOROETHANE	From degradation of vinyl chloride						
METHANE	>500; Ultimate reduction daughter product	230	680	1000	470	230	180
ETHANE	>100; Ultimate reduction daughter product	--	4.6	48	56	1.5	0.74
ETHENE	>10; Ultimate reduction daughter product	7.9	98	1900	220	21	4.9
Petroleum-Related VOCs							
BENZENE	> 100; Carbon and energy source for degradation	11 J	21 J	280 J	--	--	--
TOLUENE	> 100; Carbon and energy source for degradation	--	--	1800	420 J	--	--
ETHYLBENZENE	> 100; Carbon and energy source for degradation	--	--	1100	--	--	--
TOTAL XYLENES	> 100; Carbon and energy source for degradation	--	--	7400	--	--	--

TABLE 4-4

VOLATILE ORGANIC COMPOUNDS, DEGRADATION PRODUCTS, AND NATURAL ATTENUATION PARAMETERS, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 2 OF 2

Analyte	Favorable Degradation Criteria	5/9/2012 MSA-DMW-09D	5/9/2012 MSA-DMW-09I	5/9/2012 MSA-DMW-09S	5/11/2012 MSA-DMW-11S	5/10/2012 MSA-MW-18I	5/10/2012 MSA-MW-18S
MISCELLANEOUS (mg/L or as noted)							
ALKALINITY	> 2x background [(1)]	9.3 B	110	430	140	32	310
AMMONIA-N		0.089 B	4.2	2.4	0.84	3.3	17
CHLORIDE	> 2x background [(1)]	49	130	170	59 K	380	760
DISSOLVED ORGANIC CARBON	>20 carbon and energy source for degradation	2.5	6.5	20	11	43	28
NITRATE-N	<1	--	--	--	--	0.032 J	0.18
ORTHOPHOSPHATE-P		--	0.19 J	--	0.14 J	--	0.056 J
SULFATE	<20	65	310	180	150	510	1700
TOTAL DISSOLVED SOLIDS		170	750	900	490	1400	3300
FERROUS IRON (MG/L; TEST KIT)	>1 reductive pathway possible	10	10	10	10	>10	>10
PH (STANDARD UNITS)	5 - 9	4.50	5.63	6.12	5.66	5.39	6.33
OXIDATION-REDUCTION POTENTIAL (mV)	<50 (reduction possible) or <-100 (reduction likely)	233	118	30	81	49	-46
DISSOLVED OXYGEN (MG/L; FIELD METER)	<0.5	1.95	1.63	2.36	1.64	0.66	2.37
TEMPERATURE (DEGREES CELCIUS)	>20	13.50	14.52	13.75	16.31	13.57	13.20

-- - Not detected.
J - Positive result is considered estimated as a result of technical noncompliance.
mg/L - milligrams per liter
mV - milliVolts
J - Positive result is considered estimated as a result of technical noncompliance.
B - Blank contamination.

DCE = dichloroethene
PCE = tetrachloroethene
TCA = trichloroethane
Shaded cell indicates result meets favorable degradation criterion.

TABLE 4-5

RESULTS OF LOW FLOW AND PASSIVE DIFFUSION BAG SAMPLES, MW-4 AND MW-5
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 1 OF 2

LOCATION SAMPLE ID SAMPLE DATE	MDE Groundwater Standard	Low-Flow Purge Sample MSA-MW-04 MSA-MW4-051512-11 5/15/2012	PDB Sample MSA-MW-04 MSA-MW4-060712-11-PDB 6/7/2012	Percent Difference MSA-MW-4 11 Feet Screen Top
VOLATILES (UG/L)				
1,2-DICHLOROBENZENE	600	0.13 J	0.13 U	--
1,2-DICHLOROETHANE	5	1.2	0.22 U	--
2-BUTANONE	700	0.57 U	3.3 J	--
ACETONE	550	1.1 U	7.3 J	--
BENZENE	5	1.3	0.13 U	--
CHLOROBENZENE	100	0.27 J	0.15 U	--
CIS-1,2-DICHLOROETHENE	70	0.67 J	0.17 U	--
TRANS-1,2-DICHLOROETHENE	100	0.91 J	0.19 U	--
VINYL CHLORIDE	2	1.2	0.22 U	--
LOCATION SAMPLE ID SAMPLE DATE	**MDE Groundwater Standard**	**MSA-MW-04 MSA-MW4-051512-18 5/15/2012**	**MSA-MW-04 MSA-MW4-060712-18-PDB 6/7/2012**	**MSA-MW-4 18 Feet Screen Mid-Point**
VOLATILES (UG/L)				
1,2-DICHLOROBENZENE	600	0.13 U	0.13 U	--
1,2-DICHLOROETHANE	5	1.1	1	-9.1%
2-BUTANONE	700	0.57 U	2.8 J	--
ACETONE	550	1.1 U	8.3 J	--
BENZENE	5	0.79 J	0.82 J	3.8%
CHLOROBENZENE	100	0.25 J	0.31 J	24.0%
CIS-1,2-DICHLOROETHENE	70	0.58 J	0.8 J	37.9%
TRANS-1,2-DICHLOROETHENE	100	0.87 J	1.1	26.4%
VINYL CHLORIDE	2	0.82 J	1.4	70.7%
LOCATION SAMPLE ID SAMPLE DATE	**MDE Groundwater Standard**	**MSA-MW-04 MSA-MW4-051512-25 5/15/2012**	**MSA-MW-04 MSA-MW4-060712-25-PDB 6/7/2012**	**MSA-MW-4 25 Feet Screen Bottom**
VOLATILES (UG/L)				
1,2-DICHLOROBENZENE	600	0.13 U	0.13 U	--
1,2-DICHLOROETHANE	5	1.1	1.1	0.0%
2-BUTANONE	700	0.57 U	2.6 J	--
ACETONE	550	4.5 J	8.3 J	84.4%
BENZENE	5	0.65 J	0.9 J	38.5%
CHLOROBENZENE	100	0.24 J	0.34 J	41.7%
CIS-1,2-DICHLOROETHENE	70	0.61 J	0.86 J	41.0%
TRANS-1,2-DICHLOROETHENE	100	0.89 J	1.2	34.8%
VINYL CHLORIDE	2	0.81 J	1.4	72.8%

TABLE 4-5

RESULTS OF LOW FLOW AND PASSIVE DIFFUSION BAG SAMPLES, MW-4 AND MW-5
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 2 OF 2

LOCATION SAMPLE ID SAMPLE DATE	MDE Groundwater Standard	Low-Flow Purge Sample MSA-MW-05 MSA-MW5-051412-25 5/14/2012	PDB Sample MSA-MW-05 MSA-MW5-060712-25-PDB 6/7/2012	Percent Difference MSA-MW-5 25 Feet Screen Top
VOLATILES (UG/L)				
1,2-DICHLOROBENZENE	600	13 U	8.7 U	--
1,2-DICHLOROETHANE	5	22 U	15 U	--
2-BUTANONE	700	57 U	38 U	--
ACETONE	550	110 U	73 U	--
BENZENE	5	13 U	8.7 U	--
CHLOROBENZENE	100	15 U	10 U	--
CIS-1,2-DICHLOROETHENE	70	2500	1800	-28.0%
TRANS-1,2-DICHLOROETHENE	100	58 J	34 J	-41.4%
VINYL CHLORIDE	2	440	230	-47.7%
LOCATION **SAMPLE ID** **SAMPLE DATE**	**MDE Groundwater Standard**	**MSA-MW-05** **MSA-MW5-051412-31** **5/14/2012**	**MSA-MW-05** **MSA-MW5-060712-31-PDB** **6/7/2012**	**MSA-MW-5** **31 Feet** **Screen Mid-Point**
VOLATILES (UG/L)				
1,2-DICHLOROBENZENE	600	13 U	13 U	--
1,2-DICHLOROETHANE	5	22 U	22 U	--
2-BUTANONE	700	57 U	57 U	--
ACETONE	550	110 U	110 U	--
BENZENE	5	13 U	13 U	--
CHLOROBENZENE	100	15 U	15 U	--
CIS-1,2-DICHLOROETHENE	70	2400	2600	8.3%
TRANS-1,2-DICHLOROETHENE	100	56 J	54 J	-3.6%
VINYL CHLORIDE	2	440	530	20.5%
LOCATION **SAMPLE ID** **SAMPLE DATE**	**MDE Groundwater Standard**	**MSA-MW-05** **MSA-MW5-051412-37** **5/14/2012**	**MSA-MW-05** **MSA-MW5-060712-37-PDB** **6/7/2012**	**MSA-MW-5** **37 Feet** **Screen Bottom**
VOLATILES (UG/L)				
1,2-DICHLOROBENZENE	600	12 U	13 U	--
1,2-DICHLOROETHANE	5	20 U	22 U	--
2-BUTANONE	700	52 U	57 U	--
ACETONE	550	100 U	110 U	--
BENZENE	5	12 U	13 U	--
CHLOROBENZENE	100	14 U	15 U	--
CIS-1,2-DICHLOROETHENE	70	2400	2400	0.0%
TRANS-1,2-DICHLOROETHENE	100	53 J	56 J	5.7%
VINYL CHLORIDE	2	410	520	26.8%

Footnotes:

-- = The chemical was not analyzed or no value was available.

Data Qualifiers:

Blank (i.e., no qualifier) = the chemical was detected.

> = The chemical was detected.

J = The chemical was detected but the concentration reported is an estimated value.

U = The chemical was not detected.

< = The chemical was not detected.

R = The chemical was rejected.

TABLE 4-6

METALS EXCEEDING MARYLAND GROUNDWATER STANDARDS, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND
PAGE 1 OF 2

ANALYTE	MDE Groundwater Standard[1] (ug/L)	Total Metals Samples			Filtered Metals Samples		
		Detections Exceeding Standard		Maximum Concentration (ug/L)	Detections Exceeding Standard		Maximum Concentration (ug/L)
		(Quantity)	(Percent)[2]		(Quantity)	(Percent)[2]	
PRIORITY POLLUTANT AND MISCELLANEOUS METALS							
VANADIUM	3.7	23	32.4%	210	10	14.1%	180
NICKEL	73	18	25.0%	570	17	23.6%	570
ARSENIC	10	17	23.9%	49	15	21.1%	48
CADMIUM	5	14	19.7%	1000	12	16.9%	1100
BERYLLIUM	4	8	11.3%	16	8	11.3%	7.6
CHROMIUM	100	3	4.2%	150	0	0%	86
SELENIUM	50	1	1.4%	67	1	1.4%	66
ZINC	5,000	1	1.4%	6800	0	0%	5000
ANTIMONY	6	0	0%	1.8 J	0	0%	1.8
BARIUM	2,000	0	0%	1300	0	0%	1500
COBALT	NA	NA	NA	570	NA	NA	550
COPPER	1,300	0	0%	700	0	0%	300
HEXAVALENT CHROMIUM	100	0	0%	0.547	NA	NA	NA
LEAD	15	0	0%	14	0	0%	5.6
MERCURY	2	0	0%	1.7	0	0%	0.41
MOLYBDENUM	NA	NA	NA	5 J	0	0%	5.8
SILVER	100	0	0%	0.47 J	0	0%	0.08 U[3]
THALLIUM	2.7	0	0%	0.14 U - 2.8 U[3]	0	0%	0.14 U - 3 U[3]
TUNGSTEN	NA	0	0%	14	0	0%	18

TABLE 4-6

METALS EXCEEDING MARYLAND GROUNDWATER STANDARDS, 2012
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

ANALYTE	MDE Groundwater Standard[1] (ug/L)	Total Metals Samples			Filtered Metals Samples		
		Detections Exceeding Standard		Maximum Concentration (ug/L)	Detections Exceeding Standard		Maximum Concentration (ug/L)
		(Quantity)	(Percent)[2]		(Quantity)	(Percent)[2]	
NATURAL ATTENUATION ANALYSIS METALS							
CALCIUM	NA	NA	NA	200000	NA	NA	NA
IRON	300	6	100%	170000	NA	NA	NA
MAGNESIUM	NA	NA	NA	210000	NA	NA	NA
MANGANESE	50	6	100%	5000	NA	NA	NA
POTASSIUM	NA	NA	NA	43000	NA	NA	NA
SILICON DIOXIDE	NA	NA	NA	36000	NA	NA	NA
SODIUM	NA	NA	NA	590000	NA	NA	NA

1 Maryland Department of the Environment Soil and Groundwater Standards, Interim Final 2.1, June 2008.

2 Total number of samples is 72 for listed analytes except calcium, iron, magnesium, manganese, silicon dioxide, sodium, and potassium (which is 6) and hexavalent chromium. Total number of hexavalent chromium samples is 71.

3 The letter U indicates that the metal was not detected at the detection limit concentration shown left of the letter. For thallium, the range of non-detect concentrations is shown.

ug/L - micrograms per liter (i.e. parts per billion)

NA = Not analyzed (used for metals result columns) or no standard available (used for MDE standard column)

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater contours Upper Surficial aquifer April 2012.mxd)
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FIGURE 4-1

GROUNDWATER ELEVATION CONTOURS-UPPER SURFICIAL AQUIFER WELLS, APRIL 2012

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL OR PIEZOMETER
- DEEP CONFINED AQUIFER WELL
- ABANDONED WELL
- GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 1 FOOT (DASHED WHERE INFERRED)
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND
- 1.79 GROUNDWATER ELEVATION FEET, NAVD, 1988

NM= Not measured

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 8/2/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater contours Intermediate Surficial aquifer April 2012.mxd)
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FIGURE 4-2

GROUNDWATER ELEVATION CONTOURS-INTERMEDIATE SURFICIAL AQUIFER WELLS, APRIL 2012

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL OR PIEZOMETER
- DEEP CONFINED AQUIFER WELL
- ABANDONED WELL
- GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 0.5 OR 1 FOOT (DASHED WHERE INFERRED)
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND
- *1.24* GROUNDWATER ELEVATION FEET, NAVD, 1988

NM= Not measured

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 8/3/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater contours Lower Surficial aquifer April 2012.mxd)
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MARYLAND AIR NATIONAL GUARD

3301 Edwards Lane

PZ-2 (S)
PZ-2 (I)
PZ-2 (D)

Gate

Gate

Gate

2.0

1.5

1.0

0.5

2.5

2.5

2.0

1.5

1.0

0.5

MW33S
MW33I

MW27D

MW28I

MW36S

MW16S
MW16I
MW16D
2.07

MW17S
MW17I
MW17D
2.01

MW14I
MW14D

MW15S
MW15I
MW15D
2.39

POND #2

MW18S
MW18I
MW18D
0.83

MW4

DMW3S
DMW3I

DMW3D
1.07

PETROLEUM HYDRO-CARBON AREA

MW7

MW26S
MW26I
MW26D
2.66

DMW9S
DMW9I
DMW9D
1.72

POND #1

MW39S

DMW2A
DMW2B
1.05

RW1S
OW1S
DMW2S

RW1I

OW1I

DMW10S
DMW10I

MW20S
MW20I
MW20D
1.58

DMW4I
DMW4D

DMW4S
0.54

DMW8S

DMW8I
1.32
DMW8D

MW25S
MW25I

MW21I
MW21D
1.89

DMW1S

DMW11S
DMW11I

MW3

MW22I
MW22D
2.12

DMW5D
0.53

DMW5S
DMW5I

DMW1A
DMW1B
1.89

TAXIWAY TANGO

MW37S

TT-11

DMW7S
DMW7I

MW5

DMW7D
1.04

MW23S
MW23I
MW23D
1.82

DRUM AREA

MW19I
MW19D
1.41

MW2

DMW6S

DMW6I
DMW6D
0.49

TT-12

TT-14

AIRPORT RUNWAY

MW38S

MW1

TT-13

MW24S
MW24I

MW6

MW32S
MW32I

MW30I

MW30D

MW29D

MW31D

FIGURE 4-3

GROUNDWATER ELEVATION CONTOURS-LOWER SURFICIAL AQUIFER WELLS, APRIL 2012

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL OR PIEZOMETER
- DEEP CONFINED AQUIFER WELL
- ABANDONED WELL
- GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 1 FOOT (DASHED WHERE INFERRED)
- 1.61 GROUNDWATER ELEVATION FEET, NAVD, 1988
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 55 110 220 Feet

N

DATE MODIFIED: 8/3/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater contours Deep Confined aquifer April 2012.mxd)
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FIGURE 4-4

GROUNDWATER ELEVATION CONTOURS-DEEP CONFINED AQUIFER WELLS, APRIL 2012

LEGEND

- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL OR PIEZOMETER
- DEEP CONFINED AQUIFER WELL
- ABANDONED WELL
- GROUNDWATER ELEVATION CONTOUR CONTOUR INTERVAL = 1 FOOT (DASHED WHERE INFERRED)
- *3.99* GROUNDWATER ELEVATION FEET, NAVD, 1988
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 8/6/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater monitoring well locs Shallow Aquifer VOCs April May 2012 Tags.mxd)
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FIGURE 4-5

TRICHLOROETHENE, CIS-1,2-DICHLOROETHENE AND VINYL CHLORIDE DETECTED IN GROUNDWATER-UPPER SURFICIAL AQUIFER, 2012

LEGEND

- GROUNDWATER MONITORING WELL: THE CONCENTRATION OF ONE OR MORE OF THE VOCs EXCEEDS A STANDARD
- GROUNDWATER MONITORING WELL: CONCENTRATIONS DO NOT EXCEED THE STANDARDS
- DEEP CONFINED AQUIFER WELL SAMPLED
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED FOR VOCS THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND
- J ESTIMATED VALUE BELOW REPORTING LIMIT
- CONCENTRATION IN RED EXCEEDS THE STANDARD

Well ID	
Analyte	Concentration In Micrograms Per Liter (ug/L)

TCE = Trichloroethene (standard = 5 ug/L)
c-12DCE = cis-1,2-Dichloroethene (standard = 70 ug/L)
VC = Vinyl chloride (standard = 2 ug/L)

For upper surficial aquifer or “S” wells sampled, the absence of a results tag or any of the three VOCs within a results tag indicate those VOCs/VOC were not detected.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 7/30/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater monitoring well locs Intermediate Aquifer VOCs April May2012 Tags.mxd)
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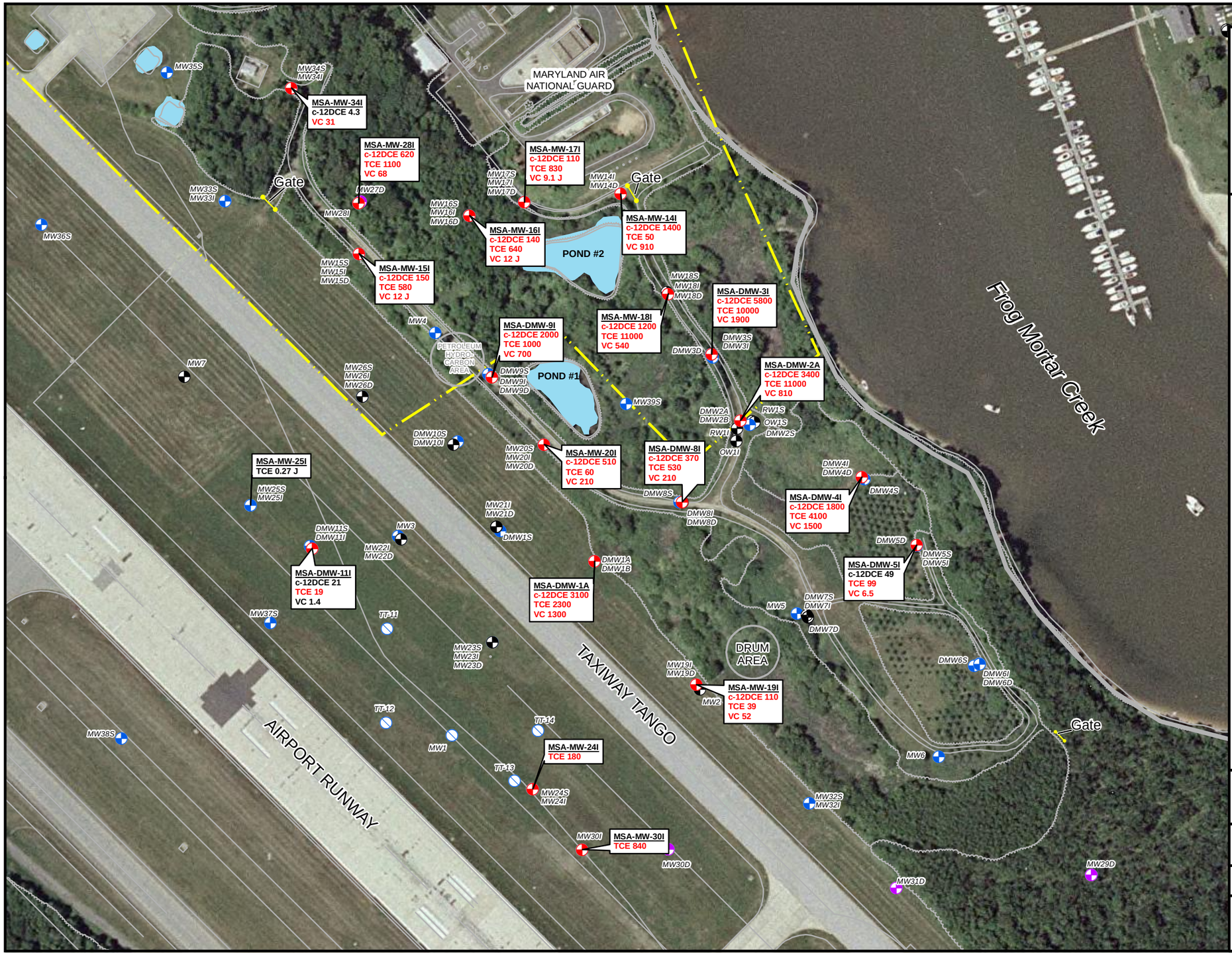

FIGURE 4-6

TRICHLOROETHENE, CIS-1,2-DICHLOROETHENE AND VINYL CHLORIDE DETECTED IN GROUNDWATER-INTERMEDIATE SURFICIAL AQUIFER, 2012

LEGEND

- GROUNDWATER MONITORING WELL: THE CONCENTRATION OF ONE OR MORE OF THE VOCs EXCEEDS A STANDARD
- GROUNDWATER MONITORING WELL: CONCENTRATIONS DO NOT EXCEED THE STANDARDS
- DEEP CONFINED AQUIFER WELL SAMPLED
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED FOR VOCS THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

J ESTIMATED VALUE BELOW REPORTING LIMIT

CONCENTRATION IN RED EXCEEDS THE STANDARD

Well ID	
Analyte	Concentration In Micrograms Per Liter (ug/L)

TCE = Trichloroethene (standard = 5 ug/L)
c-12DCE = cis-1,2-Dichloroethene (standard = 70 ug/L)
VC = Vinyl chloride (standard = 2 ug/L)

For intermediate surficial aquifer or "I" wells sampled, the absence of a results tag or any of the three VOCs within a results tag indicate those VOCs/VOC were not detected.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 7/30/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Groundwater monitoring well locs Lower Aquifer VOCs April May2012 Tags.mxd)



FIGURE 4-7

TRICHLOROETHENE, CIS-1,2-DICHLOROETHENE AND VINYL CHLORIDE DETECTED IN GROUNDWATER-LOWER SURFICIAL AND DEEP CONFINED AQUIFERS, 2012

LEGEND

- GROUNDWATER MONITORING WELL: THE CONCENTRATION OF ONE OR MORE OF THE VOCs EXCEEDS A STANDARD
- GROUNDWATER MONITORING WELL: CONCENTRATIONS DO NOT EXCEED THE STANDARDS
- DEEP CONFINED AQUIFER WELL SAMPLED
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED FOR VOCS THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

J ESTIMATED VALUE BELOW REPORTING LIMIT

CONCENTRATION IN RED EXCEEDS THE STANDARD

Well ID	
Analyte	Concentration In Micrograms Per Liter (ug/L)

TCE = Trichloroethene (standard = 5 ug/L)
c-12DCE = cis-1,2-Dichloroethene (standard = 70 ug/L)
VC = Vinyl chloride (standard = 2 ug/L)

For lower surficial aquifer or “D” wells sampled, the absence of a results tag or any of the three VOCs within a results tag indicate those VOCs/VOC were not detected.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 7/30/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Benzene April_May 2012.mxd)
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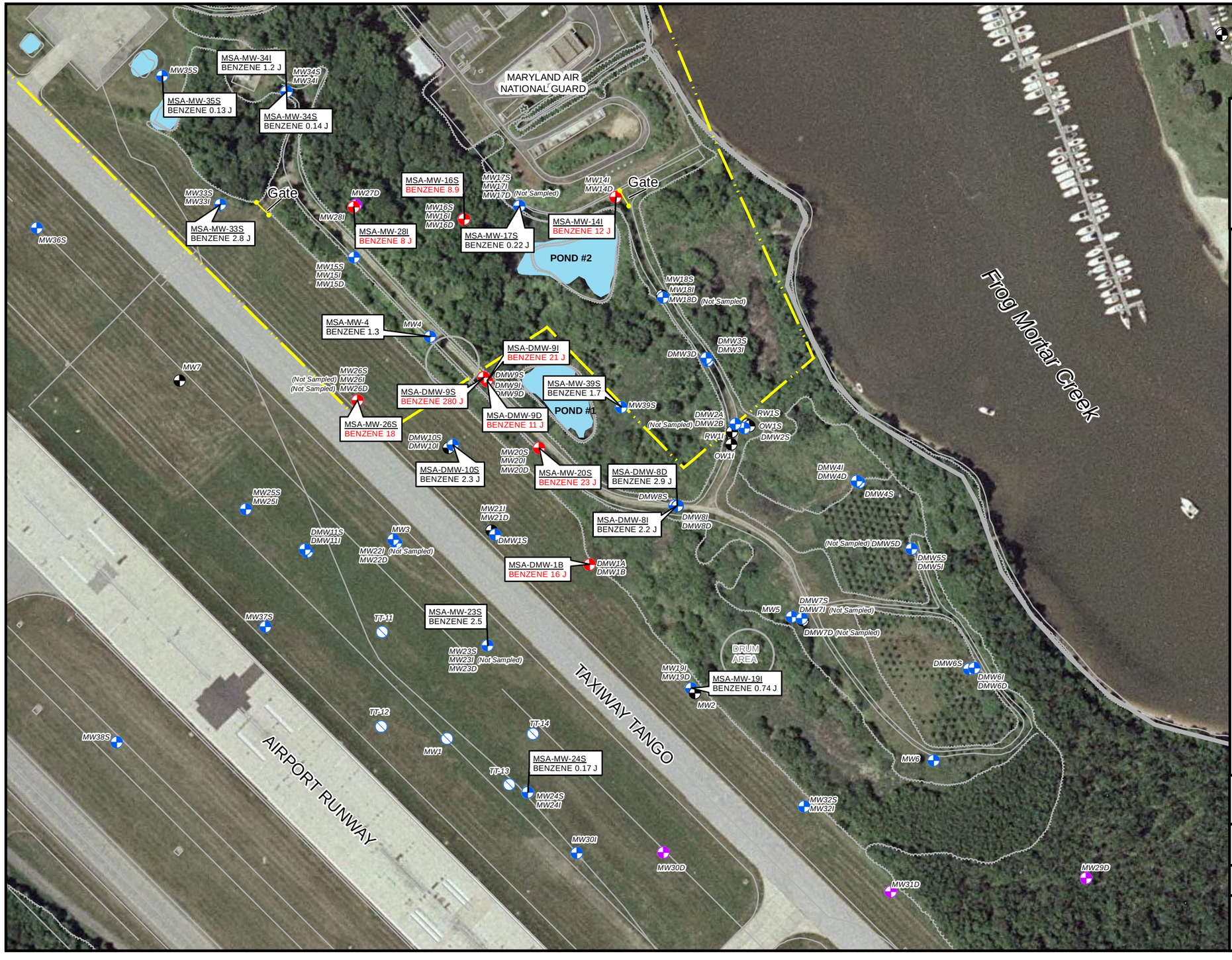


FIGURE 4-8

BENZENE DETECTED IN GROUNDWATER-SURFICIAL AND DEEP CONFINED AQUIFERS, 2012

LEGEND

- GROUNDWATER MONITORING WELL: CONCENTRATION EXCEEDS THE STANDARD
- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL: CONCENTRATION DOES NOT EXCEED THE STANDARD
- DEEP CONFINED AQUIFER WELL SAMPLED
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED FOR VOCS THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

J ESTIMATED VALUE BELOW REPORTING LIMIT

CONCENTRATION IN RED EXCEEDS THE STANDARD

Well ID	
Analyte	Concentration In Micrograms Per Liter (ug/L)

Benzene (standard = 5 ug/L)

For wells sampled, the absence of a results tag indicates the analyte was not detected.

(Not Sampled) - Indicates well not sampled if symbol is obscured for this well.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 7/31/12

CREATED BY: MP

TETRA TECH

FIGURE 4-9

TIME SERIES PLOTS OF MAJOR CHLORINATED VOCS-SOURCE AREA
WELLS DMW-7S AND MW-5
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

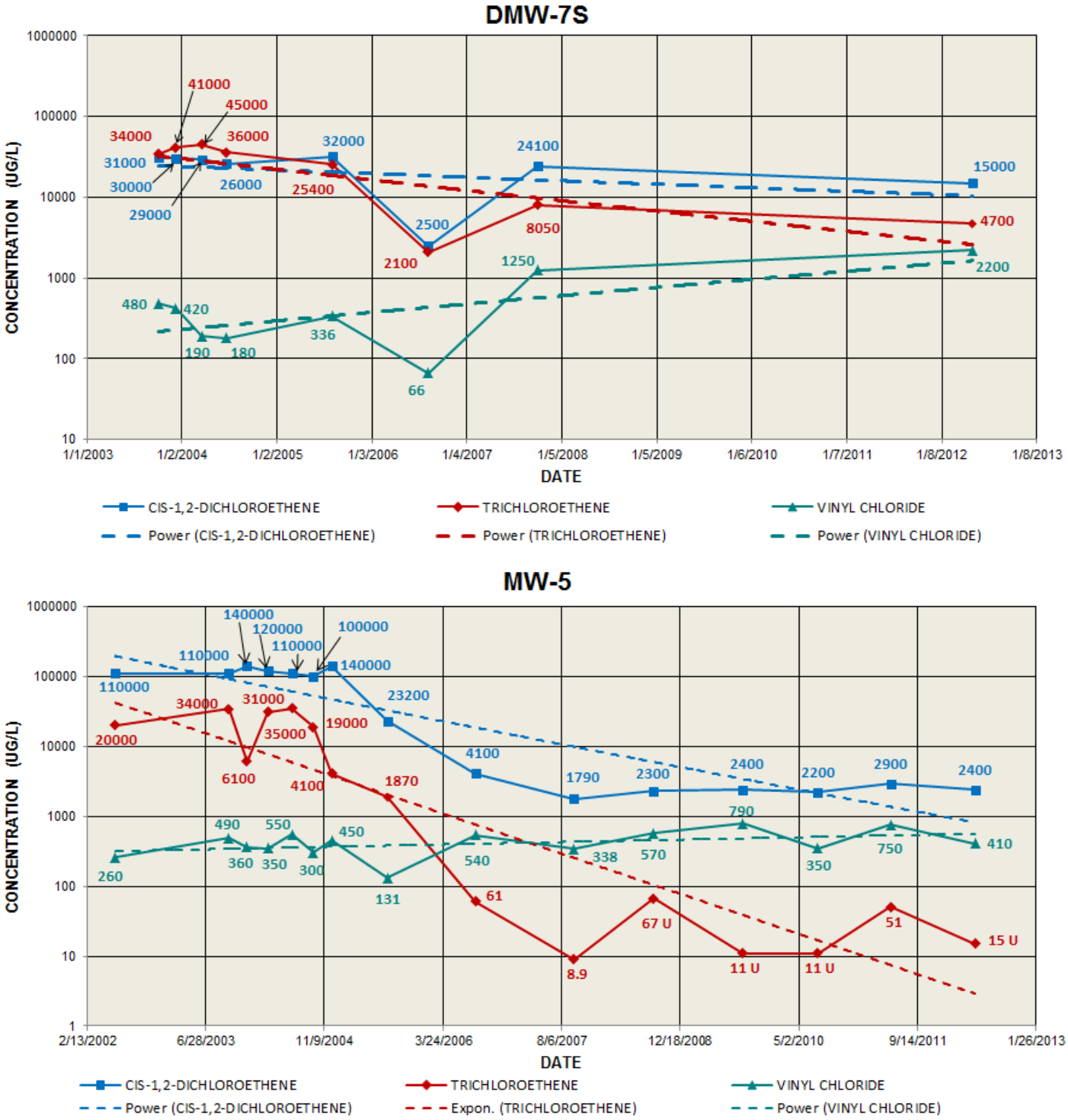
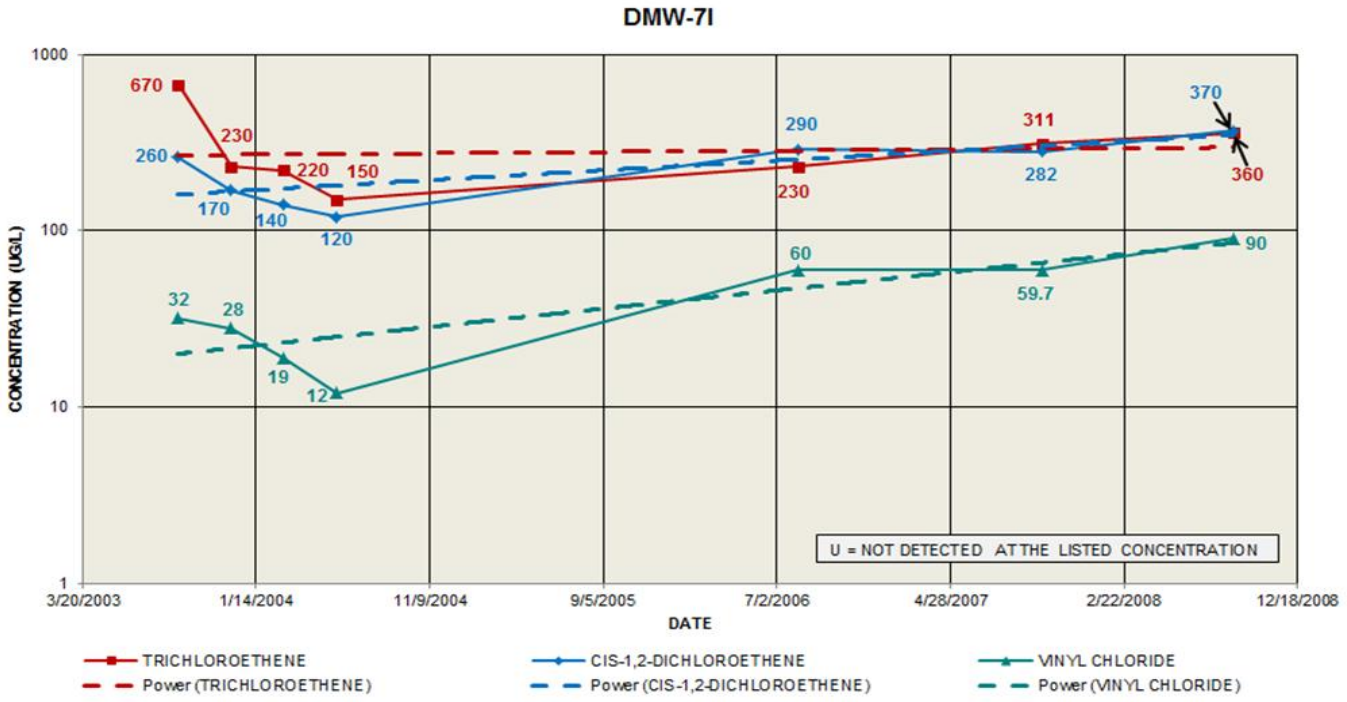


FIGURE 4-10

TIME SERIES PLOTS OF MAJOR CHLORINATED VOCS-SOURCE AREA WELLS DMW-7I AND DMW-7D LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND



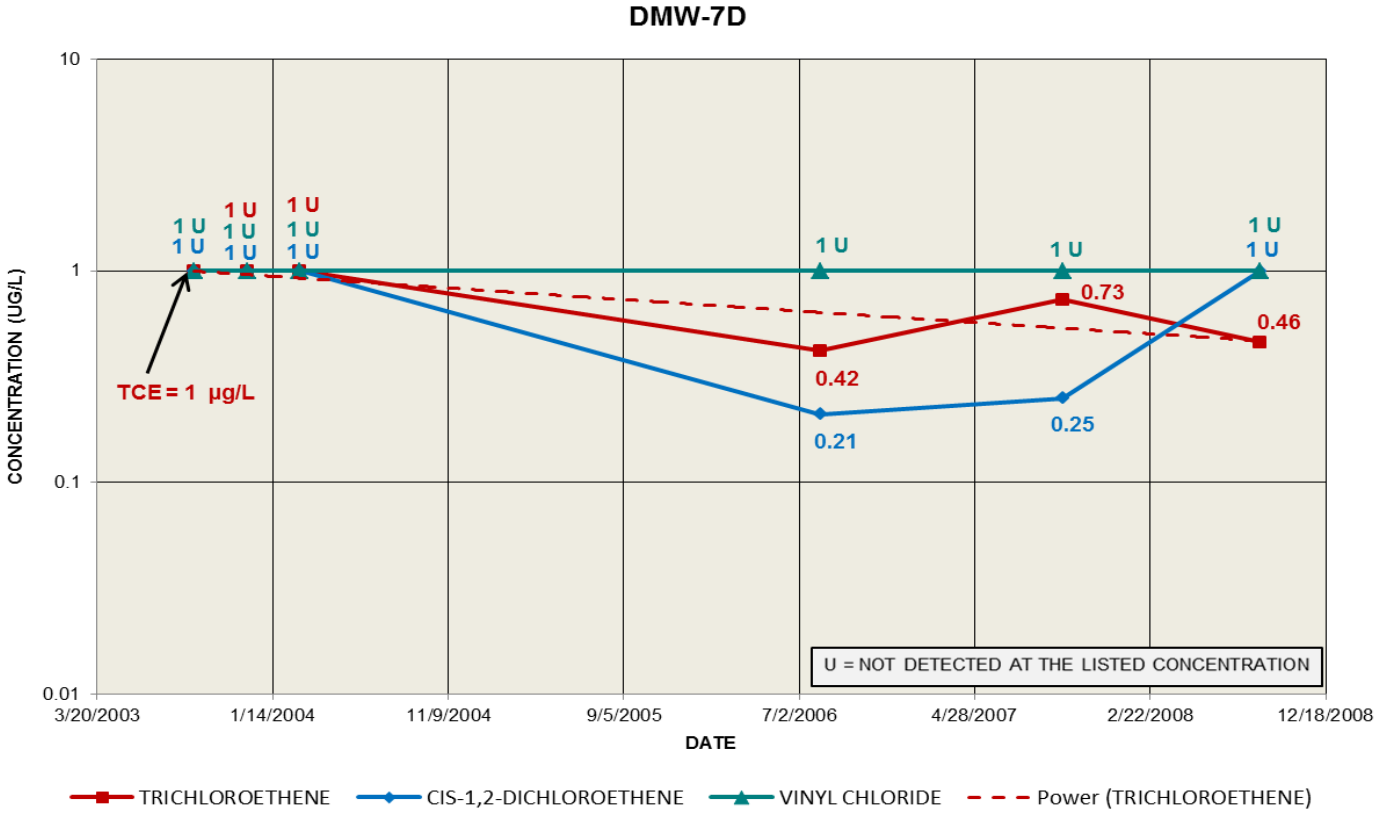


FIGURE 4-11

TIME SERIES PLOTS OF MAJOR CHLORINATED VOCS-SOURCE AREA WELLS DMW-9S, DMW-9I, AND DMW-9D LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

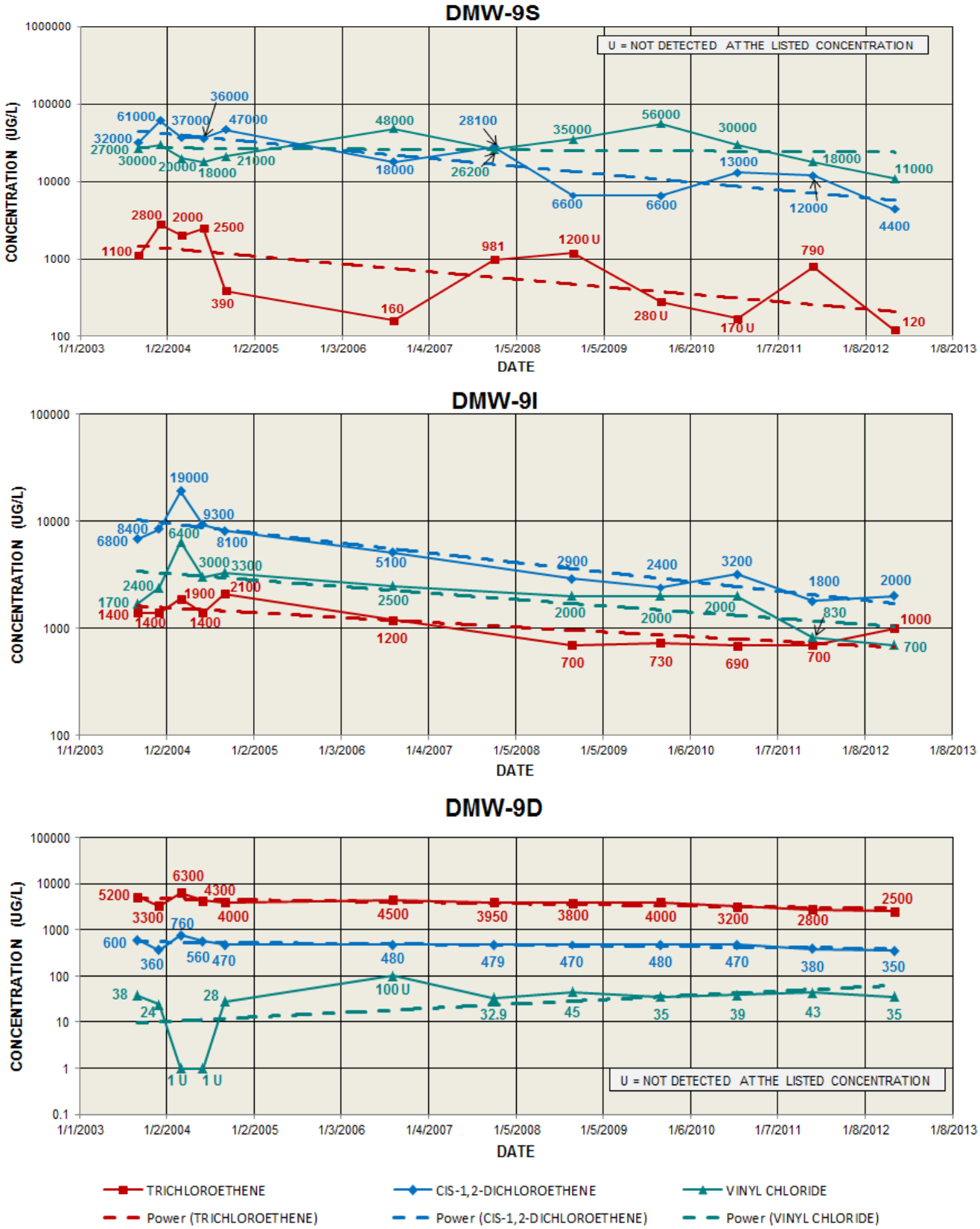


FIGURE 4-12

TIME SERIES PLOTS OF MAJOR CHLORINATED VOCS-SOURCE AREA WELLS DMW-11S AND DMW-1A LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

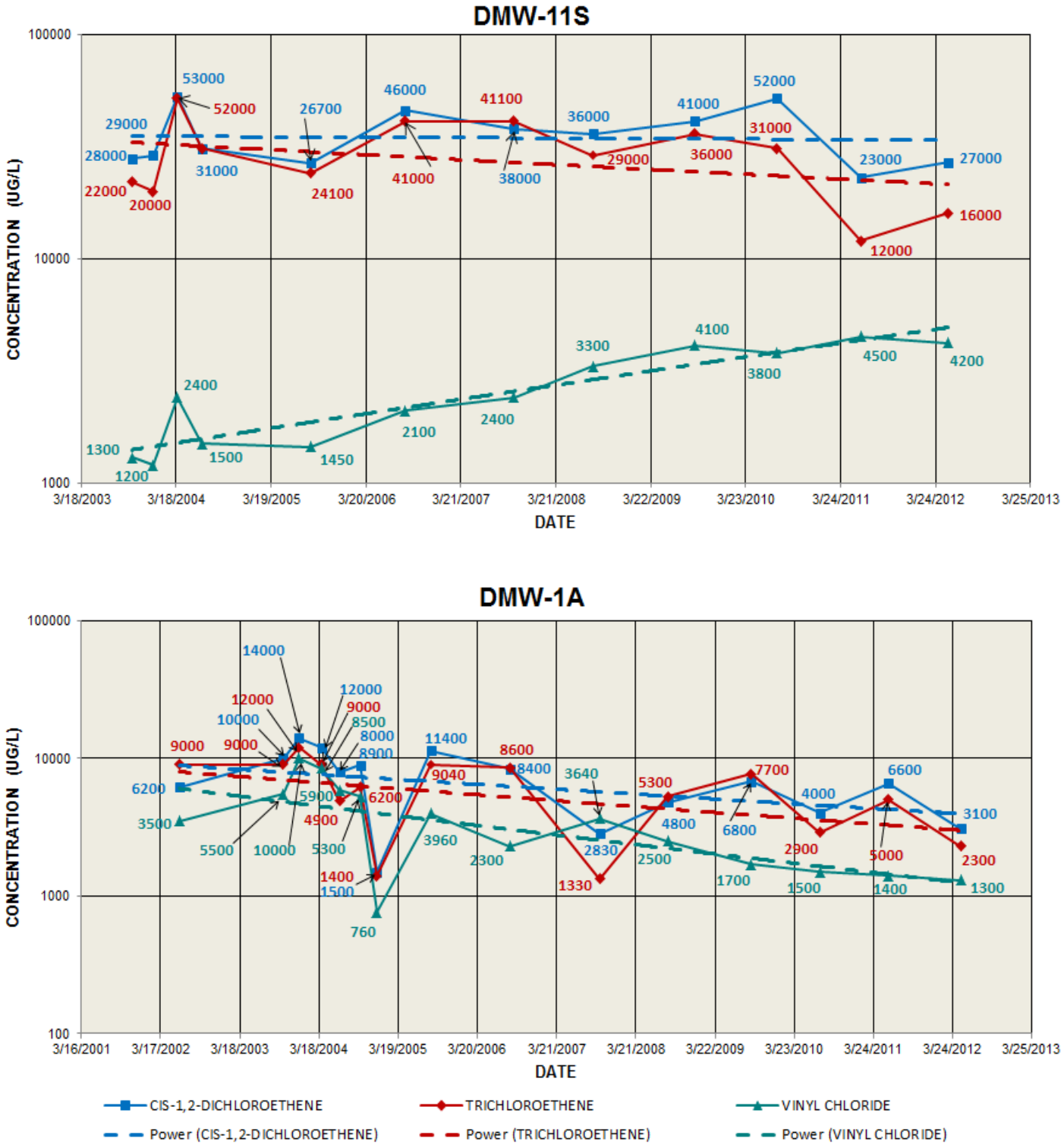


FIGURE 4-13

TIME SERIES PLOTS OF MAJOR CHLORINATED VOCS-SOURCE AREA WELLS DMW-5S, DMW-4I, AND DMW-4D LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

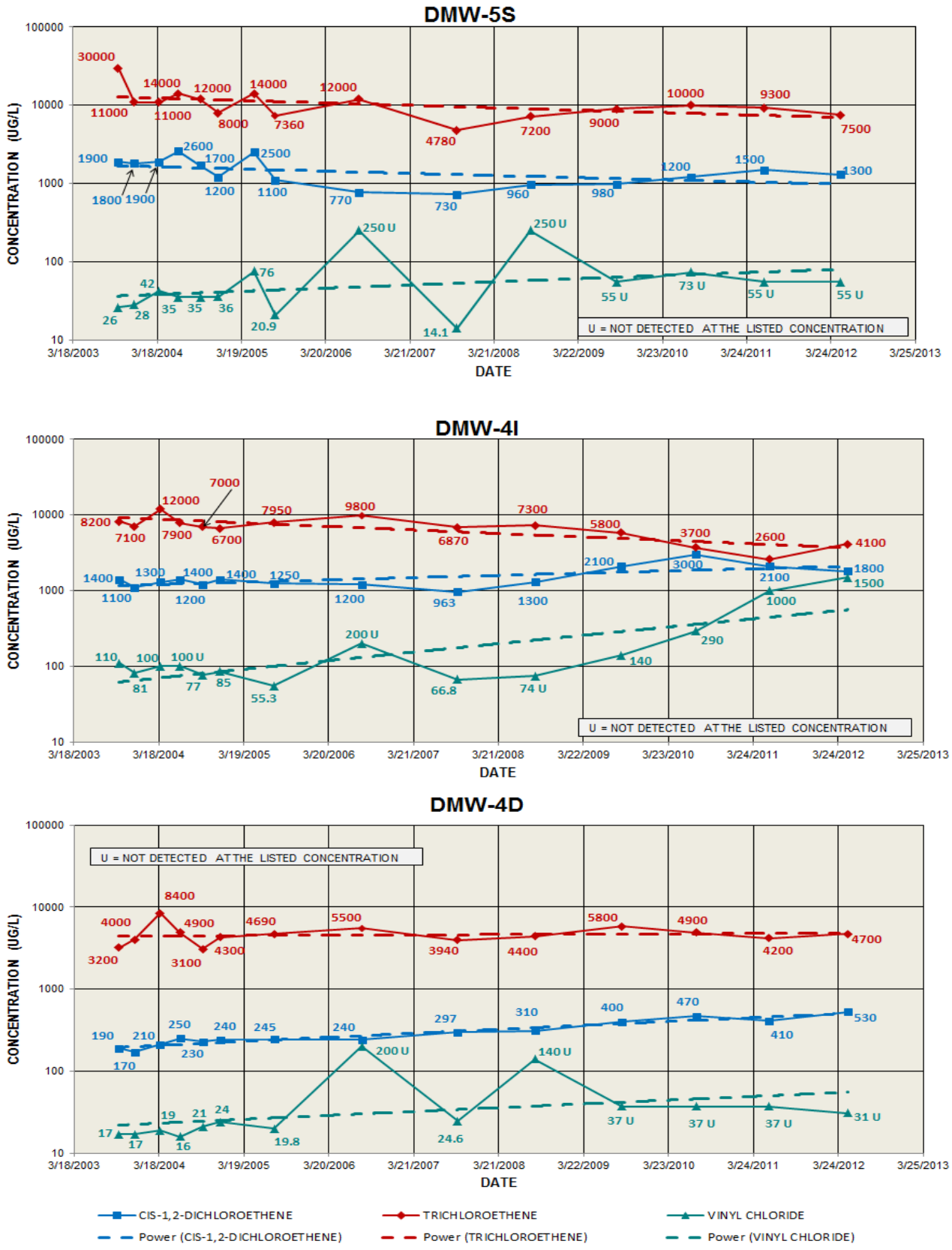
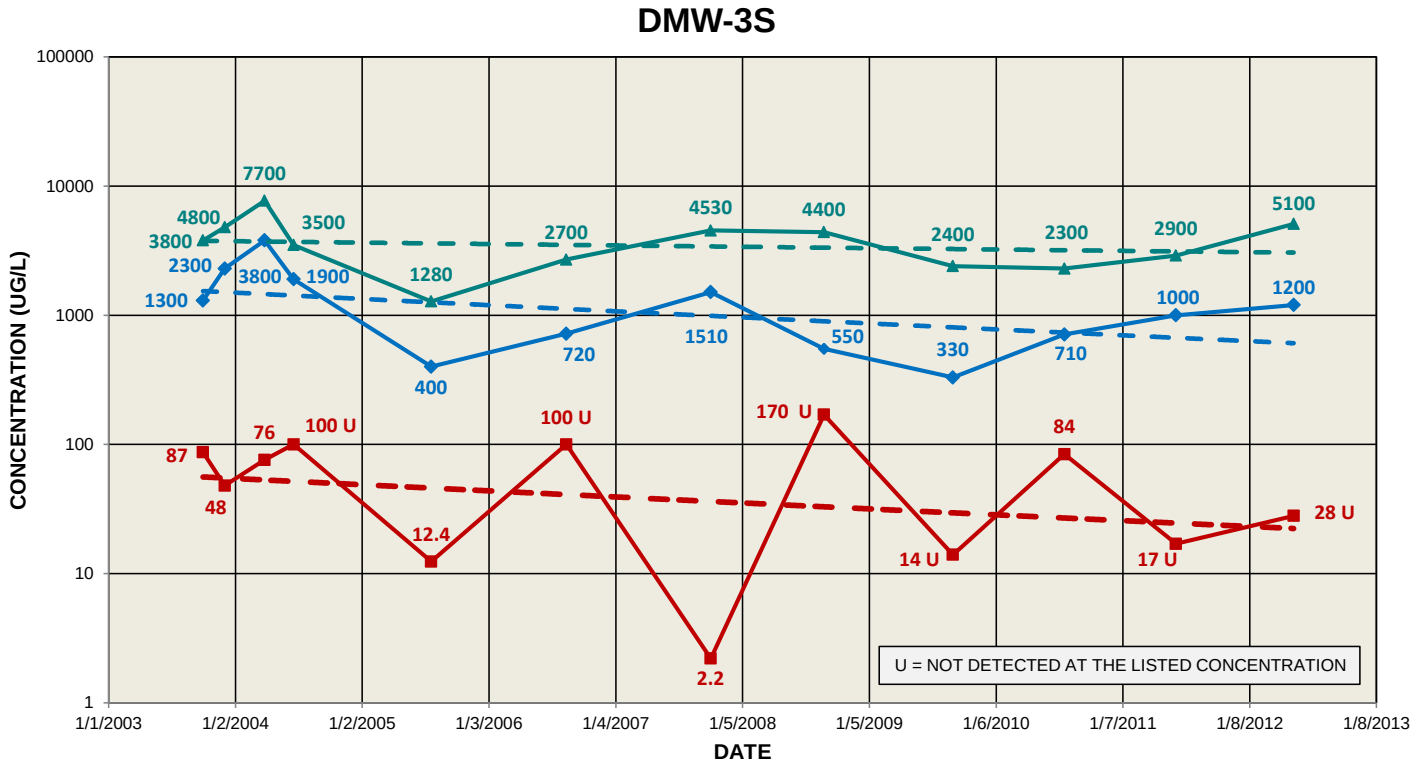


FIGURE 4-14

TIME SERIES PLOTS OF MAJOR CHLORINATED VOCS-SOURCE AREA WELLS DMW-3S AND DMW-3I LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND



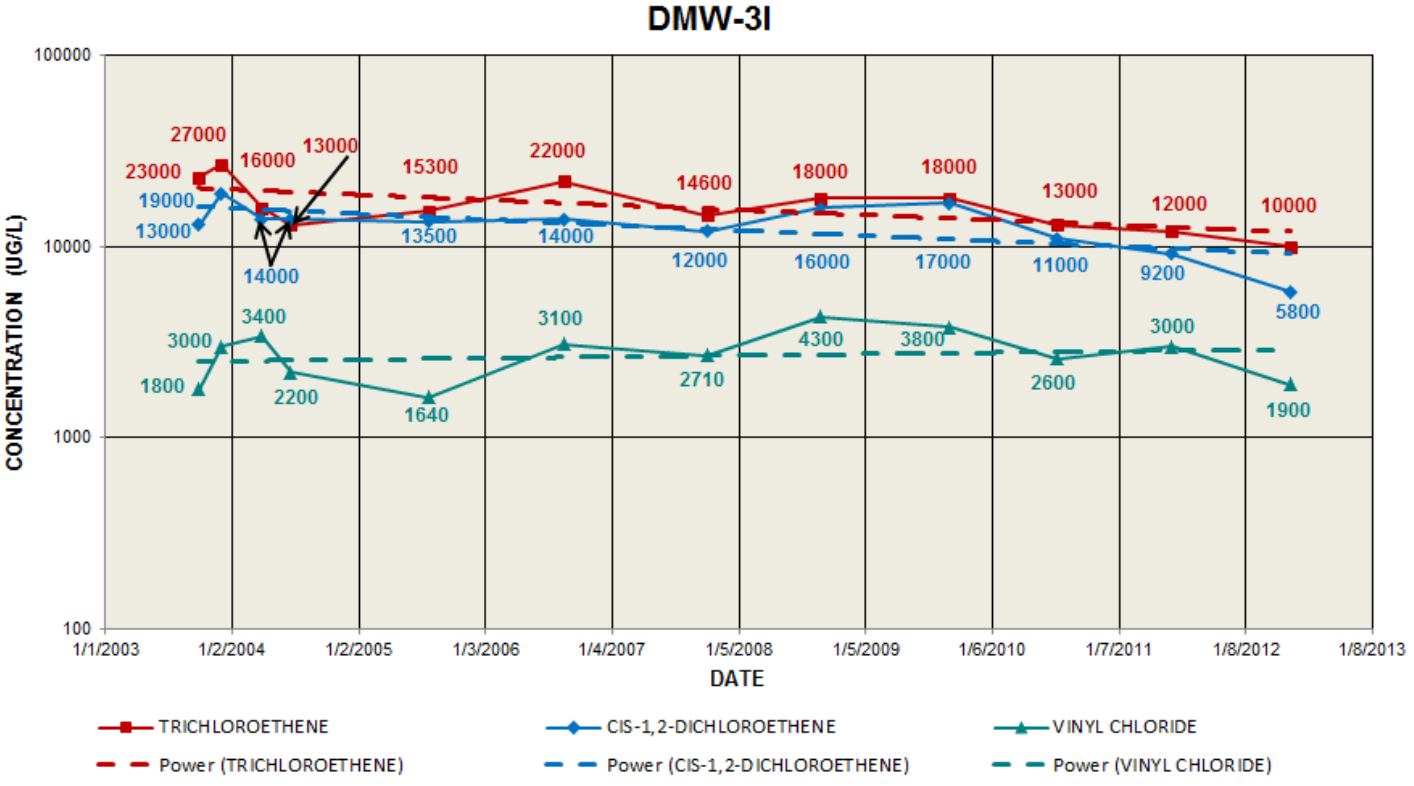


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FIGURE 4-15

1,4- DIOXANE DETECTED IN GROUNDWATER-SURFICIAL AND DEEP CONFINED AQUIFERS, APRIL-MAY 2012

LEGEND

- GROUNDWATER MONITORING WELL: CONCENTRATION EXCEEDS THE SCREENING LEVEL
- SURFICIAL AQUIFER GROUNDWATER MONITORING WELL: CONCENTRATION DOES NOT EXCEED THE SCREENING LEVEL
- DEEP CONFINED AQUIFER WELL SAMPLED
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED FOR 1,4-DIOXANE THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND

J ESTIMATED VALUE BELOW REPORTING LIMIT
K RESULT IS BIASED HIGH

CONCENTRATION IN RED EXCEEDS THE SCREENING LEVEL

Well ID	
Analyte	Concentration In Micrograms Per Liter (ug/L)

1,4- Dioxane (Screening Level = 3 ug/L)

For wells sampled, the absence of a results tag indicates the analyte was not detected.

(Not Sampled) - Indicates well not sampled if symbol is obscured for this well.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 7/31/12

CREATED BY: MP

TETRA TECH

Map Document: (K:\GProject\MartinStateAirport-LMC\MapDocs\MXD\Maps\Cad_Nic_Van April_May 2012.mxd)
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FIGURE 4-16

CADMIUM, NICKEL, AND VANADIUM EXCEEDANCES IN GROUNDWATER-SURFICIAL AND DEEP CONFINED AQUIFERS, 2012

LEGEND

- GROUNDWATER MONITORING WELL: ONE OR MORE CONCENTRATIONS EXCEED THE STANDARDS
- GROUNDWATER MONITORING WELL: CONCENTRATIONS DO NOT EXCEED THE STANDARDS
- DEEP CONFINED AQUIFER WELL SAMPLED
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED FOR METALS THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND
- J ESTIMATED VALUE BELOW REPORTING LIMIT

Well ID	
Analyte	Concentration In Micrograms Per Liter (ug/L)

Cadmium standard= 5 ug/l
Nickel standard= 73 ug/l
Vanadium standard= 3.7 ug/l

For wells sampled, only concentrations exceeding the standards are shown. The maximum of either the total and dissolved metal concentrations is shown.

Result in red indicates total metal concentration is shown. Result in black indicates dissolved metal concentration is shown. Result in blue indicates total and dissolved concentrations are equal.

(Not Sampled) - Indicates well not sampled if symbol is obscured for this well.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 8/2/12

CREATED BY: MP

TETRA TECH

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FIGURE 4-17

PETROLEUM HYDROCARBON EXCEEDANCES IN GROUNDWATER-UPPER SURFICIAL AQUIFER, 2012

LEGEND

- GROUNDWATER MONITORING WELL: ONE OR MORE CONCENTRATIONS EXCEED THE STANDARDS
- GROUNDWATER MONITORING WELL: CONCENTRATIONS DO NOT EXCEED THE STANDARDS
- DEEP CONFINED AQUIFER WELL (DRO/GRO NOT SAMPLED THIS ROUND)
- ABANDONED WELL
- WELL OR PIEZOMETER NOT SAMPLED FOR DRO/GRO THIS ROUND
- MARYLAND AIR NATIONAL GUARD BOUNDARY
- POND
- J ESTIMATED VALUE BELOW REPORTING LIMIT

Well ID	
Analyte	Concentration In Micrograms Per Liter (ug/L)

DRO= Diesel-range organics (standard is 47 ug/l)
GRO= Gasoline-range organics (standard is 47 ug/l)

Only upper surficial wells ("S" wells) and MW3 - MW6 were sampled for TPH-DRO/GRO

For wells sampled, only concentrations exceeding the standards are shown.

Dump Road Area
Lockheed Martin, Martin State Airport
Middle River, Maryland

0 60 120 240 Feet

N

DATE MODIFIED: 8/2/12

CREATED BY: MP

TETRA TECH

Section 5
Summary

The following summarizes the findings of the 2012 groundwater sampling and analysis program for the Dump Road Area (DRA) of Martin State Airport (MSA) in Middle River, Maryland:

- Groundwater in the upper, intermediate, and lower surficial aquifer zones flows east and northeast to Frog Mortar Creek.

- Concentrations of chlorinated volatile organic compounds (cVOCs) exceed Maryland Department of the Environment (MDE) groundwater standards throughout a large portion of the investigation area, and at multiple depths. The two highest trichloroethene (TCE) concentrations observed in the current sampling episode are 16,000 micrograms per liter (µg/L) and 11,000 micrograms per liter, reported for upper surficial aquifer wells DMW-11S (Taxiway Tango Median Area) and DMW-2A/DMW-18I (eastern part of the site near Frog Mortar Creek). Multiple volatile organic compound (VOC) sources at the site have resulted in volatile organic compound plumes in groundwater extending to areas north of Pond 2, south to wells DMW-6I and DMW-7I, and west to the area between Taxiway Tango and the airport runway.

- Concentrations of chlorinated volatile organic compounds in groundwater are consistent with the 2011 results. Time-series plots of volatile organic compounds in source areas and downgradient locations indicate a general decrease in volatile organic compound concentrations since monitoring began in the early 2000s. Volatile organic compound concentrations in the source area for the Taxiway Tango Median Area plume (well DMW-11S) had remained steady until 2010, but then decreased from the 2010 concentrations by more than 50% to historical lows for trichloroethene and *cis*-1,2-dichloroethene (*cis*-1,2-DCE) in 2011 and 2012.

- At six wells where groundwater samples were analyzed for natural attenuation assessment parameters, anaerobic reductive dechlorination is evidenced by the presence of the trichloroethene breakdown product *cis*-1,2-dichloroethene. Vinyl chloride, methane, ethene, and elevated chloride concentrations indicate that complete dechlorination may be readily occurring in the upper and intermediate surficial aquifer zones at the Dump Road Area site. However, lower relative concentrations of vinyl chloride, methane, and ethene, low groundwater pH, and high oxidation reduction potential indicate that slow or incomplete reductive dechlorination of lower order chlorinated volatile organic compounds may be occurring in the lower surficial aquifer zone.

- Volatile organic compound groundwater contamination is present at concentrations greater than groundwater standards at currently delineated areas to the north (wells MW-14I, MW-15S/I, MW-16S/I, MW-17I, and MW-28I), east (wells MW-14I,

MW-18I/S, DMW-3S/I, DMW-4S/I/D, and DMW-5S/I), and west (wells MW-24I, DMW-11S, and MW-33S). The Dump Road Area Source Areas Investigation was completed in 2012 which will provide additional supplemental data in a separate report.

- At wells MW-4 and MW-5, low-flow purge and passive diffusion bag (PDB) samples were collected near the top of each well screen, from the midpoint of each well screen, and from the bottom of each well screen to evaluate possible vertical contaminant distributions that can occur when formation materials of varying permeability are screened or when long well screens are used. These sampling results are generally comparable for detected volatile organic compounds at the three sampling depths in each well, and between samples collected via low-flow purging and the bag samplers. Low-flow samples and the bag midpoint and screen bottom samples do not indicate substantial vertical profiling of volatile organic compounds at either well. However, volatile organic compound concentrations in the screen top bag samples were consistently lower than the low-flow samples collected at the same depth, and were consistently lower than both the deeper low-flow and bag samples. For the top of screen samples, the pumping samples generally provided higher volatile organic compound concentrations than the bag samples. However, for the midpoint and bottom samples, the pumping samples generally provided lower concentrations than the bag samples. The low-flow and bag results compare more favorably for higher volatile organic compound concentrations.

- The semivolatile organic compound (SVOC) 1,4-dioxane was detected primarily in groundwater samples collected from the upper and intermediate surficial aquifer zones. 1,4-Dioxane is co-located in areas containing the highest concentrations of chlorinated volatile organic compounds (primarily near Pond 1 and the area east). Highest concentrations of 1,4-dioxane are east of Pond 1 near Frog Mortar Creek at wells DMW-2A (300 micrograms per liter) and DMW-3I (230 micrograms per liter), and west of Pond 1 at wells MW-20S (240 micrograms per liter) and DMW-9I (150 micrograms per liter).

- Concentrations of 10 metals exceed groundwater standards in one or more surficial aquifer groundwater samples. Total iron, total manganese, vanadium, arsenic, cadmium, nickel, and cadmium exceed standards most frequently. Maximum concentrations of iron, manganese, vanadium, and cadmium exceed the Maryland Department of the Environment groundwater standards by more than one order of magnitude. The maximum concentrations for both total and dissolved nickel exceed its groundwater standard by a factor of nearly eight. The highest concentrations of cadmium are co-located with high levels of volatile organic compounds in the surficial aquifer at wells DMW-1A (maximum of 1,100 micrograms per liter), DMW-1B, DMW-8I, DMW-8D, DMW-2A, DMW-2S, MW-18I, and DMW-3I, all of which are south and east of Pond 1.

- Hexavalent chromium was detected in only eight of 71 groundwater samples, with a maximum concentration of 0.547 micrograms per liter. Its concentrations do not exceed the Maryland Department of the Environment groundwater standard.

- In the deep confined aquifer wells (MW-27D, MW-29D, MW-30D, and MW-31D), only total vanadium at MW-31D exceeds the Maryland Department of the Environment groundwater standards. The dissolved (i.e., filtered) vanadium concentration at this well does not exceed the standard.

- Total petroleum hydrocarbon (TPH) diesel-range organics (DRO) and gasoline-range organics (GRO) were detected in 22% and 50% of the 2012 upper surficial aquifer groundwater samples, respectively. Most concentrations exceed the Maryland Department of the Environment groundwater standard of 47 micrograms per liter. The highest diesel-range organic and gasoline-range organic concentrations were detected in wells DMW-11S (diesel-range organics) and DMW-9S (gasoline-range organics), in the Taxiway Tango Median Area and Petroleum Hydrocarbon and Pond 1 Area, respectively. Substantially lower concentrations of diesel-range organics and gasoline-range organics were reported for groundwater in the Drum Area.

- Perchlorate was detected in 14 groundwater samples. However, only one of these concentrations (4.6 micrograms per liter at DMW-4I) exceeds the Maryland Department of the Environment groundwater standard of 2.6 micrograms per liter. Haloacetic acids and cyclotrimethylene trinitramine (also known as Royal Demolition Explosive [RDX]) were not detected in the three and nine groundwater samples analyzed, respectively, for these compounds.

- Radium-228 and total radium were detected in eight of 11 groundwater samples. Radium-228 concentrations exceed the groundwater standard in one sample each from the intermediate surficial aquifer at wells DMW-3I and DMW-6I, and the deep surficial aquifer well at DMW-6D. The total radium concentrations for wells DMW-6I and DMW-6D also exceed the groundwater standard.

- Concentrations of radium-228 and total radium do not exceed the groundwater standard in samples collected from upper surficial aquifer (wells MW-3, DMW-6S, MW-16S), other sampled locations of the intermediate and lower surficial-aquifer (DMW-3D, MW-16I, and MW-16D), and the deep confined aquifer (wells MW-27D, and MW-29D).

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Section 6
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APPENDIX A—GROUNDWATER LEVEL RECORD SHEETS

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: MSA - MARTIN State Airport **Project No.:** 112IC04021
Location: Middle River, MARYLAND **Personnel:** WALT Pryor / Stuart Cameron
Weather Conditions: Sunny 60° F **Measuring Device:** Electronic meter
Tidally Influenced: Yes ___ No X **Remarks:**

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
MW34S	4-16-12	1040			4.51			
MW34I		1041			4.81			
MW28I		1044			6.35			
MW27D		1045			2.42			
MW15S		1046			6.05			
MW15I		1047			6.55			
MW15D		1048			6.38			
MW4		1049			7.74			
DMW9S		1050			9.32			
DMW9I		1051			9.42			
DMW9D		1052			9.69			
MW20S		1053			10.35			
MW20I		1054			10.34			
MW20D		1055			10.82			
DMW8S		1056			14.02			
DMW8I		1057			15.03			
DMW8D		1058			15.03			
DMW2A		1100			20.89			
DMW2B		1101			20.61			
DMW2S		1103			20.93			
DMW3S		1105			10.10			
DMW3I		1106			15.55			
DMW3D		1107			15.39			
MW18S		1109			7.94			
MW18I	↓	1110			8.21			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Martin State Airport
Location: MSA
Weather Conditions: Sunny 60°
Tidally Influenced: Yes ___ No X
Project No.:
Personnel: WHP & STC
Measuring Device: water level ~~meter~~ meter
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
MW18D	4-16-12	1111			8.05			
MW14I		1115			10.99			
MW14D		1116			7.09			
MW17S		1120			6.45			
MW17I		1121			5.40			
MW17D		1122			5.55			
MW16S		1127			9.00			
MW16I		1128			8.00			
MW16D		1129			8.15			
MW19S		1130			12.30			
DMW4S		1138			19.95			Top of PVC
DMW4I		1139			19.75			Top of PVC
DMW4D		1140			19.90			Top of PVC
DMW7S		1143			20.65			
DMW7I		1146			20.95			
DMW7D		1147			20.90			
MW5		1148			21.35			
DMW5S		1150			20.75			
DMW5I		1151			20.80			
DMW5D		1152			20.85			
DMW6S		1156			18.00			
DMW6I		1157			18.03			
DMW6D		1158			18.02			
MW20D		1159			8.10			
MW6		1210			14.50			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: Martin State Airport
Location: MW MSA
Weather Conditions: Sunny 75°
Tidally Influenced: Yes ___ No X
Project No.:
Personnel: Walt P STU C
Measuring Device: Water Level meter
Remarks:

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
MW35s	4-16-12	1320			9.25			
MW33s		1321			7.05			
MW33I		1322			7.11			
MW26s		1329			8.92			
MW26I		1330			8.97			
MW26D		1331			9.00			
DMW10s		1332			7.68			
DMW10I		1334			7.99			
MW21I		1337			8.68			
MW21D		1338			8.89			
DMW1s		1339			8.68			
DMW1A		1343			9.88			
DMW1B		1344			10.15			
MW19I		1346			6.63			
MW19D		1347			6.53			
MW2		1348			6.87			
MW32s		1353			5.74			
MW32I		1354			5.65			
MW31D		1406			3.55			
MW30D		1423			4.27			
MW24s		1428			4.17			
MW24I		1429			5.40			
MW23s		1430			7.60			
MW23I		1431			7.80			
MW23D	↓	1432			8.21			

* All measurements to the nearest 0.01 foot

Tetra Tech, Inc.

GROUNDWATER LEVEL MEASUREMENT SHEET

Project Name: _____ **Project No.:** _____
Location: _____ **Personnel:** _____
Weather Conditions: _____ **Measuring Device:** _____
Tidally Influenced: Yes ___ No ___ **Remarks:** _____

Well or Piezometer Number	Date	Time	Elevation of Reference Point (feet)*	Total Well Depth (feet)*	Water Level Indicator Reading (feet)*	Thickness of Free Product (feet)*	Groundwater Elevation (feet)*	Comments
MW 22I	4/16/12	1447			8.75			
MW 22D		1448			8.90			
MW 3		1449			8.70			
DMW 11S		1450			4.97			
DMW 11I		1451			6.43			
MW 25S		1453			5.75			
MW 25I		1454			6.97			
MW 7		1502			6.80			
MW 37S		1506			6.83			
MW36S		1508			7.45			
MT-MW01S	4-17-12	0900			4.77			
MT-MW02S		0903			9.87			
MT-MW03S		0905			Top of Pvc			
MT-MW04S		0908			5.74			
MT-MW05S		0910			4.40			
MT-MW06S		0913			1.70			
GSP-MW1		0930			6.00			
GSP-MW 2		0932			6.91			
GSP-MW 3		0934			3.75			
GSP-MW 4		0936			3.40			
GSP-MW 5		0938			3.60			
GSP-MW 6		0939			5.20			
GSP-MW 7		0942			3.55			
GSP-MW 8		0944			4.22			

* All measurements to the nearest 0.01 foot

APPENDIX B—MONITORING WELL PURGING AND SAMPLING RECORDS

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MW-3
Sample Location: MSA
Sampled By: DC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1155	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Low Flow	clear	5.81	0.202	15.21	26.7	2.10	102	0.131

PURGE DATA:

Date: 5/15/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Low Flow								
Monitor Reading (ppm): -								
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD): 29.5								
Static Water Level (WL): 8.62								
One Casing Volume(gal/L): -								
Start Purge (hrs): 1120								
End Purge (hrs): 1230								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 7L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3/40ml VOAs	
Dioxane	-	2-1L amber glass	
Perchlorate	-	1-250ml plastic	
Total PPM + Hg	HNO_3	1-500ml plastic	
Dissolved PPM + Hg	HNO_3	1-500ml plastic	
GRO/DRO	-	2-1L amber glass	
GRO/DRO	HCl	2-40ml VOAs	
Hex Chrom.	-	1-125ml plastic	1230

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Dorothy Tate

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MW-[redacted]3
DATE: 5/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1120	8.62	–	–	–	–	–	–	–	–	begin purge TWD-295
1125	9.55	190	5.83	0.201	74.1	2.21	14.53	103	0.131	
1130	9.60	100	5.83	0.201	61.5	2.22	14.98	102	0.130	
1135	9.73	100	5.84	0.200	45.6	2.19	15.09	102	0.130	
1140	9.82	100	5.81	0.201	33.8	2.11	15.07	103	0.130	
1145	9.89	100	5.82	0.201	31.6	2.08	15.12	102	0.130	
1150	9.93	100	5.81	0.202	26.7	2.10	15.21	102	0.131	
1155	–	100	–	–	–	–	–	–	–	sample

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC0402

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW4-051512
Sample Location: MW4
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1430	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	7.27	1.67	16.99	11.54	0.92	-81	0.8

PURGE DATA:

Date: 5/15/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 4" PVC								
Total Well Depth (TD):		Purge Data Sheet						
Static Water Level (WL):								
One Casing Volume(gal/L):								
Start Purge (hrs): 1225								
End Purge (hrs): ~~1305~~ 1300								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl / None	2-40 mL vials / 2-1L Ambers	✓
RDX	—	2-1L Ambers	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1500

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

SC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW4-051512
DATE: 5/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1225	7.51	—	—	—	—	—	—	—	—	
1230	7.91	200	6.91	1.57	17.3	2.91	20.30	92	0.8	
1235	8.21	200	7.16	1.61	12.4	1.25	18.16	-17	0.8	
1240	8.22	200	7.21	1.63	11.16	1.00	17.91	-43	0.8	
1245	8.28	200	7.23	1.65	10.28	0.96	17.59	-59	0.8	
1250	8.28	200	7.27	1.67	10.18	0.99	17.26	-69	0.8	
1255	8.28	200	7.28	1.67	14.0	0.87	17.19	-75	0.8	
1300	8.28	200	7.27	1.67	11.54	0.92	16.89	-81	0.8	
Sampling VOCs 1										
Adjust bladder screen to 18' below top of casing										
1310	8.07	200	—	—	—	—	—	—	—	
1315	8.21	200	7.31	1.74	9.67	0.73	18.45	-56	0.8	
1320	8.22	200	7.25	1.69	P.63	0.89	18.03	-75	0.9	
1325	8.26	200	7.26	1.70	11.5	0.77	17.91	-83	0.9	
1330	8.22	200	7.25	1.71	9.58	0.71	17.94	-87	0.9	
1335	8.25	200	7.27	1.70	9.10	0.71	17.8	-89	0.9	
1340	8.25	200	7.27	1.70	8.59	0.67	17.80	-91	0.9	
Sampling VOCs										
Adjust bladder screen to 11' below top of casing										
1345	8.11	—	—	—	—	—	—	—	—	
1350	8.16	200	7.38	1.78	9.40	3.24	18.91	-80	0.9	
1355	8.35	200	7.36	1.78	8.85	0.72	17.99	-94	0.9	
1400	8.35	200	7.39	1.81	7.52	0.69	17.89	-102	0.9	
1405	8.35	200	7.37	1.82	6.76	0.75	17.74	-103	0.9	
1410	8.33	200	7.40	1.83	6.27	0.68	17.61	-109	0.9	
1415	8.39	200	7.41	1.83	6.05	0.63	17.59	-110	0.9	
Sampling VOCs										
Adjust bladder screen to original depth of 25' and sample at 1430 for total + dissolved metals, 1,4-Dioxane, 6:2 or DRO, Perchlorate, ROX, Hardness.										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW4-051512-25
Sample Location: MW4
Sampled By: SRL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1300	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	7.27	1.67	16.99	11.54	0.92	-81	0.8

PURGE DATA:

Date: 5/15/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 4" PVC								
Total ~~Well~~ Screen Depth (TD): 25								
Static Water Level (WL): 7.51								
One Casing Volume(gal/L):								
Start Purge (hrs): 1225								
End Purge (hrs): 1305								
Total Purge Time (min): 40								
Total Vol. Purged (gal/L): 3961								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓

OBSERVATIONS / NOTES:

VOCs collected @ 25 below TOC

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112FC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW4-051512-18
Sample Location: MW4
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1340	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	7.27	1.70	17.80	8.59	0.67	-91	0.9

PURGE DATA:

Date: 5/15/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 4" PVC								
Total ~~Well~~ Depth (TD): 18								
Static Water Level (WL): 8.07								
One Casing Volume(gal/L):								
Start Purge (hrs): 1310								
End Purge (hrs): 1345								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓

OBSERVATIONS / NOTES:

VOCs Collected @ 18 below TOC

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 117FC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW4-051512-11
Sample Location: MW4
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1415	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	7.41	1.83	17.59	6.05	0.63	-110	0.9

PURGE DATA:

Date: 5/15/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 4" PVC		Purge Data Sheet						
Total Screen Depth (TD): 11								
Static Water Level (WL): 8.11								
One Casing Volume(gal/L):								
Start Purge (hrs): 1345								
End Purge (hrs): 1420								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 ml VOAs	✓

OBSERVATIONS / NOTES:

VOCs Collected @ 11 below TOC

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112FC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW5-051412
Sample Location: ~~Site~~ MW5
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/14/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1240	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	6.81	1.79	15.13	8.85	0.96	-65	0.9

PURGE DATA:

Date: 5-14-12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump			See Low		Flow			
Monitor Reading (ppm): —								
Well Casing Diameter & Material 4" PVC								
Total ~~Well~~ Depth (TD): 37			Purge Data Sheet					
Static Water Level (WL): 21.24								
One Casing Volume(gal/L):								
Start Purge (hrs): 1020								
End Purge (hrs): 1055								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Total Metals	~~HNO3~~ HNO3	1-500 mL plastic	✓
Dissolved Metals	HNO3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl/None	2-40 mL vials / 2-1L Ambers	✓
RDX	—	2-1L Ambers	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1255

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW5-051412
DATE: 05/14/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1020	21.24	300	—	—	—	—	—	—	—	
1025	21.46	300	6.56	1.70	14.5	3.21	17.54	133	0.9	
1030	21.65	250	6.79	1.75	13.2	1.34	15.96	-30	0.9	
1035	21.73	250	6.81	1.76	10.20	1.23	15.76	-43	0.9	
1040	21.75	250	6.81	1.77	8.20	1.13	15.57	-50	0.9	
1045	21.75	250	6.81	1.78	8.34	1.05	15.36	-57	0.9	
1050	21.75	250	6.81	1.79	8.65	0.99	15.26	-61	0.9	
1055	21.75	250	6.81	1.79	8.85	0.96	15.13	-65	0.9	
Sampling VOCs										
1105 Adjust bladder screen to 31'										
1110	22.20	—	—	—	—	—	—	—	—	
1115	22.20	250	6.80	1.79	7.54	1.05	15.20	-66	0.9	
1120	22.08	250	6.80	1.80	7.38	0.87	15.39	-69	0.9	
1125	22.08	250	6.78	1.80	7.38	0.87	15.50	-70	0.9	
1130	22.08	250	6.78	1.80	7.39	1.02	15.60	-73	0.9	
1135	22.08	250	6.78	1.80	7.21	0.86	15.64	-74	0.9	
1140	22.08	250	6.78	1.79	6.98	0.82	15.68	-74	0.9	
Sampling VOCs										
1200 Adjust bladder screen to 25'										
1205	22.40	—	—	—	—	—	—	—	—	
1210	22.40	150	6.89	1.82	18.2	5.08	16.28	-68	0.9	
1215	21.85	150	6.79	1.82	15.4	1.51	16.64	-67	0.9	
1220	21.72	150	6.77	1.81	16.7	1.05	17.52	-74	0.9	
1225	21.71	150	6.77	1.80	16.2	0.98	18.00	-78	0.9	
1230	21.70	150	6.77	1.80	15.3	0.94	18.06	-79	0.9	
Sampling VOCs										
1240 Adjust bladder screen to original 37' & sample ~~[illegible]~~ Total & Dissolved metals, 1,4-Dioxane, Perchlorate, RDX, CPU & DRU, & Hex Chrom.										

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW5-05141237
Sample Location: MW5
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/14/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1055	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	6.81	1.74	15.13	8.85	0.96	-65	0.9

PURGE DATA:

Date: 5/14/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump								
Monitor Reading (ppm): —			See Low Flow Purge					
Well Casing Diameter & Material 4" PVC								
Total ~~Well~~ screen Depth (TD): 37'			Data Sheet					
Static Water Level (WL): 21.24								
One Casing Volume(gal/L):								
Start Purge (hrs): 1020								
End Purge (hrs): 1105								
Total Purge Time (min): 45								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 40mL vials	✓

OBSERVATIONS / NOTES:

Collect VOCs @ 37' below TOC.

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW5-051412-31
Sample Location: MW5
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/14/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1140	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	6.78	1.79	15.68	6.98	0.82	-74	0.9

PURGE DATA:

Date: 5/14/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material: 4" PVC								
Total ~~Well~~ Depth (TD): 31'								
Static Water Level (WL): 22.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 1110								
End Purge (hrs): 1200								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 1.596l								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL Vials	✓

OBSERVATIONS / NOTES:

Collect VOCs @ 31' below TOC

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW5-051412-25
Sample Location: MW5
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/14/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1230	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	6.77	1.80	18.06	15.3	0.54	-79	0.9

PURGE DATA:

Date: 5/14/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow Purge						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 4" PVC		Data Sheet						
Total ~~Well~~ screen Depth (TD): 25								
Static Water Level (WL): 22.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 1205								
End Purge (hrs): 1240								
Total Purge Time (min): 35								
Total Vol. Purged (gal/L): 1.5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓

OBSERVATIONS / NOTES:

Collect VOCs @ 25' below TOC

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW6-050712
Sample Location: MW6
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Date: 5/7/12	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Time: 1445								
Method: Bladder Pump	Slightly Cloudy	5.63	1.63	15.00	43.8	0.74	89	0.8

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/7/12								
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 14.15								
One Casing Volume(gal/L):								
Start Purge (hrs): 1355								
End Purge (hrs): 1515								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL Plastic	✓
TPH-DRO + GRO	HCl/None	2-40 mL vials / 2-1L Ambers	✓
Hexavalent Chromium	—	1-250 mL Plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1510

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-MW6-050712
DATE: 5/7/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1355	14.15	—	—	—	—	—	—	—	—	
1400	14.19	200	3.98	1.33	156	8.15	17.14	267	0.7	
1405	14.19	200	5.54	1.54	>1000	2.68	15.29	191	0.8	
1410	14.19	200	5.58	1.59	892	2.10	15.13	162	0.8	
1415	14.19	200	5.61	1.62	644	1.07	15.08	127	0.8	
1420	14.20	200	5.62	1.62	154	1.05	15.08	120	0.8	
1425	14.21	200	5.63	1.63	78.9	0.96	15.04	112	0.8	
1430	14.22	200	5.63	1.63	50.2	0.86	15.00	100	0.8	
1435	14.22	200	5.63	1.63	45.0	0.80	15.05	93	0.8	
1440	14.22	200	5.63	1.63	47.2	0.78	15.02	92	0.8	
1445	14.23	200	5.63	1.63	43.8	0.74	15.00	89	0.8	
Sampling VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, GRO + DRO, + Hexavalent Chromium										

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

Sample ID No.: DMW15-050112
Sample Location: DMW15
Sampled By: Walt P
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-10-12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1515	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	clear	6.67	0.372	14.98	6.5	4.39	0.2	96

PURGE DATA:

Date: 5-10-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material								
Type: 2" PVC		See	Low	Flow	Purge			
Total Well Depth (TD):								
Static Water Level (WL): 8.52			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1423								
End Purge (hrs): 1510								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Marathon State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: Drnw1s-051012
DATE: 5-10-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1423	8.50	—	—	—	—	—	—	—	—	Initial, no odor
1425	8.75	300	6.49	0.366	38.8	8.27	17.06	98	0.2	Slightly cloudy
1430	8.70	200	6.49	0.390	11.0	5.44	15.93	100	0.2	↓
1435	8.70	200	6.56	0.391	10.7	5.48	15.47	99	0.2	Clear water
1445	8.70	200	6.64	0.384	9.1	5.10	15.09	98	0.2	↓
1455	8.70	200	6.66	0.377	8.0	4.51	15.02	93	0.2	
1500	8.70	200	6.67	0.373	6.5	4.48	15.03	91	0.2	
1505	8.70	200	6.68	0.373	6.4	4.42	14.99	88	0.2	
1510	8.70	200	6.67	0.372	6.5	4.39	14.98	86	0.2	

Well Parameters Stabilize

Sampling Begins

SIGNATURE(S): Walt R

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112EC04021

Sample ID No.: MSA-DMW25051012
Sample Location: DMW25
Sampled By: SBC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/10/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1425	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	4.15	1.76	15.24	7.52	0.91	152	0.7

PURGE DATA:

Date: 5/10/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 20.54								
One Casing Volume(gal/L):								
Start Purge (hrs): 1340								
End Purge (hrs): 1515								
Total Purge Time (min): 95								
Total Vol. Purged (gal/L): 39.1								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
Total Metals	HNO3	1-500 mL plastic	✓
Dissolved Metals	HNO3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl/None	2-40mL vials/ 2-1L Ambers	✓
Haloacetic Acids	NH4Cl	2-250 mL Amber	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1510

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-DMW2S-05102
DATE: 5/10/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1340	20.54	—	—	—	—	—	—	—	—	
1345	20.61	200	4.73	1.40	364	4.67	14.77	150	0.7	
1350	20.62	200	4.35	1.38	107.0	1.40	14.63	168	0.7	
1355	20.62	200	4.35	1.37	68.9	1.28	14.56	164	0.7	
1400	20.62	200	4.33	1.37	41.4	1.13	14.50	162	0.7	
1405	20.62	200	4.34	1.36	25.4	1.08	14.58	158	0.7	
1410	20.62	200	4.35	1.36	18.5	0.99	14.64	155	0.7	
1415	20.62	200	4.36	1.36	12.3	0.96	14.61	153	0.7	
1420	20.62	200	4.36	1.36	10.45	0.92	15.05	152	0.7	
1425	20.62	200	4.35	1.36	9.52	0.91	15.24	152	0.7	
Sampling VOCs, Total + Dissolved Metals, Perchlorate, 1,4-Dioxane, GRO+DRO, Hexavalent Cr, + Hex Chrom										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: D.MW-3s
Sample Location: MSA
Sampled By: DC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/14/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1435	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Low flow	clear							

PURGE DATA:

Date: 5/14/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Low flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD): —								
Static Water Level (WL): 10.10								
One Casing Volume(gal/L): —								
Start Purge (hrs): 1400								
End Purge (hrs): 1530								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 9L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40ml VOAs	
Dioxane	—	2-1L amber glass	
Perchlorate	—	1-250ml plastic	
Total PPM + Hg	HNO_3	1-500ml plastic	
Dissolved PPM + Hg	HNO_3	1-500ml plastic	
GRO + DRO	—	2-1L amber glass	
Haloacetic Acids		2-125ml amber glass	
RDX	-	2-1L Amber glass	
Hex Chrom.	—	1-125ml plastic	1520

OBSERVATIONS / NOTES:

Bladder Pump connections worn down + bad connection

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: DMW-35
DATE: 5/14/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
[redacted]	[redacted]									
1400	10.10	—	—	—	—	—	—	—	—	begin purge
1405	11.60	100	8.30	4.97	9.20	1.97	13.45	-48	3.19	
1410	12.55	100	8.51	4.48	7.56	1.82	13.39	-86	2.86	
1415	13.15	100	8.51	3.97	7.89	1.78	13.56	-108	2.50	
1420	13.80	100	8.48	3.72	7.08	1.75	13.59	-118	2.37	
1425	14.52	100	8.42	3.53	8.26	1.72	13.60	-120	2.26	
1430	14.95	100	8.43	3.43	9.42	1.72	13.76	-128	2.20	
1435	—	—	—	—	—	—	—	—	—	sample.

SIGNATURE(S): Dustin Cote

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW4S-050312
Sample Location: DMW4S
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/3/12								ORP
Time: 1202								
Method: Low Flow	Clear	4.83	1.81	15.63	37.5	1.81	0.9	243

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/3/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): 25.27								
Static Water Level (WL): 19.76								
One Casing Volume(gal/L):								
Start Purge (hrs): 1123								
End Purge (hrs): 1232								
Total Purge Time (min): 69								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass viles	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250 mL plastic bottle	
Total PPM + Hg	HNO_3	1-500 mL plastic bottle	
Dissolved PPM+Hg	HNO_3	1-500 mL plastic bottle	
TPH-GRO	HCl	2-40 mL glass viles	
TPH-DRO	—	2-1L amber glass bottles	
Hex. Chrom.	—	1-125 mL plastic bottle	1223

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-DMW4S-050312
DATE: 5/3/12

		±0.1	±3%	±10	±10%	±3%	±10%		
Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1123	19.76	—	—	—	—	—	—	—	—	Begin Purge
1127	19.81	100	5.29	1.99	60.0	8.11	12.98	279	1.0	
1132	19.81	100	4.97	1.96	70.3	3.50	13.09	267	1.0	
1137	19.82	100	4.82	1.94	77.3	2.36	13.50	262	1.0	
1142	19.81	100	4.78	1.92	69.1	2.06	13.95	258	1.0	
1147	19.82	100	4.78	1.90	58.6	1.96	14.52	254	1.0	
1152	19.82	100	4.78	1.86	52.4	1.94	14.99	250	1.0	
1157	19.82	100	4.81	1.82	42.5	1.91	15.38	246	0.9	
1202	19.82	100	4.83	1.81	37.5	1.81	15.63	243	0.9	Sample
		—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): Dawn L Mucker

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04022

Sample ID No.: MSA-DMW55-050412
Sample Location: DMW55
Sampled By: SBC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/4/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1035	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	4.16	1.57	14.31	7.05	1.06	226	6.8

PURGE DATA:

Date: 5/4/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 20.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1110								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
GRO + DRO	HCl/None	2-40mL vials / 2-1L Ambers	✓
Haloacetic Acids	NH_4Cl	2-250 mL Ambers	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom Collected On @

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112TC04021
WELL ID.: MSA-DMW/5S-050412
DATE: 5/4/12

Time (hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1000	20.40	—	—	—	—	—	—	—	—	
1005	20.68	300	5.65	1.55	44.6	4.75	15.69	222	0.8	
1010	21.18	250	5.44	1.53	39.4	2.52	15.06	197	0.8	
1015	21.31	200	4.73	1.55	15.7	1.38	14.40	203	0.8	
1020	21.33	200	4.56	1.56	12.1	1.21	14.36	211	0.8	
1025	21.36	200	4.34	1.56	8.69	1.09	14.28	219	0.8	
1030	21.34	200	4.23	1.57	7.83	1.08	14.30	221	0.8	
1035	21.32	200	4.16	1.57	7.06	1.06	14.31	226	0.8	
Sampling VOCs, Total + Dissolved Metals, Perchlorate, 1,4-Dioxane, DRO + GRO, Halogenated Acids, + Hex Chrom										

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW6S-050312
Sample Location: DMW6S
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/3/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 0940	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	6.18	1.45	13.38	8.63	0.87	-55	0.7

PURGE DATA:

Date: 5/3/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 7.78								
One Casing Volume(gal/L):								
Start Purge (hrs): 0845								
End Purge (hrs): ~~1035~~ 1035								
Total Purge Time (min): 140								
Total Vol. Purged (gal/L): 3 Gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250mL plastic	✓
TPH-GRO+DRO	HCl/None	2-40mL vials / 2-1L Ambers	✓
Radium 224, 226, +228	HNO_3	1-1L plastics	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex chrom collected @ 1330

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-DMW6S-050312
DATE: 5/3/12

Time (hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0845	17.78	—	—	—	—	—	—	—	—	
0850	17.86	300	5.95	1.28	71000	4.42	14.55	157	0.6	
0855	17.80	250	6.04	1.37	964	2.32	14.09	39	0.7	
0900	17.80	250	6.08	1.38	909	2.05	13.88	-6	0.7	
0905	17.80	250	6.12	1.41	620	1.64	13.60	-28	0.7	
0910	17.80	250	6.13	1.42	126	1.43	13.51	-31	0.7	
0915	17.80	250	6.15	1.43	60.7	1.26	13.40	-40	0.7	
0920	17.80	250	6.16	1.44	40.6	1.09	13.37	-45	0.7	
0925	17.80	250	6.17	1.45	30.2	1.01	13.39	-47	0.7	
0930	17.80	250	6.17	1.45	27.4	0.96	13.43	-50	0.7	
0935	17.80	250	6.18	1.45	16.4	0.89	13.40	-53	0.7	
0940	17.80	250	6.18	1.45	8.63	0.87	13.38	-55	0.7	
Sampling VOCs, Total & Dissolved Metals, 1,4-Dioxane, Perchlorate, GRO+DRO, Radium 224, 226+228, & Hexavalent Chromium.										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04001

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW75-050312
Sample Location: DMW75
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/3/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: ~~Bladder Pump~~ 1415	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	5.49	2.21	14.49	5.93	0.66	112	1.1

PURGE DATA:

Date: 5/3/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): -								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 20.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 1340								
End Purge (hrs): 1440								
Total Purge Time (min): 10								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO3	1-500 mL plastic	✓
Dissolved Metals	HNO3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
~~Radium 224, 226, 228~~	~~HNO3~~	~~3-1L Ambers~~	~~RAL~~
Hexavalent Chromium	—	1-250 mL plastic	✓
DRO + GRO	HCl/None	2-40mL vials / 2-1L Ambers	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1440

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-DMW7S-050312
DATE: 5/3/12

Time (hrs)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1340	20.40	—	—	—	—	—	—	—	—	
1345	20.62	250	5.50	2.14	24.5	3.17	15.67	204	1.1	
1350	20.60	250	5.61	2.11	21.6	1.59	15.08	179	1.1	
1355	20.60	250	5.57	2.15	13.6	1.16	14.73	139	1.1	
1400	20.60	250	5.52	2.18	9.40	0.87	14.56	124	1.1	
1405	20.60	250	5.50	2.19	8.64	0.74	14.53	119	1.1	
1410	20.60	250	5.50	2.20	6.22	0.68	14.41	114	1.1	
1415	20.60	250	5.49	2.21	5.93	0.66	14.49	112	1.1	
Sampling VOC, Total & Dissolved Metals, Perchlorate, 1,4-Dioxane, Rad 224, 226, 228, & Hex Chrom										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112ICO402-1

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW8S-250212
Sample Location: DMW8S
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/2/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1050	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	5.16	1.38	14.50	7.13	1.22	153	0.7

PURGE DATA:

Date: 5/2/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD): —								
Static Water Level (WL): 14.26								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1135								
Total Purge Time (min): 95								
Total Vol. Purged (gal/L): 4 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Amber	✓
Perchlorate	—	1-250 mL plastic	✓
DRO + GRO	HCl/None	2-40 mL vials/2-1L Amber	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1420

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-DMW8S-050212
DATE: 5/2/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1000	14.26	—	—	—	—	—	—	—	—	
1005	14.58	200	5.12	1.31	100.2	6.82	18.18	253	0.7	
1010	14.58	150	5.38	1.27	71.7	5.66	18.06	245	0.6	
1015	14.66	200	5.34	1.29	79.7	5.01	17.13	256	0.6	
1020	14.87	200	5.19	1.33	148	2.89	16.52	236	0.7	
1025	15.11	250	5.18	1.31	68.2	2.53	15.81	220	0.6	
1030	15.32	250	5.17	1.29	27.1	2.04	15.26	195	0.6	
1035	15.30	200	5.15	1.32	15.8	1.67	15.01	182	0.7	
1040	15.30	200	5.13	1.35	10.10	1.26	14.73	171	0.7	
1045	15.30	200	5.14	1.37	9.86	1.23	14.61	164	0.7	
1050	15.30	200	5.14	1.38	7.13	1.22	14.50	153	0.7	
Sampling VOCs, Total & Dissolved Metals, Perchlorate, 1,4-Dioxane, GRO + DRO, & Hex Chrom										

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW9s-050912
Sample Location: DMW 9s
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5-9-12								
Time: 1509								
Method: Bladder pump	Clean	6.12	1.58	13.75	0.0	2.36	0.8	30

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-9-12								
Method: Bladder pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 9.10			Data	sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1418								
End Purge (hrs): 1504								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 ~ 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
RDX	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Diss Gasses	HCl	3 - 40 ml VOA	✓
Ammonia	H2SO4	1 - 500 ml Poly	✓
DOC	H2SO4	2 - 40 ml VOA	✓

OBSERVATIONS / NOTES:

Perchlorate	—	1 - 250 ml Poly	✓
Hex chrom	—	1 - 250 ml Poly	✓
Alk, TDS, Anions	—	1 - 1L Poly	✓

Ferrous & Total Iron 10 ppm (mg/L) 1509

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: DMW 95-050912
DATE: 5-9-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1418	9.10	—	—	—	—	—	—	—	—	Initial pump action
1419	9.20	300	5.77	1.50	33.8	6.43	15.55	149	0.8	Slightly cloudy
1424	9.15	300	6.03	1.58	1.5	2.61	14.02	68	0.8	Clear water
1429	9.15	300	6.06	1.58	0.6	2.73	13.98	62	0.8	
1434	9.15	300	6.10	1.60	0.0	2.51	13.72	40	0.8	
1439	9.15	300	6.13	1.58	0.0	2.45	13.85	32	0.8	
1444	9.15	300	6.12	1.58	0.0	2.36	13.73	31	0.8	
1449	9.15	300	6.13	1.57	0.0	2.44	13.79	29	0.8	
1454	9.15	300	6.12	1.58	0.0	2.36	13.75	30	0.8	
1459	9.15	300	6.12	1.58	0.0	2.36	13.75	30	0.8	
1504	9.15	300	6.12	1.58	0.0	2.36	13.75	30	0.8	

Well Parameters Stabilized
Sampling Begins

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112FC04021-02

Sample ID No.: DMW10S-050112
Sample Location: DMW10S
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
- [ ] Low Concentration
- [ ] High Concentration

- [ ] Domestic Well Data
- [x] Monitoring Well Data
- [ ] Other Well Type:
- [ ] QA Sample Type:

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 5-10-12								
Time: 1104								
Method: Bladder pump	Slightly	6.45	2.03	12.21	20.1	1.53	1.0	-13

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-10-12								
Method: Bladder pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 7.65			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1012								
End Purge (hrs): 1059								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 – 40 ml VOA	✓
Total PPM	HNO3	1 – 500 ml Poly	✓
Diss PPM	HNO3	1 – 500 ml Poly	✓
1,4 Dioxane	—	2 – 1L Ambers	✓
DRO	—	2 – 1L Ambers	✓
GRO	HCl	2 – 40 ml VOA	✓
Perchlorate	—	1 – 250 ml Poly	✓
Hex		1 – 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.: —

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02
WELL ID.: DMW10s - 051012
DATE: 5-10-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1012	7.65	—	—	—	—	—	—	—	—	Initial purge color
1014	7.70	300	5.96	1.76	55.3	6.44	14.07	205	0.9	Slightly cloudy
1019	7.70	250	6.16	1.92	19.6	3.12	13.27	83	1.0	
1024	7.70	250	6.28	1.98	22.8	2.04	12.84	35	1.0	
1034	7.70	250	6.34	2.01	31.5	1.66	12.71	14	1.0	
1044	7.70	250	6.41	2.02	24.1	1.61	12.48	-3	1.0	
1049	7.70	250	6.43	2.03	19.0	1.57	12.31	-8	1.0	
1054	7.70	250	6.44	2.03	20.0	1.53	12.23	-11	1.0	
1059	7.70	250	6.45	2.03	20.1	1.53	12.21	-13	1.0	
			Well parameters stabilize							
			Sampling Begins							

SIGNATURE(S): Walt R

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112FC04521-02

Sample ID No.: DMW 11S-05112
Sample Location: DMW 11S
Sampled By: MH P
C.O.C. No.:

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 5-11-12								
Time: 1102								
Method: Bladder pump	clear	5.66	0.637	16.31	4.73	1.64	03	81

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-11-12								
Method: Bladder pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 4.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1011								
End Purge (hrs): 1057								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 — 40 ml VOA	✓
Total PPM	HNO3	1 — 500 ml Poly	✓
Diss PPM	HNO3	1 — 500 ml Poly	✓
1,4 Dioxane	—	2 — 1L Ambers	✓
DRO	—	2 — 1L Ambers	✓
GRO	HCl	2 — 40 ml VOA	✓
Perchlorate	—	1 — 250 ml Poly	✓
Hex Chrom	—	1 — 250 ml Poly	✓
Diss Gasses	HCl	2 — 40 ml VOA	✓
Ammonia	H2SO4	1 — 500 ml Poly	✓
Alk, TDS, Anions	—	1 — 1L Poly	✓
DOC	H2SO4	3 — 40 ml VOA	✓
6 metals	—	1 — 500 ml Poly	✓

OBSERVATIONS / NOTES:

Ferrous & Total Iron 10 ppm

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112BC04021-02

WELL ID.: PMW115-051112
DATE: 5-11-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1011 ~~0957~~	4.65	—	—	—	—	—	—	—	—	Initial, No odor
1012	4.95	300	6.15	0.683	29.6	6.46	18.65	239	0.3	Slightly Cloudy
1017	5.25	300	5.52	0.596	34.1	1.87	16.97	142	0.3	↓
1022	5.35	300	5.53	0.624	40.0	2.27	16.66	113	0.3	↓
1032	5.30	200	5.58	0.643	39.0	1.84	16.17	98	0.3	↓
1042	5.30	200	5.64	0.632	28.1	1.67	16.13	87	0.3	↓
1047	5.30	200	5.65	0.634	4.50	1.64	16.18	85	0.3	Clear Water
1052	5.30	200	5.65	0.636	4.65	1.61	16.25	83	0.3	↓
1057	5.30	200	5.66	0.637	4.73	1.64	16.31	81	0.3	↓
			Well	parameters		Stabilize				
				Sampling		Begins				

SIGNATURE(S): Matt Ryan

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW15S-041912
Sample Location: MW15S
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-18-12								
Time: 1140								
Method: Peristaltic pump	clear	4.15	0.462	11.66	0.0	1.30	0.2	287

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-18-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 6.25			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1013								
End Purge (hrs): 1135								
Total Purge Time (min): 80								
Total Vol. Purged (Gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (EPA 8260B)	HCl	3 - 40 ml VOA	✓
1,4 Dioxane (EPA 8270c Sim)	—	2 - 1L Ambers	✓
Perchlorate (EPA 314)	—	1 - 250 ml Poly	✓
Total PPM (EPA 6020B)	HNO3	1 - 500 ml Poly	✓
Diss PPM (EPA 6020B)	HNO3	1 - 500 ml Poly	✓
GRO and BTEX (EPA 8015B)	—	2 - 40 ml VOA	✓
DRO	—	2 - 1L Ambers	✓
Hex Chrom		1 - See 252 ml Poly	✓

OBSERVATIONS / NOTES:

Hex Chrom 1230

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Walter P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-03

WELL ID.: MSA-MW15s-041812
DATE: 4-18-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1013	6.25	—	—	—	—	—	—	—	—	Initial no odor
1015	6.65	300	4.08	0.529	3.6	2.47	15.37	254	0.3	Clean Water
1020	7.30	100	4.15	0.485	0.0	1.43	14.94	287	0.2	
1025	7.68	100	4.17	0.461	0.0	1.75	14.16	284	0.2	
1035	8.30	100	4.17	0.458	0.0	1.41	12.88	283	0.2	
1045	8.80	100	4.16	0.456	0.0	1.35	12.49	285	0.2	
1055	9.25	100	4.16	0.459	0.0	1.29	12.14	285	0.2	
1105	9.70	100	4.15	0.460	0.0	1.24	11.96	285	0.2	
1115	10.07	100	4.16	0.463	0.0	1.26	11.77	287	0.2	
1125	10.40	100	4.15	0.464	0.0	1.26	11.70	287	0.2	
1130	10.45	100	4.15	0.463	0.0	1.24	11.72	287	0.2	
1135	10.50	100	4.15	0.462	0.0	1.30	11.68	287	0.2	

SIGNATURE(S): Walter E Pa

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: MSA-MW165-050912
Sample Location: MW165
Sampled By: SAC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/9/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1055	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Peri Pump	Cloudy White	6.22	2.19	13.14	27.9	0.82	-14	1.1

PURGE DATA:

Date: 5/9/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD): 22.28		Purge Data Sheet						
Static Water Level (WL): 5.50								
One Casing Volume(gal/L):								
Start Purge (hrs): 1000								
End Purge (hrs): 1135								
Total Purge Time (min): 95								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL Plastic	✓
Radium 224, 226, & 228	HNO_3	2-1L Ambers	✓
RDX	—	2-1L Ambers	✓
Hexavalent Chromium	—	1-250 mL plastic	
GRO & DRO	HCl/None	2-40 mL vials / 2-1L Ambers	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1320

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW16S-050912
DATE: 5/9/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1000	5.50	—	—	—	—	—	—	—	—	
1005	5.55	250	6.01	2.36	>1000	2.26	15.27	210	1.2	
1010	5.56	250	6.17	2.28	948	1.13	14.36	52	1.2	
1015	5.58	250	6.17	2.25	>1000	1.08	13.89	31	1.1	
1020	5.61	250	6.18	2.20	753	1.03	13.78	18	1.1	
1025	5.55	250	6.18	2.19	>1000	1.01	13.64	9	1.1	
1030	5.55	250	6.19	2.19	>1000	0.99	13.43	−1	1.1	
1035	5.55	250	6.20	2.20	564	0.99	13.45	−3	1.1	
1040	5.55	250	6.22	2.24	22.5	0.99	13.47	−5	1.1	
1045	5.55	250	6.22	2.20	28.6	0.86	13.31	−10	1.1	
1050	5.55	250	6.22	2.20	33.4	0.84	13.21	−12	1.1	
1055	5.55	250	6.22	2.19	27.9	0.82	13.14	−14	1.1	
Sampling	VOCs, Total & Dissolved	metals, 1,4-D	Nitrate, perch	lorate, DRO+	GRO, RDX,	Rad 224,	226, 228, &	Hex Chrom.		

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW17S-042012
Sample Location: MW17S
Sampled By: SBL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/20/12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1200								
Method: Peri Pump	Clear	6.88	0.814	16.89	9.64	0.80	04	-14

PURGE DATA:

Date: 4/20/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 19.79								
Stalic Water Level (WL): 6.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 1100								
End Purge (hrs): 1240								
Total Purge Time (min): 100								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + ORO	HCl/None	2-40mL vials / 2-1L Ambers	✓ ✓
RDX	—	2-1L Ambers	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom collected @ on

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-MW17S-042012
DATE: 4/20/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1100	6.40	~	~	~	—	—	~	—	—	
1105	6.72	250	6.50	0.619	82.2	2.54	18.17	55	0.3	
1110	7.52	250	6.80	0.622	54.3	1.52	15.48	-40	0.3	
1115	7.71	200	6.84	0.605	28.8	1.16	15.96	-54	0.3	
1120	7.93	200	6.86	0.594	18.3	0.97	16.69	-69	0.3	
1125	8.04	200	6.88	0.654	17.5	1.11	15.21	-82	0.3	
1130	8.13	200	6.89	0.656	17.1	0.98	15.15	-90	0.3	
1135	8.24	200	6.88	0.698	16.9	0.97	15.68	-91	0.3	
1140	8.35	200	6.88	0.720	16.4	0.96	15.81	-91	0.4	
1145	8.36	200	6.88	0.731	14.2	0.90	16.54	-92	0.4	
1150	8.30	200	6.88	0.743	13.4	0.85	17.13	-96	0.4	
1155	8.36	200	6.88	0.789	11.2	0.82	16.12	-55	0.4	
1200	8.36	200	6.88	0.814	9.64	0.80	16.89	-14	0.4	
Sampling Wells, Total + Dissolved Metals, 1,4-Dioxane, DRO+GRO, RDX, + Hexavalent Chromium										

SIGNATURE(S): A L

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW18S-051012
Sample Location: MW18S
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/10/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1045	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Per. Pump	Clear	6.33	5.49	13.20	6.13	7.37	-46	2.9

PURGE DATA:

Date: 5/10/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Per. Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 25.61								
Static Water Level (WL): 7.77								
One Casing Volume(gal/L):								
Start Purge (hrs): 0935								
End Purge (hrs): 1200								
Total Purge Time (min): 145								
Total Vol. Purged (gal/L): 5gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals + 6 Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl/None	2-40 mL vials / 2-1L Ambers	✓
RDX	—	2-1L Ambers	✓
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-500 mL plastic	✓
Alk, TDS, Anions	—	1-1L plastic	✓
DOC	H_2SO_4	2-40mL vials	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1200

Ferrous Iron >10 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112TC04021

WELL ID.: MSA-MW18S-051012
DATE: 5/10/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0935	7.77	—	—	—	—	—	—	—	—	
0940	8.58	300	6.32	1.72	27.5	5.96	15.06	202	0.9	
0945	9.54	200	6.66	1.94	25.6	5.61	13.82	73	1.0	
0950	10.24	200	6.66	3.16	23.0	4.54	13.23	24	1.7	
0955	10.43	200	6.53	4.21	23.5	3.81	13.12	12	2.3	
1000	10.64	200	6.42	5.26	22.6	2.36	13.09	2	2.8	
1005	10.69	150	6.41	5.33	22.4	2.11	13.16	-12	2.9	
1010	10.73	150	6.40	5.48	23.1	2.89	13.48	-19	2.9	
1015	10.85	150	6.40	5.68	22.5	3.19	13.60	-36	3.0	
1020	10.95	150	6.34	6.59	16.4	1.19	13.47	-27	3.6	
1025	11.06	150	6.32	6.59	20.9	1.10	13.20	-36	3.6	
1030	11.18	150	6.36	5.01	18.2	1.63	13.15	-40	3.5	
1035	11.38	150	6.37	5.52	12.8	2.10	13.11	-45	3.0	
1040	11.62	150	6.35	5.50	8.24	2.21	13.15	-46	2.9	
1045	11.85	150	6.33	5.49	6.13	2.37	13.20	-46	2.9	

Sampling for VOCs, total + Dissolved metals, 1,4-Dioxane, Perchlorate, GRO + DRO, Nat Atten parameters, + Hex chrom.

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Minden State Airport
Project No.: 112EC04021-02

Sample ID No.: MSA-MW20S-042012
Sample Location: MW20S
Sampled By: Matt P.
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-20-12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1020	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	clear	5.58	1.94	14.21	10.3	1.07	1.0	65

PURGE DATA:

Date: 4-20-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 10.35								
One Casing Volume(gal/L):								
Start Purge (hrs): 0913								
End Purge (hrs): 1015								
Total Purge Time (min): 62								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total ppm	HNO3	1 - 500 ml Poly	✓
Diss ppm	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
Perchlorate	—	1 - 250 ml Poly	✓
RDX	—	2 - 1L Ambers	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

Matt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Manteno State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MSA-MW20S-042012
DATE: 4-20-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0913	10.35	—	—	—	—	—	—	—	—	Initial pump odor
0915	10.50	300	5.81	1.77	800	2.71	18.54	90	0.9	Cloudy water
0920	10.50	200	5.41	1.83	695	1.44	17.09	95	0.9	
0925	10.50	200	5.46	1.85	440	1.26	16.17	89	0.9	
0935	10.50	200	5.50	1.92	217	1.28	14.89	80	1.0	
0945	10.50	200	5.56	1.92	103	1.15	14.92	74	1.0	
0955	10.50	200	5.58	1.93	11.3	1.08	14.40	70	1.0	
1005	10.50	200	5.56	1.94	10.2	1.07	14.20	68	1.0	Clean water
1010	10.50	200	5.57	1.94	10.1	1.04	14.23	67	1.0	
1015	10.50	200	5.58	1.94	10.3	1.07	14.21	65	1.0	
	←	Well		Parameters		Stabilize		→		
	←			Sampling		Begins		→		

SIGNATURE(S): Wade

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: MSA-MW235-051112
Sample Location: MW235
Sampled By: SBC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/11/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1030	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Peri Pump	Clear	6.74	1.29	15.81	912	0.73	-72	0.6

PURGE DATA:

Date: 5/11/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 26.84								
Static Water Level (WL): 7.67								
One Casing Volume(gal/L):								
Start Purge (hrs): 0945								
End Purge (hrs): 1100								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl/None	2-40mL vials / 2-1L Ambers	✓
Hexavalent Chromium	—	1-250mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom collected on @

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW23S-05111r
DATE: 5/11/12

Time (hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0945	7.67	—	—	—	—	—	—	—	—	
0950	7.71	200	5.95	1.16	26.5	3.15	19.59	214	0.6	
0955	7.71	200	6.43	1.20	25.9	1.21	18.92	93	0.6	
1000	7.71	200	6.63	1.23	27.6	0.79	17.92	-7	0.6	
1005	7.71	200	6.68	1.24	26.3	0.75	17.09	-21	0.6	
1010	7.71	200	6.71	1.26	25.9	0.70	16.88	-44	0.6	
1015	7.71	200	6.73	1.27	22.8	0.75	16.50	-51	0.6	
1020	7.71	200	6.76	1.28	20.0	0.74	16.07	-63	0.6	
1025	7.71	200	6.77	1.29	14.2	0.77	15.88	-69	0.6	
1030	7.71	200	6.74	1.29	9.12	0.73	15.81	-72	0.6	
Sampling VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, CrVI + DRO, & Hex chrom.										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112C04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW24S-050712
Sample Location: MW24S
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/7/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1300	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Peri Pump	Clear	3.92	270	14.13	5.69	1.21	248	14

PURGE DATA:

Date: 5/7/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 24.95								
Static Water Level (WL): 4.35								
One Casing Volume(gal/L):								
Start Purge (hrs): 1225								
End Purge (hrs): 1330								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2.4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
TPH GRO + DRO	HCl/None	2-40mL vials / 2-1L Ambers	✓
Hexavalent Chromium	—	1-250mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1320

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-MW24S-050712
DATE: 5/7/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1225	~~4.79~~ 4.35	—	—	—	—	—	—	—	—	
1230	4.80	200	3.52	2.63	155	4.27	15.57	307	1.4	
1235	4.94	200	3.86	2.69	34.7	1.57	14.41	283	1.4	
1240	4.96	200	3.87	2.68	25.3	1.23	14.28	271	1.4	
1245	4.97	200	3.90	2.68	20.7	1.09	14.17	260	1.4	
1250	5.00	200	3.91	2.69	16.0	0.99	14.15	252	1.4	
1255	5.01	200	3.92	2.70	11.8	1.13	14.14	249	1.4	
1300	5.01	200	3.92	2.70	9.69	1.21	14.13	248	1.4	
Sampling	VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, GRO, DRO, & Hex Chrom									

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112TC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW25S-050812
Sample Location: MW25S
Sampled By: Walt P.
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-8-12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1037								
Method: Peristaltic pump	Clean	5.98	0.332	14.42	8.7	1.14	0.2	116

PURGE DATA:

Date: 5-8-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 5.96								
One Casing Volume(gal/L):								
Start Purge (hrs): 0946								
End Purge (hrs): 1032								
Total Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.5								

See low flow purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—	—	Walt P.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Mantin State Airport
PROJECT NUMBER: 112FC04021.02

WELL ID.: MSA-MW25S-050812
DATE: 5-8-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0946	5.90	—	—	—	—	—	—	—	—	Initial, no odor
0947	6.60	300	5.47	0.404	47.6	3.84	16.14	237	0.2	Slightly cloudy
0952	7.10	300	5.72	0.349	184	1.72	15.14	187	0.2	Cloudy water
0957	6.85	180	5.75	0.321	79.4	1.57	15.04	168	0.2	↓
1002	6.80	180	5.80	0.312	35.4	1.29	14.91	152	0.2	
1007	6.80	180	5.88	0.322	9.5	1.21	14.52	135	0.2	Clean water
1012	6.80	180	5.91	0.330	8.7	1.19	14.41	126	0.2	↓
1017	6.80	180	5.94	0.331	8.5	1.17	14.42	120	0.2	
1022	6.80	180	5.98	0.332	8.7	1.14	14.42	116	0.2	
			Pull Parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Walt B

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IW04071

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW26S-050112
Sample Location: MW26S
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/1/12	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Time: 1445	Clear	6.69	2.73	19.87	7.34	0.64	-110	1.4
Method: Peri Pump								

PURGE DATA:

Date: 5/1/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material: 2" PVC								
Total Well Depth (TD): 20.83								
Static Water Level (WL): 9.08								
One Casing Volume(gal/L):								
Start Purge (hrs): 1415								
End Purge (hrs): 1520								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Amber	✓
TPH-GRO & DRO	HCl / None	2-40mL vials / 2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex chrom collected @ 1515

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 162IC04021
WELL ID.: MSA-MW26S-050112
DATE: 5/1/12

Time (military)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1415	9.08	—	—	—	—	—	—	—	—	
1420	9.65	250	6.48	2.53	19.2	1.89	22.28	17	1.3	
1425	9.90	250	6.68	2.57	9.27	0.83	21.72	-86	1.3	
1430	9.98	250	6.68	2.73	8.14	0.84	19.63	-94	1.4	
1435	10.05	250	6.68	2.85	6.47	0.86	17.46	-102	1.5	
1440	10.16	250	6.69	2.78	6.93	0.74	18.23	-108	1.4	
1445	10.24	250	6.69	2.73	7.34	0.64	19.87	-110	1.4	
Sampling VOCs, Total & Dissolved Metals, 1,4-Dioxane, GRO & DRO, Perchlorate, & Hex Chrom										

SIGNATURE(S):

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW32S-050912
Sample Location: MW32S
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/2/12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1318	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow	Clear	5.10	0.907	13.28	35.4	1.19	0.4	140

PURGE DATA:

Date: 5/2/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 34.93								
Static Water Level (WL): 6.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 1245								
End Purge (hrs): 1404								
Total Purge Time (min): 79								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass vials	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM + Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM + Hg	HNO_3	1-500mL plastic bottle	
TPH-GRO	HCl	2-40mL glass vials	
TPH-DRO	—	2-1L amber glass bottles	
Hex. Chrom.	—	1-125mL plastic bottle	1400

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-MW325-050912
DATE: 5/2/12

			±0.1	±3%	<10	±10%	±3%	±10%		
Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1245	6.93	–	–	–	–	–	–	–	–	Begin Purge
1248	6.94	120	5.57	0.609	42.2	7.18	13.33	148	0.3	
1253	6.94	120	5.50	0.660	42.2	3.19	13.24	146	0.3	
1258	6.94	120	5.17	0.866	44.3	1.72	13.26	143	0.4	
1303	6.94	120	5.13	0.885	45.4	1.58	13.29	145	0.4	
1308	6.94	120	5.11	0.897	51.5	1.37	13.28	144	0.4	
1313	6.94	120	5.10	0.903	46.9	1.26	13.24	141	0.4	
1318	6.94	120	5.10	0.907	35.4	1.19	13.28	140	0.4	Sample
1404	6.94	–	–	–	–	–	–	–	–	End Purge

SIGNATURE(S): Dawn L Mitchell

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW33S-050112
Sample Location: MW33S
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/1/12								ORP
Time: 0954								
Method: Low Flow	clear	5.74	0.180	14.42	18.2	1.52	0.1	121

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/1/12								
Method: Low Flow								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 45.0'								
Static Water Level (WL): 7.06								
One Casing Volume(gal/L):								
Start Purge (hrs): 0920								
End Purge (hrs): 1039								
Total Purge Time (min): 79								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass viles	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM + Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM + Hg	HNO_3	1-500mL plastic bottle	
TPH-GRO	HCl	2-40mL glass viles	
TPH-DRO	—	2-1L amber glass bottles	
Hex. Chrom.	—	1-125mL plastic bottle	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-MW33S-~~eeeee~~050112
DATE: 5/1/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
			±0.1	±3%	410	±10%	±3%	±10%		
0920	9.06	—	—	—	—	—	—	—	—	Begin Purge
0924	7.56	100	5.72	0.092	32.6	1.72	14.45	233	0.0	
0929	7.59	100	5.75	0.181	21.0	1.64	14.12	170	0.1	
0934	7.61	100	5.75	0.177	18.9	1.67	13.94	140	0.1	
0939	7.62	100	5.76	0.178	18.7	1.59	14.00	128	0.1	
0944	7.63	100	5.76	0.179	18.6	1.57	14.10	126	0.1	
0949	7.64	100	5.76	0.179	18.6	1.57	14.48	124	0.1	
0954	7.65	100	5.74	0.180	18.2	1.52	14.42	121	0.1	Sample
1039	7.75	—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): Dawn L Martucci

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: MSA-MW34S-041911
Sample Location: MW34S
Sampled By: SBC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/19/12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1005	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	5.20	0.137	13.77	4.59	1.18	0.11	181

PURGE DATA:

Date: 4/19/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 36.63								
Static Water Level (WL): 4.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 0925								
End Purge (hrs): 1035								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl/None	2-40 mL vials / 2-1L Ambers	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex chrom collected @ 1205

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-MW34S-04/8/12
DATE: 4/19/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0925	4.95	—	—	—	—	—	—	—	—	
0930	5.34	250	5.26	0.167	4.64	1.96	15.81	241	0.1	
0935	5.37	200	5.26	0.159	3.70	1.57	15.59	234	0.1	
0940	5.33	200	5.25	0.150	3.26	1.32	14.56	216	0.1	
0945	5.33	200	5.23	0.143	4.49	1.12	14.12	201	0.1	
0950	5.33	200	5.21	0.141	4.86	1.15	14.51	196	0.1	
0955	5.33	200	5.20	0.140	5.05	1.18	13.89	190	0.1	
1000	5.33	200	5.20	0.139	4.36	1.18	13.81	188	0.1	
1005	5.33	200	5.20	0.137	4.89	1.18	13.77	183	0.1	
Sampling	VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, GRO+DRO, + Hex Chrom									

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW35S-041012
Sample Location: MW35S
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/20/12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 0955								
Method: Peri Pump	Clear	4.58	0.194	16.31	2.68	1.03	0.1	165

PURGE DATA:

Date: 4/20/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 34.31								
Static Water Level (WL): 9.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 0915								
End Purge (hrs): 1030								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
Total Metals	HNO_3	1-500mL plastic	✓
Dissolved Metals	HNO_3	1-500mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250mL plastic	✓
GRO + DRO	HCl/None	2-40mL vials / 2-1L Ambers	✓ ✓
Hexavalent Chromium	—	1-250mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom collected on at

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW35S-042012
DATE: 4/20/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0915	9.30	—	—	—	—	—	—	—	—	
0920	10.22	250	4.78	0.199	16.8	1.96	21.11	208	0.1	
0925	10.62	200	4.62	0.188	12.6	1.03	19.96	194	0.1	
0930	11.49	200	4.60	0.186	7.79	0.97	19.22	184	0.1	
0935	11.81	200	4.60	0.189	6.13	0.97	18.47	179	0.1	
0940	12.41	200	4.60	0.190	5.81	0.98	17.86	173	0.1	
0945	12.89	200	4.59	0.191	5.23	0.89	17.20	169	0.1	
0950	12.87	200	4.58	0.193	3.87	0.94	16.91	168	0.1	
0955	13.85	200	4.58	0.194	2.68	1.03	16.31	165	0.1	
Sampling	VOCs, Total & Dissolved metals, 1,4-Dioxane, Perchlorate, CrVI & DRO, & Hex chrom									

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW37S-050812
Sample Location: MW37S
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 5-8-12								
Time: 1445								
Method: Peristaltic pump	Clear	5.35	0.300	13.58	1.3	1.12	0.1	148

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-8-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See	low	flow	purge		
Static Water Level (WL): 7.00								
One Casing Volume(gal/L):			Data	sheet				
Start Purge (hrs): 1354								
End Purge (hrs): 1440								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 – 40 ml VOA	✓
Total PPM	HNO3	1 – 500 ml Poly	✓
Diss PPM	HNO3	1 – 500 ml Poly	✓
1,4 Dioxane	—	2 – 1L Ambers	✓
DRO	—	2 – 1L Ambers	✓
GRO	HCl	2 – 40 ml VOA	✓
Perchlorate	—	1 – 250 ml Poly	✓
Hex Chrom	—	1 – 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112EC04021-02
WELL ID.: MSA-MW37s-050812
DATE: 5-8-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1354	7.00	—	—	—	—	—	—	—	—	Initial, no odor
1353	7.05	300	5.77	0.284	1.1	3.47	17.04	192	0.1	Clear water
1400	7.05	200	5.36	0.295	0.0	1.71	15.32	203	0.1	
1405	7.05	200	5.34	0.299	0.0	1.47	14.73	200	0.1	
1415	7.05	200	5.31	0.301	0.0	1.13	14.16	195	0.1	
1425	7.05	200	5.33	0.301	0.0	1.15	14.01	191	0.1	
1430	7.05	200	5.34	0.301	1.2	1.19	14.00	189	0.1	
1435	7.05	200	5.35	0.300	1.3	1.16	13.97	188	0.1	
1440	7.05	200	5.35	0.300	1.3	1.12	13.98	188	0.1	
			Well parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Walt Pa

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-MW38S-041812
DATE: 4/18/12

Time (hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1050	7.38	—	—	—	—	—	—	—	—	
1055	7.49	250	5.91	0.279	30.9	2.40	18.08	134	0.1	
1100	7.50	200	5.80	0.276	32.1	1.86	16.82	126	0.1	
1105	7.50	200	5.82	0.245	33.4	1.32	15.59	105	0.1	
1110	7.50	200	5.90	0.243	33.7	1.26	14.99	86	0.1	
1115	7.50	200	5.95	0.246	33.6	1.21	14.78	74	0.1	
1120	7.50	200	5.99	0.249	34.2	1.18	14.64	62	0.1	
1125	7.50	200	6.04	0.254	29.4	1.26	14.28	51	0.1	
1130	7.50	200	6.07	0.258	21.0	1.48	13.99	42	0.1	
1135	7.50	200	6.09	0.259	19.8	1.50	13.91	38	0.1	
1140	7.50	200	6.13	0.263	18.2	1.16	13.84	31	0.1	
1145	7.50	200	6.16	0.266	15.7	1.05	13.70	24	0.1	
1150	7.50	200	6.18	0.269	14.3	1.02	13.66	19	0.1	
1155	7.50	200	6.20	0.272	13.0	1.00	13.63	15	0.1	
Sampling VOCs, Total Metals, Dissolved Metals, 1,4-Dioxane, Perchlorate, GRO+DRO & Hex Chrom.										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112C04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW38S-041812
Sample Location: MW38S
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/18/12								
Time: 1155								
Method: Peri Pump	Slightly Orange	6.20	0.272	13.63	13.0	1.00	0.1	15

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/18/12								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): –								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 21.23								
Static Water Level (WL): 7.38								
One Casing Volume(gal/L):								
Start Purge (hrs): 1050								
End Purge (hrs): 1240								
Total Purge Time (min): 65 min								
Total Vol. Purged (gal/L): 35 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl / None	2-40 mL vials / 2-1L Ambers	✓ ✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1330

Circle if Applicable:
MS/MSD | Duplicate ID No.:

Signature(s):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW395-041912
Sample Location: MW395
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/19/12	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Time: 1310								
Method: Peri Pump	Clear	6.06	0.675	16.31	12.4	0.84	0.3	21

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/19/12								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 29.60								
Static Water Level (WL): 11.36								
One Casing Volume(gal/L):								
Start Purge (hrs): 1220								
End Purge (hrs): 1335								
Total Purge Time (min): 75								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
Total Metals	HNO_3	1-500mL	✓
Dissolved Metals	HNO_3	1-500mL plastic	✓
1,4-Dioxane	—	2-1L Amber	✓
Perchlorate	—	1-250mL plastic	✓
GRO & DRO	HCl/None	2-40mL vials / 2-1L Ambers	✓✓
Hexavalent Chromium	—	1-250mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1340

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-MW39S-04912
DATE: 4/19/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1220	12.36	–	–	–	–	–	–	–	–	
1225	12.88	200	5.84	0.673	22.3	3.95	15.70	190	0.3	
1230	14.21	200	6.05	0.695	14.18	1.66	15.87	56	0.3	
1235	14.96	200	6.06	0.696	16.6	1.54	14.08	41	0.3	
1240	15.19	200	6.06	0.690	20.2	1.41	14.42	38	0.3	
1245	15.62	200	6.06	0.682	20.5	1.32	15.13	32	0.3	
1250	15.81	200	6.06	0.676	20.7	1.17	15.72	28	0.3	
1255	15.94	200	6.06	0.674	15.9	0.98	15.88	26	0.3	
1300	16.17	200	6.07	0.664	14.5	0.88	16.44	24	0.3	
1305	16.28	200	6.06	0.669	13.6	0.86	16.38	22	0.3	
1310	16.43	200	6.06	0.675	12.4	0.84	16.31	21	0.3	
Sampling For VOCs, Total Metals, Dissolved Metals, 1,4-Dioxane, Perchlorate, GRO + DRO, & Hex Chrom.										

SIGNATURE(S): AL

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

Sample ID No.: MT-MW01S-042512
Sample Location: MW01S
Sampled By: Walt B
C.O.C. No.:

[] Domestic Well Data
[] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Date: 4-25-12								
Time: 1335								
Method: Peristaltic pump	Clear	6.18	0.499	17.11	1.1	1.02	0.2	6

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-25-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 8.0								
Well Casing Diameter & Material Type: 2" PVC		See Low Flow Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 4.35								
One Casing Volume(gal/L):								
Start Purge (hrs): 1244								
End Purge (hrs): 1330								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total APM	HNO3	1 - 500 ml Poly	✓
Diss APM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112dc04021-62
WELL ID.: MT-MW01S-042512
DATE: 4-25-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1244	4.35	—	—	—	—	—	—	—	—	Initial, no odor
1245	5.00	300	6.03	0.499	23.0	3.33	16.43	154	0.2	Slightly cloudy
1250	5.95	100	6.26	0.463	6.7	1.71	16.52	52	0.2	Clean water
1255	6.70	100	6.31	0.455	3.1	1.55	16.75	29	0.2	
1305	8.05	100	6.33	0.499	1.6	1.22	17.15	9	0.2	
1315	8.50	100	6.26	0.450	0.5	1.17	17.01	7	0.2	
1320	8.70	100	6.22	0.499	1.0	1.04	17.13	6	0.2	
1325	8.75	100	6.19	0.499	1.0	1.02	17.26	7	0.2	
1330	8.80	100	6.18	0.499	1.1	1.02	17.11	6	0.2	
		Well Parameters Stabilized								
		Sampling Begins								

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MT-MW02S-042312
Sample Location: MW02S
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: / Time:	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Method: Peristaltic pump								

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-23-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See Low Flow Purge					
Static Water Level (WL): 9.45								
One Casing Volume(gal/L):			Data Sheet					
Start Purge (hrs): 1305								
End Purge (hrs): 1436								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	
Total PPM	HNO3	1 - 500 ml Poly	
Diss PPM	HNO3	1 - 500 ml Poly	
1,4 Dioxane	—	2 - 1L Ambers	
Perchlorate	—	1 - 250 ml Poly	
Hex Chrom	—	1 - 250 ml Poly	
GRO	HCl	2 - 40 ml VOA	
DRO	—	2 - 1L Ambers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s):

Walt P

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA GW Sampling
Project No.: 112IC04041

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MT-MW02S
Sample Location: MT-MW02S
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/30/12	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Time: 1305								
Method: Peri Pump								

PURGE DATA:

Date:	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method:								
Monitor Reading (ppm):								
Well Casing Diameter & Material								
Total Well Depth (TD): 17.75								
Static Water Level (WL): 14.79								
One Casing Volume(gal/L):								
Start Purge (hrs):								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	
Total Metals	HNO_3	1-500 mL plastic	
Dissolved Metals	HNO_3	1-500 mL plastic	
1,4-Dioxane	—	2-1L Ambers	
Perchlorate	—	1-250 mL plastic	
GRO + DRO	HCl/None	2-40mL Vials / 2-1L Ambers	
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1320

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MT-MW02S-042312
DATE: 4-23-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1305	9.45	—	—	—	—	—	—	—	—	Initial, no odor
1306	9.85	300	6.07	0.609	157	3.00	13.76	63	0.3	Cloudy water
1311	10.05	100	5.82	0.623	31.8	1.91	13.63	44	0.3	Slightly Cloudy
1316	10.35	100	5.76	0.626	14.5	1.67	13.61	37	0.3	
1326	11.03	100	5.72	0.639	14.1	1.29	13.37	25	0.3	
1336	12.10	100	5.71	0.641	13.3	1.26	13.41	14	0.3	
1346	12.75	100	5.78	0.648	12.7	1.21	13.17	8	0.3	
1356	13.40	100	5.82	0.653	13.4	1.18	13.35	1	0.3	
1406	14.01	100	5.85	0.669	13.5	1.14	13.11	-4	0.3	
1416	14.75	100	5.86	0.678	14.1	1.22	13.33	-9	0.3	
1426	15.30	100	5.76	0.690	15.1	1.27	13.33	-7	0.3	
1436	16.00	100	5.80	0.696	15.1	1.27	13.76	-13	0.3	↓

Well parameters did not stabilize 90 min max purge per Work Plan. Well dry for Recharge 90%.

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Marion State Airport
Project No.: 112FC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MAT-MW03-042312
Sample Location: MW03
Sampled By: Walt P.
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: / Time:	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Method: Peristaltic pump	Cloudy	6.21	0.152	14.85	3.05	1.40	0.1	11

PURGE DATA:

Date: 4-23-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): Top of Well			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1037								
End Purge (hrs): 1149								
Total Vol. Purged (gal/L) 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	
Total PPM	HNO3	1 - 500 ml Poly	
Diss PPM	HNO3	1 - 500 ml Poly	
1,4 Dioxane	—	2 - 1L Ambers	
Perchlorate	—	1 - 250 ml Poly	
Hex Chrom	—	1 - 250 ml Poly	
GRO	—	2 - 40 ml VOA	
DRO	—	2 - 1L Ambers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Walt P.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Manfield State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MTT-MW03-042312
DATE: 4-23-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1037	Top Of PR	—	—	—	—	—	—	—	—	Initial, pre-purge
1038	0.40	300	5.58	0.286	61.9	3.15	15.61	163	0.1	Slightly cloudy
1043	1.55	200	6.01	0.214	56.5	1.61	15.39	83	0.1	↓
1048	2.30	200	6.15	0.201	65.4	1.41	15.25	54	0.1	
1058	3.50	100	6.23	0.186	275	1.27	15.15	32	0.1	Cloudy water
1108	4.55	100	6.26	0.181	390	1.20	14.76	26	0.1	↓
1118	5.85	100	6.26	0.182	346	1.16	14.80	19	0.1	
1128	6.85	100	6.27	0.186	364	1.18	14.65	13	0.1	
1138	8.00	100	6.29	0.186	360	1.30	14.94	9	0.1	
1148	9.00	100	6.21	0.192	305	1.40	14.85	11	0.1	
1158										
1208				Dry						

Let Well Recharge 90 %

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Meeting State Airport
Project No.: 112G04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MT-MW04S-042412
Sample Location: MW04S
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-24-12								
Time: 1130								
Method: Peristaltic pump	Clean	4.48	0.134	14.15	2.9	2.28	0.1	260

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-24-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	Low	Flow	Purge			
Total Well Depth (TD):								
Static Water Level (WL): 5.81			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 0954								
End Purge (hrs): 1125								
Total Purge Time (min): ~~2.0~~	91							
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total ppm	HNO3	1 - 500 ml Poly	✓
Diss ppm	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s): Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112E-004021-02
WELL ID.: MT-MW04S-042412
DATE: 4-24-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0954	5.61	—	—	—	—	—	—	—	—	Initial, no action
0955	6.60	300	4.05	0.196	76.9	4.75	15.71	287	0.1	Cloudy water
1000	7.15	180	3.88	0.161	35.5	2.84	15.98	296	0.1	Slightly cloudy
1005	7.80	100	3.88	0.149	16.4	2.67	15.27	296	0.1	↓
1015	8.90	100	4.03	0.137	7.3	2.55	14.68	287	0.1	Clean water
1025	10.50	100	4.31	0.137	4.7	2.54	13.83	271	0.1	
1035	11.80	100	4.32	0.136	3.8	2.50	13.77	269	0.1	
1045	13.10	100	4.45	0.136	4.0	2.48	13.81	262	0.1	
1055	14.40	100	4.44	0.135	3.4	2.49	13.81	262	0.1	
1105	15.01	100	4.44	0.135	3.3	2.35	13.95	262	0.1	
1115	15.52	100	4.47	0.134	2.6	2.32	14.12	260	0.1	
1125	15.70	100	4.46	0.134	2.9	2.28	14.15	260	0.1	↓
		Well parameters did not stabilize								
		after 90 min max purge time with								
		Plan Samplings Begins								

SIGNATURE(S): Matt Fee

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112EC04021-62

Sample ID No.: MT-MW05S-042512
Sample Location: MW05S
Sampled By: Walt P
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-25-12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1051	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	4.00	0.587	13.04	2.0	1.00	0.3	345

PURGE DATA:

Date: 4-25-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	low	flow	purge			
Total Well Depth (TD):								
Static Water Level (WL): 4.15			Data	sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 0915								
End Purge (hrs): 1046								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 – 40 ml VOA	✓
Total PPM	HNO3	1 – 500 ml Poly	✓
Diss PPM	HNO3	1 – 500 ml Poly	✓
1,4 Dioxane	—	2 – 1L Ambers	✓
DRO	—	2 – 1L Ambers	✓
GRO	HCl	2 – 40 ml VOA	✓
Perchlorate	—	1 – 250 ml Poly	✓
Hex Chrom	—	1 – 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021.

WELL ID.: MT-MW05S-042512
DATE: 4-25-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0915	4.15	—	—	—	—	—	—	—	—	Initial, no odor
0916	4.90	300	4.00	0.662	15.7	3.16	14.33	328	0.3	Slightly Cloudy
0921	5.45	100	3.81	0.643	3.0	1.74	13.33	340	0.3	Clean Water
0926	6.00	100	3.85	0.623	3.2	1.46	12.92	340	0.3	
0936	7.45	100	3.87	0.601	6.7	1.18	12.75	343	0.3	
0946	8.53	100	3.86	0.593	2.6	1.15	12.76	344	0.3	
0956	9.70	100	3.91	0.593	3.1	1.05	12.77	344	0.3	
1006	10.85	100	3.94	0.589	2.4	1.07	12.81	344	0.3	
1016	11.90	100	3.95	0.589	2.4	1.06	12.91	345	0.3	
1026	12.90	100	3.97	0.587	1.9	1.02	12.97	345	0.3	
1036	14.20	100	3.99	0.587	1.9	1.00	13.05	345	0.3	
1046	15.20	100	4.00	0.587	2.0	1.00	13.04	345	0.3	

Well parameters did not stabilize after 90 min max purge pure work plan sampling begins

SIGNATURE(S): Walt Pe

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112Ca4021 - 02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MT-MW06s-042412
Sample Location: MW06S
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-24-12	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Time: 1457								
Method: Peristaltic pump	Clear	4.42	0.804	17.10	8.8	1.30	0.4	265

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-24-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):		See	low	flow	purge			
Static Water Level (WL): 1.50								
One Casing Volume(gal/L):			Data	Sheet				
Start Purge (hrs): 1331								
End Purge (hrs): 1452								
Total Purge Time (min): 81								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total Mn	HNO3	1 - 500 ml Poly	✓
Diss Mn	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021 02

WELL ID.: MT-MW065-042412
DATE: 4-24-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1331	1.50	—	—	—	—	—	—	—	—	
1332	2.05	300	4.82	0.744	61.1	3.05	20.09	251	0.4	Initial, no odor
1337	3.00	200	4.38	0.793	34.6	1.48	18.79	276	0.4	Slightly cloudy
1342	3.75	100	4.35	0.792	29.0	1.34	18.61	277	0.4	↓
1352	5.65	100	4.21	0.804	19.8	1.21	18.11	285	0.4	↓
1402	6.30	100	4.22	0.805	11.1	1.20	18.21	282	0.4	↓
1412	6.60	100	4.29	0.806	11.7	1.27	18.25	278	0.4	↓
1422	6.90	100	4.31	0.806	9.1	1.22	18.22	276	0.4	Clean water
1432	7.25	100	4.34	0.805	8.5	1.22	18.11	273	0.4	↓
1442	7.60	100	4.39	0.805	9.7	1.26	18.01	270	0.4	↓
1447	7.65	100	4.41	0.805	9.5	1.29	18.06	268	0.4	↓
1452	7.70	100	4.42	0.804	9.8	1.30	18.10	265	0.4	
			Well	Parameters		Stabilized				
				Sampling		Begins				

SIGNATURE(S): Matt B

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112FC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: GSP-mw1-042612
Sample Location: mw1
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-26-12								
Time: 1014								
Method: Peristaltic pump		6.19	1.54	13.25	10.2	1.20	0.9	6

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-26-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 5.60								
One Casing Volume(gal/L):								
Start Purge (hrs): 0923								
End Purge (hrs): 1009								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1325

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Manlius State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: GSP-MW1-042612
DATE: 4-26-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0923	5.60	—	—	—	—	—	—	—	—	Initial, no odor cloudy water
0924	5.85	300	5.94	1.37	118	1.83	16.63	155	0.7	
0929	6.25	200	6.25	1.50	108	1.33	15.14	52	0.7	
0934	6.40	100	6.26	1.52	88.4	1.27	14.63	36	0.8	
0944	6.85	100	6.26	1.55	70.5	1.28	13.67	18	0.8	
0954	7.25	100	6.23	1.55	28.7	1.27	13.18	11	0.8	
0959	7.30	100	6.20	1.56	10.1	1.27	13.06	10	0.8	Clean water
1004	7.35	100	6.20	1.55	9.98	1.22	13.20	8	0.8	
1009	7.40	100	6.19	1.54	10.2	1.20	13.25	6	0.8	
			pH	Parameters		Stab.				
				Sampling	Begins					

PAGE 2 OF 2

SIGNATURE(S): _____

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: GSP-MW2-042612
Sample Location: MW2
Sampled By: Walt P.
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-26-12 / Time: 1225 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	4.57	0.042	13.37	8.22	1.52	0.0	216

PURGE DATA:

Date: 4-26-12 / Method: Peristaltic pump	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See Low Flow Purge					
Static Water Level (WL): 6.80								
One Casing Volume(gal/L):			Data Sheet					
Start Purge (hrs): 1128								
End Purge (hrs): 1220								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total RCRA	HNO3	1 - 500 ml Poly	✓
Diss RCRA	HNO3	1 - 500 ml Poly	—
1,4 Dioxane	—	2 - 1L Ambers	—
BNO	~~HNO3~~ —	2 - 1L Ambers	—
GRO	HCl	2 - 40 ml VOA	—
Perchlorate	—	1 - 250 ml Poly	—
Hex Chrom	—	1 - 250 ml Poly	—
	—		

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt P.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Manlius State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: GSP-MW2-042612
DATE: 4-26-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1128	6.80	—	—	—	—	—	—	—	—	Initial purge
1130	7.40	300	5.84	0.075	127	3.02	13.61	102	0.0	cloudy water
1135	7.70	100	4.97	0.060	102	2.38	13.58	168	0.0	
1140	8.11	100	4.85	0.063	99.7	2.08	13.51	196	0.0	
1150	8.75	100	4.64	0.049	61.3	1.81	13.31	203	0.0	
1200	9.25	100	4.58	0.046	31.3	1.70	13.29	213	0.0	
1210	9.75	100	4.56	0.044	8.30	1.66	13.34	215	0.0	Clean water
1215	9.80	100	4.57	0.043	8.20	1.55	13.36	215	0.0	
1220	9.85	100	4.57	0.042	8.22	1.52	13.37	216	0.0	
			Well parameters stabilized							
			Sampling Begins							

SIGNATURE(S): Walt Re

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Manteo (Shallowbag) Bay
Project No.: 112G04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: GSP-MW3-042612
Sample Location: MW3
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-26-12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1440	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peristaltic pump	Clear	5.11	0.048	13.08	6.6	1.51	0.0	204

PURGE DATA:

Date: 4-26-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See low flow purge					
Static Water Level (WL): 3.41								
One Casing Volume(gal/L):			Data Sheet					
Start Purge (hrs): 1333								
End Purge (hrs): 1435								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
Dro	—	2 - 1L Ambers	✓
Gro	HCl	2 - 1L 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112G04021-07

WELL ID.: GSP-MW3-042612
DATE: 4-26-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1333	3.41	—	—	—	—	—	—	—	—	Initial, no odor
1335	3.95	300	5.39	0.059	105	4.34	13.52	223	0.0	Cloudy water
1340	4.18	200	4.95	0.058	42.9	2.13	13.62	234	0.0	↓
1345	4.32	200	4.99	0.055	23.3	1.67	13.36	228	0.0	↓
1355	4.50	100	5.00	0.052	15.6	1.65	13.28	219	0.0	↓
1405	4.89	100	5.06	0.052	11.2	1.63	13.25	213	0.0	↓
1415	5.00	100	5.09	0.050	8.7	1.60	13.22	208	0.0	Clear water
1425	5.10	100	5.10	0.048	6.6	1.55	13.19	205	0.0	↓
1430	5.10	100	5.11	0.048	6.5	1.53	13.20	204	0.0	↓
1435	5.10	100	5.11	0.048	6.6	1.51	13.08	204	0.0	↓
			PCM	Parameters		Stabilize				
				Sampling		Begins				

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Manton State Airport
Project No.: 112EC04021-02

Sample ID No.: GSP-MW4-042712
Sample Location: MW 4
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-27-12								
Time: 1353								
Method: Peristaltic pump	Clear	5.52	1.15	14.60	9.84	1.52	0.6	139

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-27-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See Low Flow Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 3.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 1301								
End Purge (hrs): 1348								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 – 40 ml VOA	✓
Total Mn	HNO3	1 – 500 ml Poly	✓
Diss Mn	HNO3	1 – 500 ml Poly	✓
1,4 Dioxane	—	2 – 1L Ambers	✓
DRO	—	2 – 1L Ambers	✓
GRO	HCl	2 – 40 ml VOA	✓
Perchlorate	—	1 – 250 ml Poly	✓
Hex Chrom	—	1 – 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: GSP-MW4-042712
DATE: 4-27-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1301	3.20	—	—	—	—	—	—	—	—	Initial, no odor
1303	3.60	300	5.53	1.04	367	6.21	16.60	231	0.5	Cloudy water
1308	3.60	200	5.46	1.09	157	1.87	16.36	202	0.5	↓
1313	3.60	200	5.48	1.12	80.9	1.60	15.72	180	0.6	↓
1323	3.60	200	5.50	1.14	30.0	1.57	15.00	160	0.6	↓
1333	3.60	200	5.52	1.14	13.1	1.55	14.75	149	0.6	↓
1338	3.60	200	5.52	1.15	9.80	1.54	14.63	142	0.6	clear water
1343	3.60	200	5.52	1.15	9.70	1.53	14.61	139	0.6	↓
1348	3.60	200	5.52	1.15	9.84	1.52	14.60	139	0.6	↓
			Well	parameters		stabilize				
				Sampling		Begins				

SIGNATURE(S): Volk

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA GW Sampling
Project No.: 112IC040[illegible]21

Sample ID No.: GSP-MW5-043012
Sample Location: GSP-MW5
Sampled By: SBC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/30/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1030	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Peri Pump	Clear	5.56	0.615	14.54	15.6	0.43	150	0.3

PURGE DATA:

Date: 4/30/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD): 39.38								
Static Water Level (WL): 4.91								
One Casing Volume(gal/L):								
Start Purge (hrs): 0955								
End Purge (hrs): 1105								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4 Dioxane	—	2-1L Amber	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl/None	2-40 mL vials / 2-1L Amber	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex chrom collected @ 1220

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

[signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport GW
PROJECT NUMBER: 112I020421
WELL ID.: GSP-MW5-043012
DATE: 4/30/12

Time (hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0955	4.91	—	—	—	—	—	—	—	—	
1000	5.20	250	5.76	0.677	9.95	1.78	18.03	208	0.3	
1005	5.25	200	5.67	0.655	14.6	1.20	15.94	200	0.3	
1010	5.25	200	5.65	0.631	14.8	1.12	15.50	185	0.3	
1015	5.25	200	5.63	0.615	14.7	1.06	15.02	169	0.3	
1020	5.25	200	5.62	0.615	15.3	1.00	14.88	162	0.3	
1025	5.25	200	5.58	0.615	15.5	0.98	14.69	157	0.3	
1030	5.25	200	5.56	0.615	15.6	0.93	14.54	160	0.3	
Sampling VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, GRO + DRO, + Hex Chrom.										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA GW Sampling
Project No.: 112IC04021

Sample ID No.: GSP-MW6-043012
Sample Location: GSP-MW6
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

Date: 4/30/12	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Time: 1145								
Method: Peri Pump	Clear	6.89	0.982	11.92	4.17	3.45	157	0.5

PURGE DATA:

Date: 4/30/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material: 2" PVC								
Total Well Depth (TD): 22.31								
Static Water Level (WL): 3.13								
One Casing Volume(gal/L):								
Start Purge (hrs): 1110								
End Purge (hrs): 1210								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 2.9 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO3	1-500 mL plastic	✓
Dissolved Metals	HNO3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
GRO + DRO	HCl/None	2-40mL vials / 2-1L Ambers	✓
Hexavalent Chromium	—	1-250mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1210

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA GW
PROJECT NUMBER: 112IC04021

WELL ID.: GSP-MW6-043012
DATE: 4/30/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1110	3.13	—	—	—	—	—	—	—	—	
1115	3.78	250	6.52	0.900	42.7	7.74	13.18	167	0.5	
1120	3.99	200	6.82	0.961	35.1	4.55	12.51	155	0.5	
1125	4.19	200	6.86	0.971	17.3	3.11	12.18	148	0.5	
1130	4.25	200	6.87	0.973	12.4	3.01	12.04	149	0.5	
1135	4.36	200	6.89	0.975	9.44	2.95	11.95	150	0.5	
1140	4.37	200	6.89	0.979	8.40	3.16	11.93	150	0.5	
1145	4.39	200	6.89	0.982	4.17	3.45	11.92	157	0.5	
Sampling	VOCs, Total + Dissolved Metals, 1,4-Dioxane, GRO + DRO, Perchlorate + Hex chrom									

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Manatee State Airport
Project No.: 112EC04021-02

Sample ID No.: GSP-MW7-042712
Sample Location: MW7
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-27-12								
Time: 1014								
Method: Peristaltic pump								

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-27-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See low flow purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 3.40								
One Casing Volume(gal/L):								
Start Purge (hrs): 0922								
End Purge (hrs): 1009								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: GSP-MW7-042712
DATE: 4-27-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0922	3.40	—	—	—	—	—	—	—	—	Initial, no odor
0924	4.15	300	5.16	0.401	110	2.99	15.21	266	0.2	Cloudy water
0929	4.75	150	5.51	0.363	90.4	1.62	14.57	241	0.2	
0934	5.10	100	5.57	0.355	76.3	1.47	13.82	236	0.2	
0944	5.60	100	5.56	0.352	59.7	1.36	13.61	230	0.2	
0954	5.95	100	5.51	0.350	52.9	1.36	12.82	226	0.2	
0959	6.00	100	5.55	0.346	11.18	1.36	12.49	221	0.2	Slightly Cloudy
1004	6.00	100	5.53	0.347	11.0	1.32	12.52	220	0.2	
1009	6.00	100	5.53	0.346	11.2	1.36	12.99	218	0.2	
			Well Parameters Stabilize							
			Sampling Begins							

SIGNATURE(S): Walter Re

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112FC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: GSP-MW8-042712
Sample Location: MW8
Sampled By: Walt P.
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-27-12	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Time: 1203								
Method: Peristaltic pump	Clear	4.48	0.193	16.66	8.5	2.54	0.1	267

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-27-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See	Low	Flow	Purge			
Total Well Depth (TD):								
Static Water Level (WL): 4.16			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1112								
End Purge (hrs): 1158								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 1.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
DRO	—	2 - 1L Ambers	✓
GRO	HCl	2 - 40 ml VOA	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: GSP-MW8-042712
DATE: 4-27-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1112	4.16	—	—	—	—	—	—	—	—	Init. High, moderate
1113	4.75	300	4.92	0.206	28.8	4.33	16.07	259	0-1	Slightly Cloudy
1118	5.60	150	4.50	0.203	26.4	3.24	15.65	278	0-1	↓
1123	6.25	100	4.47	0.201	22.9	2.92	15.49	278	0-1	↓
1133	7.30	100	4.47	0.196	20.6	2.67	15.41	275	0-1	↓
1143	7.50	100	4.47	0.194	17.5	2.61	15.65	276	0-1	↓
1148	7.60	100	4.46	0.193	8.6	2.56	15.95	268	0-1	Clean Water
1153	7.65	100	4.48	0.193	8.0	2.56	16.05	267	0-1	↓
1158	7.70	100	4.48	0.193	8.2	2.59	16.10	267	0-1	↓
			Well Parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Walt R

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW1A-050512
Sample Location: DMW1A
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 5/2/12								
Time: 1016								
Method: Low Flow	Clear	4.76	0.783	12.91	21.1	1.33	0.4	191

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/2/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 46.6								
Static Water Level (WL): 9.98								
One Casing Volume(gal/L):								
Start Purge (hrs): 0934								
End Purge (hrs): 1031								
Total Purge Time (min): 57								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass vials	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM+Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM+Hg	HNO_3	1-500mL plastic bottle	
Hex. Chrom.	—	1-125mL plastic bottle	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Diane L Mulhern

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-DMW1A-050212
DATE: 5/2/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
			±0.1	±3%	<10	±10%	±3%	±10%		
0934	9.98	—	—	—	—	—	—	—	—	Begin Purge.
0941	10.02	100	5.14	0.783	77.9	5.39	14.53	245	0.4	
0946	10.03	100	5.02	0.762	67.6	3.37	14.05	220	0.4	
0951	10.07	100	4.92	0.773	48.2	2.79	13.45	211	0.4	
0956	10.06	100	4.84	0.776	34.0	2.04	13.37	202	0.4	
1001	10.08	100	4.80	0.783	27.2	1.72	12.99	197	0.4	
1006	10.08	100	4.77	0.783	24.2	1.52	12.96	195	0.4	
1011	10.09	100	4.76	0.782	20.7	1.45	12.91	193	0.4	
1016	10.10	100	4.76	0.783	21.1	1.33	12.91	191	0.4	Sample
1031	10.22	—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): Dawn F Mathews

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW2A-050312
Sample Location: DMW2A
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/3/12								ORP
Time: 1340								
Method: Low Flow	Cloudy	4.10	1.63	[illegible]	[illegible]	[illegible]	0.8	284
				14.56	426	1.56		

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/3/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 54.63								
Static Water Level (WL): 20.72								
One Casing Volume(gal/L):								
Start Purge (hrs): 1308								
End Purge (hrs): 1401								
Total Purge Time (min): [illegible]53								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass viles.	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM + Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM + Hg	HNO_3	1-500mL plastic bottle	
Hex. Chrom.	—	1-125mL plastic bottle	1401

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Diane L Mulhern

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-DMW2A-050312
DATE: 5/3/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.) ±0.1	S. Cond. (mS/cm) ±3%	Turb. (NTU) <10	DO (mg/L) ±10%	Temp. (Celcius) ±3%	ORP mV ±10%	Salinity % or ppt	Comments
1308	20.72	—	—	—	—	—	—	—	—	Begin Purge
1310	20.89	100	3.63	1.48	329	6.57	17.51	333	0.7	
1315	20.84	100	4.74	1.47	474	2.47	15.80	250	0.7	
1320	20.84	100	4.44	1.53	410	1.99	15.77	247	0.8	
1325	20.83	100	4.18	1.56	411	1.83	15.14	269	0.8	
1330	20.81	100	4.10	1.58	434	1.72	15.01	280	0.8	
1335	20.82	100	4.09	1.61	454	1.64	14.80	284	0.8	
1340	20.82	100	4.10	1.63	426	1.56	14.56	284	0.8	Sample
1401	20.83	—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: DMW2A
Sample Location: DMW2A
Sampled By: SBL
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/16/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1135	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Bladder Pump	Clear	4.32	1.53	18.54	44.5	0.70	193	0.8

PURGE DATA:

Date: 5/16/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 20.48								
One Casing Volume(gal/L):								
Start Purge (hrs): 1035								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Bench Scale Study	—	2-5 gallon Containers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: DMW 2A
DATE: 5/16/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1035	20.48	—	—	—	—	—	—	—	—	
1040	20.88	400	4.12	1.54	174	6.49	19.33	243	0.8	
1045	20.60	300	4.21	1.52	824	1.53	18.02	224	0.8	
1050	20.68	300	4.22	1.51	468	1.28	17.57	214	0.8	
1055	20.67	300	4.24	1.52	233	1.03	17.32	205	0.8	
1100	20.68	300	4.28	1.53	172	0.94	17.28	198	0.8	
1105	20.66	300	4.30	1.54	121	0.98	17.32	196	0.8	
1110	20.68	300	4.31	1.56	104.3	1.01	17.35	194	0.8	
1115	20.67	300	4.31	1.56	94.1	0.95	17.46	193	0.8	
1120	20.67	300	4.31	1.56	78.3	0.81	17.64	192	0.8	
1125	20.68	300	4.30	1.56	54.4	0.77	17.86	192	0.8	
1130	20.68	300	4.31	1.54	48.2	0.73	18.04	193	0.8	
1135	20.67	300	4.32	1.53	44.5	0.70	18.54	193	0.8	
Samples for Bench Scale Study										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

Sample ID No.: DMW-3I
Sample Location: MSA
Sampled By: DC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Date: 5/14/12								
Time: 1110								
Method: Low flow	cloudy	5.01	1.53	13.62	32.3	1.46	211	0.977

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/14/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD):								
Static Water Level (WL): 15.35								
One Casing Volume(gal/L):								
Start Purge (hrs): 10:30								
End Purge (hrs): 11:50								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 8L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40ml VOAs	1110
Dioxane	–	2-1L amber glass	↓
Perchlorate	–	1-250ml plastic	
Total PPM + Mercury	HNO_3	1-500ml plastic	
Dissolved PPM + Mercury	HNO_3	1-500ml plastic	
Radium	HNO_3	3-1L plastic	
Hex Chrom	–	1-125ml plastic	1305

OBSERVATIONS / NOTES:

Bladder pump connection - not good f.t.

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: DMW-3I
DATE: 5/14/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1030	15.35		—	—	—	—	—	—	—	Start purge
1035	15.38	100	3.21	1.34	162	2.50	14.72	412	0.851	
1040	15.38	100	4.34	1.34	234	1.80	13.97	311	0.823	
1045	15.38	100	4.77	1.45	274	1.66	13.63	260	0.929	
1050	15.38	100	4.91	1.48	165	1.52	13.55	241	0.953	
1055	15.38	100	4.94	1.51	53.4	1.38	13.65	220	0.969	
1100	15.38	100	5.00	1.52	44.2	1.40	13.69	214	0.974	
1105	15.38	100	5.01	1.53	32.3	1.46	13.62	211	0.977	
1110	—	—	—	—	—	—	—	—	—	sample
1150										end purge

SIGNATURE(S): Dustin Esto

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: DMW4I
Sample Location: MW4I
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Date: 5/16/12								
Time: 1015								
Method: Bladder Pump	Slightly Cloudy	4.20	1.79	18.17	126	0.68	198	0.9

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/16/12								
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material: 2" PVC		Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 19.25								
One Casing Volume(gal/L):								
Start Purge (hrs): 0925								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
Bench Scale Study	—	2-5 gallon plastic containers	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA Bulk Sampling
PROJECT NUMBER: 162IC04021
WELL ID.: DMW4I
DATE: 5/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0925	19.25	—	—	—	—	—	—	—	—	
0930	19.25	300	3.20	1.89	144	5.08	19.21	275	1.0	
0935	19.25	300	4.04	1.80	132	1.87	18.19	220	0.9	
0940	19.35	300	4.17	1.78	140	1.02	17.68	208	0.9	
0945	19.33	300	4.20	1.78	182	0.88	17.21	203	0.9	
0950	19.35	300	4.20	1.78	185	0.76	17.09	201	0.9	
0955	19.34	300	4.20	1.77	150	1.00	17.58	201	0.9	
1000	19.33	300	4.20	1.78	150	0.84	17.73	200	0.9	
1005	19.35	300	4.20	1.78	150	0.68	17.94	199	0.9	
1010	19.33	300	4.20	1.79	134	0.68	18.09	198	0.9	
1015	19.33	300	4.26	1.79	126	0.68	18.17	198	0.9	
Sampling for Bench Scale Study										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

Sample ID No.: MSA-DMW4I-050312
Sample Location: DMW4I
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

Date: 5/3/12
Time: 0934
Method: Low Flow

Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Yellowish	3.98	1.97	13.33	154	1.43	1.0	ORP 278

PURGE DATA:

Date: 5/3/12
Method: Low Flow
Monitor Reading (ppm): N/A
Well Casing Diameter & Material Type: 2" PVC
Total Well Depth (TD): 51.92
Static Water Level (WL): 19.39
One Casing Volume(gal/L):
Start Purge (hrs): 0850
End Purge (hrs): 0951
Total Purge Time (min): 61
Total Vol. Purged (gal/L): 2.5

Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass vials	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM + Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM + Hg	HNO_3	1-500mL plastic bottle	
Hex. Chrom.	—	1-125mL plastic bottle	1247

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD
Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:
WELL ID.: MSA-DMW41-050312
DATE: 5/3/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
			±0.1	±3%	<10	±10%	±3%	±10%		
0850	19.39	—	—	—	—	—	—	—	—	Begin Purge
0854	19.43	100	3.11	1.44	47.9	5.73	15.82	449	0.7	
0859	19.42	100	3.30	1.76	1416	3.52	15.26	403	0.9	
0904	19.44	100	3.70	1.87	1105	2.27	15.07	333	0.9	
0909	19.45	100	3.85	1.95	391	1.96	13.88	305	1.0	
0914	19.44	100	3.90	1.97	254	1.81	13.63	294	1.0	
0919	19.46	100	3.94	1.97	221	1.79	13.53	287	1.0	
0924	19.47	100	3.95	1.97	199	1.61	13.51	284	1.0	
0929	19.48	100	3.97	1.97	154	1.51	13.46	280	1.0	
0934	19.49	100	3.98	1.97	154	1.43	13.33	278	1.0	Sample
0951	19.49	—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): David J Mueller

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW5I-05042
Sample Location: DMW5I
Sampled By: SPC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Date: 5/4/12								
Time: 1150								
Method: Bladder Pump	Clear	4.10	1.23	14.04	18.2	1.04	236	0.6

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/4/12								
Method: Bladder Pump								
Monitor Reading (ppm): —		See Low Flow						
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD):		Purge Data Sheet						
Static Water Level (WL): 20.59								
One Casing Volume(gal/L):								
Start Purge (hrs): 1115								
End Purge (hrs): 1220								
Total Purge Time (min): 65								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex chrom collected on @

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112T04021
WELL ID.: MSA-DMW5I-0504R
DATE: 5/4/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1115	20.59	—	—	—	—	—	—	—	—	
1120	20.60	300	3.30	1.40	5.74	6.02	14.25	327	0.7	
1125	20.59	300	3.88	1.27	8.04	2.06	13.93	284	0.6	
1130	20.59	300	4.06	1.24	9.96	1.27	13.93	257	0.6	
1135	20.59	300	4.07	1.23	12.4	1.19	13.94	248	0.6	
1140	20.59	300	4.04	1.23	16.2	1.10	13.96	241	0.6	
1145	20.59	300	4.10	1.23	17.6	1.08	14.02	240	0.6	
1150	20.59	300	4.10	1.23	18.2	1.04	14.04	231	0.6	

Sampling VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate & Hexchrom

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 111C04021

Sample ID No.: MSA-DMW6I-050312
Sample Location: DMW6I
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

Date: 5/3/12
Time: 1125
Method: Bladder Pump

Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Clear	4.17	0.923	15.11	9.63	1.78	155	0.4

PURGE DATA:

Date: 5/3/12
Method: Bladder Pump
Monitor Reading (ppm): —
Well Casing Diameter & Material: 2" PVC
Total Well Depth (TD):
Static Water Level (WL): 17.69
One Casing Volume(gal/L):
Start Purge (hrs): ~~1050~~ 1145
End Purge (hrs): 1240
Total Purge Time (min): 75
Total Vol. Purged (gal/L): 2gal

Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
	See Low Flow Purge Data Sheet						

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1 L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
Ra-226, 228	HNO_3	2-1 L Plastics	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1200

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-DMW6I-050312
DATE: 5/3/12

Time (hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1045	17.69	—	—	—	—	—	—	—	—	
1050	17.74	250	4.71	0.922	56.7	2.31	14.54	85	0.5	
1055	17.79	250	4.61	0.926	36.4	2.11	14.33	93	0.5	
1100	17.81	250	4.41	0.924	20.3	1.96	14.41	105	0.5	
1105	17.83	250	4.33	0.923	15.1	1.63	14.68	124	0.5	
1110	17.84	250	4.28	0.920	12.6	1.74	14.91	133	0.5	
1115	17.86	250	4.23	0.918	[illegible] 11.6	1.80	15.15	142	0.5	
1120	17.86	250	4.17	0.920	10.20	1.79	15.13	150	0.5	
1125	17.87	250	4.17	0.923	9.13	1.78	15.11	155	0.4	

Sampling VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, Rad 228, 226, +228, & Hex chrom.

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: MSA-DMW8I-050112
Sample Location: DMW8I
Sampled By: SPC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

Date: 5/2/12	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Time: 1240								
Method: Bladder pump	Clear	7.61	1.30	14.19	9.64	1.07	225	0.7

PURGE DATA:

Date: 5/2/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): —								
Static Water Level (WL): 15.21								
One Casing Volume(gal/L):								
Start Purge (hrs): 1150								
End Purge (hrs): 1310								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1310

Circle If Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112FC04021
WELL ID.: MSA-DMW8I-050212
DATE: 5/2/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1150	15.21	—	—	—	—	—	—	—	—	
1155	15.22	200	4.38	1.28	71000	5.14	14.54	144	0.6	
1200	15.23	200	4.16	1.35	735	2.88	14.46	102	0.7	
1205	15.20	200	4.51	1.37	836	1.96	14.21	153	0.7	
1210	15.18	200	3.93	1.38	914	1.55	14.14	180	0.7	
1215	15.18	200	3.82	1.38	733	1.23	14.09	190	0.7	
1220	15.18	200	3.69	1.35	153	1.18	14.11	206	0.7	
1225	15.18	200	3.15	1.34	96.2	1.19	14.1	209	0.7	
1230	15.18	200	3.62	1.33	58.8	1.19	14.11	216	0.7	
1235	15.18	200	3.61	1.32	16.4	1.11	14.15	221	0.7	
1240	15.18	200	3.61	1.30	9.14	1.07	14.19	225	0.7	
Sampling VOCs, Total & Dissolved Metals, 1,4-Dioxane, Perchlorate, & Hex Chrom										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Mountain State Airport
Project No.: 112C04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MW9I-050912
Sample Location: MW 9I
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1127								ORP
Method: Bladder pump	Cloudy	5.63	1.20	14.52	110	1.63	0.6	118

PURGE DATA:

Date: 5-9-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Bladder pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):				See Low Flow Purge Data Sheet				
Static Water Level (WL): 9.10								
One Casing Volume(gal/L):								
Start Purge (hrs): 0951								
End Purge (hrs): 1122								
Total Purge Time (min): 91								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
~~Dup~~	~~—~~	~~2 - 1L Ambers~~	~~✓~~
~~Geo~~	~~—~~	~~2 - 40 ml VOA~~	~~✓~~
~~BTEX~~	~~HCl~~	~~2 - 1L Ambers~~	~~✓~~
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓
DSS Gasses	HCl	3 - 40 ml VOA	✓

OBSERVATIONS / NOTES:

Ammonia	H_2SO_4	1	500 ml Poly	✓
Alk, TDS, Anions	—	1	1L Poly	✓
DOC	H_2SO_4	2	40 ml VOA	✓

Hex Chrom collected 1230.

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—	—	Walt P

Ferrous & Total Iron 10 ppm (mg/L) @ 1230

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: ~~B~~ Dmw9I-050912
DATE: 5-9-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0951	9.10	—	—	—	—	—	—	—	—	
0952	9.35	300	5.56	1.08	800	4.53	14.04	253	0.5	Initial, no odor
0957	9.35	250	5.47	1.21	346	2.17	13.39	208	0.6	cloudy water
1002	9.35	250	5.51	1.24	467	1.60	13.22	161	0.6	
1012	9.35	250	5.54	1.23	673	1.43	13.19	141	0.6	
1022	9.35	250	5.66	1.21	263	1.35	13.51	129	0.6	
1032	9.35	250	5.66	1.21	202	1.50	13.61	124	0.6	
1042	9.35	250	5.68	1.21	184	1.47	13.63	121	0.6	
1052	9.35	250	5.68	1.20	155	1.44	13.79	118	0.6	
1102	9.35	250	5.58	1.20	123	1.59	14.39	123	0.6	
1112	9.35	250	5.64	1.20	116	1.68	14.50	117	0.6	
1122	9.35	250	5.63	1.20	110	1.63	14.52	118	0.6	

Well Parameters did not Stabilize
after 90 min max Purge ~~Purge~~ Pure
Work plan Sampling Begins

SIGNATURE(S): Walt P

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112TC04021-02

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: DMW 11I-051112
Sample Location: DMW 11I
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 5-11-12 / Time: 1243 / Method: Bladder pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-11-12								
Method: Bladder pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD):			See low flow purge					
Static Water Level (WL): 6.13			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1152								
End Purge (hrs): 1238								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:	Signature(s):
—		Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Manitowoc State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: DMW11I-051112
DATE: 5-11-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1152	6.13	—	—	—	—	—	—	—	—	Initial, Moderately Slightly Cloudy
1153	6.74	300	5.62	0.029	41.2	5.65	14.75	147	0.0	
1158	6.52	180	4.95	0.029	33.6	2.82	13.75	199	0.0	
1203	6.52	180	4.67	0.027	27.4	2.48	13.43	218	0.0	
1213	6.52	180	4.69	0.026	33.0	1.95	13.19	234	0.0	
1223	6.52	180	4.44	0.025	40.5	1.91	13.28	240	0.0	
1228	6.50	180	4.42	0.025	49.7	1.79	13.31	248	0.0	
1233	6.50	180	4.42	0.025		1.73	13.25	248	0.0	
1238	6.50	180	4.41	0.025		1.71	13.29	250	0.0	
	← Well parameters stabilize →									
	← Sampling Begins →									

SIGNATURE(S): Matt Ph

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW14I-050112
Sample Location: MW14I
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Date: 5/1/12								
Time: 1105								
Method: Peri Pump	Clear	6.05	1.50	15.03	10.4	1.11	-14	0.7

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/1/12								
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC								
Total Well Depth (TD): 50.63								
Static Water Level (WL): 9.74								
One Casing Volume(gal/L):								
Start Purge (hrs): 1005								
End Purge (hrs): 1215								
Total Purge Time (min): 135								
Total Vol. Purged (gal/L): 5 gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials X3	✓
Total Metals	HNO_3	1-500 mL plastic X2	✓
Dissolved Metals	HNO_3	1-500 mL plastic X2	✓
1,4-Dioxane	—	2-1L Ambers X3	✓
Perchlorate	—	1-250 mL plastic X2	✓
Hexavalent Chromium	—	1-250 mL plastic X3	✓

OBSERVATIONS / NOTES:

Hex chrom collected @ 1210

Circle if Applicable:

MS/MSD ~~Duplicate/DeNo.~~: MSA-MW14I-050112-MS/MSD

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW14I-050112
DATE: 5/1/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1005	9.74	—	—	—	—	—	—	—	—	
1010	10.79	300	5.75	0.898	9.31	8.55	17.34	242	0.4	
1015	10.79	300	6.42	0.789	12.2	6.41	15.69	211	0.4	
1020	10.79	300	6.46	0.786	13.1	6.28	15.63	198	0.4	
1025	10.79	300	6.50	0.784	12.6	6.05	15.52	191	0.4	
1030	10.79	300	6.45	0.811	12.4	5.58	15.49	106	0.4	
1035	10.79	300	6.30	0.848	11.9	4.99	15.47	63	0.4	
1040	10.79	300	6.10	1.23	11.0	2.25	15.47	3	0.4	
1045	10.79	300	6.08	1.32	13.8	1.96	15.51	-4	0.7	
1050	10.79	300	6.06	1.46	15.3	1.60	15.57	-14	0.7	
1055	10.79	300	6.06	1.47	11.6	1.15	15.58	-16	0.7	
1100	10.79	300	6.05	1.49	11.2	1.13	15.28	-17	0.7	
1105	10.79	300	6.05	1.50	10.4	1.11	15.03	-19	0.7	
Sampling VOCs, Total & Dissolved metals, 1,4-Dioxane, Perchlorate, & Hex Chrom										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Marion State Airport
Project No.: 112IC04021.02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW15I-041812
Sample Location: MW15I
Sampled By: Matt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 4-18-12								
Time: 1416								
Method: Peristaltic pump	Slightly	4.57	0.051	13.00	12.3	1.83	0.0	ORP 281

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-18-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 6.60			Data		Sheet			
One Casing Volume(gal/L):								
Start Purge (hrs): 1324								
End Purge (hrs): 1411								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (EPA 8260B)	HCl	3 - 40 ml VOA	✓
1,4 Dioxane (EPA 8270C SIM)	—	2 - 1L Ambers	✓
Perchlorate (EPA 314)	—	1 - 250 ml Poly	✓
Total PPM (EPA 6020B)	HNO3	1 - 500 ml Poly	✓
Diss PPM (EPA 6020B)	HNO3	1 - 500 ml Poly	✓
~~Gross Alpha (EPA 900.0)~~	~~—~~	~~2 - 1L Ambers~~	
~~Ra~~			
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:
—	—

Signature(s): Matthew P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-03

WELL ID.: MSA-MW15I-041612
DATE: 4-18-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1324	6.06	—	—	—	—	—	—	—	—	
1326	6.95	300	4.99	0.110	48.3	3.70	13.05	256	0.0	Initial, no odor
1331	6.90	200	4.74	0.075	50.0	1.84	13.11	263	0.0	Slightly cloudy
1336	6.90	200	4.66	0.061	27.2	1.71	13.03	271	0.0	
1346	6.90	200	4.54	0.050	22.8	1.60	12.89	276	0.0	
1356	6.90	200	4.53	0.048	13.9	1.62	12.97	279	0.0	
1401	6.90	200	4.53	0.049	12.0	1.79	12.99	279	0.0	
1406	6.90	200	4.52	0.050	12.1	1.83	13.00	280	0.0	
1411	6.90	200	4.51	0.051	12.3	1.83	13.00	281	0.0	
			Well parameters Stable, Start Sampling Begins							

SIGNATURE(S): Walter E Pa

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112G04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW16I-050912
Sample Location: MW16I
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/9/12	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Time: 1250								
Method: Peri Pump	Slightly Cloudy	5.34	0.126	13.50	179	1.24	86	0.1

PURGE DATA:

Date: 5/9/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See	Low	Flow				
Monitor Reading (ppm): —								
Well Casing Diameter & Material: 2" PVC		Purge	Data	Sheet				
Total Well Depth (TD): 47.52								
Static Water Level (WL): 7.42								
One Casing Volume(gal/L):								
Start Purge (hrs): 1145								
End Purge (hrs): 1315								
Total Purge Time (min): 90								
Total Vol. Purged (gal/L): 2.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO3	1-500 mL plastic	✓
Dissolved Metals	HNO3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
Radium 224, 226, + 228	HNO3	3-1 L plastics	✓
Hexavalent Chromium	—	1-250 ml plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1315

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW16I-050912
DATE: 5/9/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1145	7.42	—	—	—	—	—	—	—	—	
1150	7.68	250	6.87	0.255	>1000	5.14	16.17	-53	0.1	
1155	7.72	250	5.14	0.123	695	1.04	13.73	86	0.1	
1200	7.73	250	5.16	0.122	694	1.09	13.71	85	0.1	
1205	7.73	250	5.20	0.121	698	1.86	13.68	84	0.1	
1210	7.73	250	5.24	0.119	692	2.06	13.64	84	0.1	
1215	7.73	250	5.26	0.118	695	1.91	13.59	85	0.1	
1220	7.73	250	5.26	0.117	693	1.45	13.52	86	0.1	
1225	7.73	250	5.27	0.118	165	1.43	13.49	87	0.1	
1230	7.73	250	5.29	0.119	168	1.40	13.47	88	0.1	
1235	7.73	250	5.30	0.121	170	1.38	13.49	87	0.1	
1240	7.73	250	5.32	0.123	172	1.28	13.50	86	0.1	
1245	7.73	250	5.33	0.125	176	1.25	13.50	86	0.1	
1250	7.73	250	5.34	0.126	179	1.24	13.50	86	0.1	

Sampling: VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, Radium 226, Radium 228, & Hex Chrom

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112FC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW17I-041612
Sample Location: MW17I
Sampled By: SBL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4/20/12								
Time: 1325								
Method: Peri Pump	Clear	5.33	0.076	16.22	8.28	1.28	0.0	130

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4/20/12								
Method: Peri Pump								
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 46.35								
Static Water Level (WL): 6.84								
One Casing Volume(gal/L):								
Start Purge (hrs): 1250								
End Purge (hrs): 1410								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 2 gal								

See Low Flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Hexavalent Chromium			

OBSERVATIONS / NOTES:

Hex chrom collected on @

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW17I-041012
DATE: 4/20/12

Time	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1250	6.14	—	—	—	—	—	—	—	—	
1255	6.25	250	5.55	0.071	68.1	2.84	24.81	124	0.0	
1300	6.30	200	5.35	0.076	34.5	1.80	22.09	135	0.0	
1305	6.30	200	5.40	0.077	15.7	1.16	21.50	128	0.0	
1310	6.35	200	5.37	0.077	10.92	1.06	20.63	129	0.0	
1315	6.39	200	5.34	0.077	8.89	1.20	17.74	130	0.0	
1320	6.45	200	5.35	0.076	8.41	1.24	16.94	130	0.0	
1325	6.53	200	5.33	0.076	8.28	1.28	16.22	130	0.0	
Sampling VOCs, Total + Dissolved Metals, Perchlorate, 1,4-Dioxane, + Hex chrom.										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112TC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW18I-051012
Sample Location: MW18I
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/10/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1300	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Peri Pump	Brn cloudy	5.39	2.26	13.57	>1000	0.66	49	1.2

PURGE DATA:

Date: 5/10/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 50.80								
Static Water Level (WL): 7.73								
One Casing Volume(gal/L):								
Start Purge (hrs): 1245								
End Purge (hrs): 1330								
Total Purge Time (min): 85								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals & Cyanide	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Dissolved Gasses	HCl	2-40 mL vials	✓
Ammonia	H_2SO_4	1-500 mL plastic	✓
Alk, TDS, Anions	—	1-1L plastic	✓
DOC	H_2SO_4	2-40 mL vials	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1325

Ferrous Iron > 10 ppm

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

SBC

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW18I-051012
DATE: 5/10/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1205	7.73	—	—	—	—	—	—	—	—	
1210	7.78	250	5.88	2.76	>1000	1.40	14.13	-18	1.4	
1215	7.75	250	5.54	2.59	>1000	0.88	13.46	21	1.3	
1220	7.75	250	5.52	2.57	>1000	0.81	13.41	25	1.3	
1225	7.75	250	5.49	2.48	>1000	0.75	13.39	32	1.2	
1230	7.75	250	5.44	2.38	>1000	0.70	13.35	37	1.2	
1235	7.75	250	5.43	2.35	>1000	0.71	13.42	40	1.2	
1240	7.75	250	5.42	2.33	>1000	0.71	13.48	43	1.2	
1245	7.75	250	5.40	2.31	>1000	0.70	13.49	44	1.2	
1250	7.75	250	5.40	2.30	>1000	0.69	13.52	46	1.2	
1255	7.75	250	5.39	2.29	>1000	0.67	13.54	47	1.2	
1300	7.75	250	5.39	2.26	>1000	0.66	13.57	49	1.2	Turbidity not clearing.
Sampling VOCs, Total & Dissolved Metals, 1,4-Dioxane, Perchlorate, Natural Attenuation Parameters, & Hex Chrom										

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Marion State Airport
Project No.: 112IC04021-02

Sample ID No.: MSA-MW19I-040512
Sample Location: MW19I
Sampled By: WLH P
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-19-12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1218								
Method: Peristaltic pump	Clear	5.21	0.762	14.18	0.9	1.19	0.4	110

PURGE DATA:

Date: 4-19-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge					
Total Well Depth (TD):								
Static Water Level (WL): 6.60			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1126								
End Purge (hrs): 1213								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 – 40 ml VOA	✓
Total ppm	HNO3	1 – 500 ml Poly	✓
D.55 ppm	HNO3	1 – 500 ml Poly	✓
1,4 Dioxane	—	2 – 1L Ambers	✓
Perchlorate	—	1 – 250 ml Poly	✓
Hex Chrom	—	1 – 250 ml Poly	✓

OBSERVATIONS / NOTES:

Hex Chrom 1240

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

WLH P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MSA-MW19I-041912
DATE: 4-19-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1126	6.60	—	—	—	—	—	—	—	—	Initial, no odor
1128	7.25	300	5.49	0.684	600	2.40	14.74	157	0.3	Cloudy water
1133	7.35	250	5.34	0.721	549	1.66	14.29	137	0.4	↓
1138	7.30	200	5.26	0.734	89.3	1.47	13.86	128	0.4	Slightly cloudy
1148	7.30	200	5.24	0.743	6.9	1.27	13.60	117	0.4	Clean water
1158	7.30	200	5.23	0.749	2.1	1.24	14.06	112	0.4	↓
1203	7.30	200	5.23	0.758	0.7	1.22	14.11	111	0.4	
1208	7.30	200	5.22	0.760	0.6	1.21	14.13	110	0.4	
1213	7.30	200	5.21	0.762	0.8	1.19	14.18	110	0.4	

← Well parameters stabilize →

← Sampling Begins →

SIGNATURE(S): Walter E Pa

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW20I-042012
Sample Location: MW20I
Sampled By: WHP
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-20-12								
Time: 1155								
Method: Peristaltic pump	Clear	6.00	1.18	14.97	7.25	1.22	0.6	34

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-20-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow page					
Total Well Depth (TD):								
Static Water Level (WL): 10.30			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1103								
End Purge (hrs): 1150								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD —

Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MSA-MW20I-042012
DATE: 4-20-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1103	10.30	—	—	—	—	—	—	—	—	Initial, no odor
1105	10.35	300	6.28	1.08	677	3.55	16.86	34	0.5	Cloudy water
1110	10.35	200	5.81	1.14	518	1.96	15.30	49	0.6	
1115	10.35	200	5.85	1.15	91.4	1.60	14.97	48	0.6	
1125	10.35	200	5.90	1.15	76.2	1.35	15.03	43	0.6	
1135	10.35	200	5.95	1.18	8.97	1.30	14.94	39	0.6	Clean water
1140	10.35	200	5.96	1.18	7.50	1.28	14.81	37	0.6	
1145	10.35	200	5.99	1.18	7.20	1.26	14.92	35	0.6	
1150	10.35	200	6.00	1.18	7.25	1.22	14.87	34	0.6	
		Well parameters Stabilize								
		Sampling Begins								

SIGNATURE(S): Matt Pe

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112G04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW24I-050712
Sample Location: MW24I
Sampled By: SBL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Date: 5/7/12								
Time: 1130								
Method: Peri Pump	Clear	3.72	0.100	13.70	8.19	2.47	299	0.0

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/7/12								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 45.14								
Static Water Level (WL): 5.29								
One Casing Volume(gal/L):								
Start Purge (hrs): 1055								
End Purge (hrs): 1215								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Hex Chrom	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1210

Circle if Applicable:

~~MS/MSD~~ ~~Duplicate ID No.:~~ MSA-MW24I-050712-MS/MSD

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04029

WELL ID.: MSA-MW24I-050712
DATE: 5/7/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1055	5.29	—	—	—	—	—	—	—	-	
1100	5.28	250	4.19	0.233	152	4.12	15.79	307	0.1	
1105	5.28	250	3.81	0.106	37.5	2.70	13.90	315	0.0	
1110	5.28	250	3.69	0.094	27.1	2.68	13.84	318	0.0	
1115	5.28	250	3.68	0.093	19.4	2.61	13.79	310	0.0	
1120	5.28	250	3.66	0.093	12.7	2.58	13.70	307	0.0	
1125	5.28	250	3.69	0.098	9.63	2.52	13.70	302	0.0	
1130	5.28	250	3.72	0.100	8.19	2.47	13.70	299	0.0	
Sampled VOCs, Total + Dissolved Metals, Perchlorate, 1,4-Dioxane + Hex Chrom										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112FC0402102

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW25I-050612
Sample Location: MW25I
Sampled By: Matt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5-8-12								
Time: 1213								
Method: Peristaltic pump	Clear	6.10	0.331	16.24	5.2	0.93	0.2	69

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5-8-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SCR	low flow purge				
Total Well Depth (TD):								
Static Water Level (WL): 6.65			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1122								
End Purge (hrs): 1208								
Total Purge Time (min): 46								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓
Pb			

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD — Duplicate ID No.:

Signature(s): Matt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112FC04.21-02

WELL ID.: MSA-MW25I-050812
DATE: 5-8-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1122	6.65	—	—	—	—	—	—	—	—	Initial, no odor
1123	6.80	300	6.29	0.383	339	2.47	19.34	143	0.2	Cloudy water
1128	6.80	250	6.18	0.376	263	1.12	18.26	97	0.2	↓
1133	6.80	250	6.15	0.370	191	1.03	17.33	84	0.2	
1143	6.80	250	6.13	0.356	106	0.96	16.78	74	0.2	↓
1153	6.80	250	6.10	0.343	46.0	0.96	16.51	72	0.2	Slightly cloudy
1158	6.80	250	6.09	0.333	5.3	0.95	16.35	71	0.2	Clear water
1203	6.80	250	6.10	0.332	5.1	0.94	16.26	70	0.2	↓
1208	6.80	250	6.10	0.331	5.2	0.93	16.24	69	0.2	
			Field Parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Walt Re

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW-28I
Sample Location: MW-28I
Sampled By: DC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/4/12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1242								
Method: Low Flow	Clear	4.61	0.131	14.64	3.88	1.17	0.085	

PURGE DATA:

Date: 5/4/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): -								
Well Casing Diameter & Material Type: 2"								
Total Well Depth (TD): -								
Static Water Level (WL): 6.12								
One Casing Volume(gal/L):								
Start Purge (hrs): 1207								
End Purge (hrs): 1300								
Total Purge Time (min): 53								
Total Vol. Purged (gal/L): 1.4								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass VOAs	
1,4 Dioxane	←	2-1L amber glass	
Perchlorate	←	1-250ml plastic	
Total PPM + Hg	HNO_3	1-500ml plastic	
Dissolved PPM + Hg	HNO_3	1-500ml plastic	
Hex Chrom			

OBSERVATIONS / NOTES:

Circle If Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-MW-28I
DATE: 3/4/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1207	6.12	—	—	—	—	—	—	—	—	
1212	6.40	100	4.99	0.126	4.00	1.43	15.37	198	0.082	Begin Purge
1217	6.41	100	4.92	0.128	1.28	1.26	15.28	182	0.083	
1222	6.42	100	4.91	0.128	2.50	1.18	15.12	154	0.083	
1227	6.43	100	4.88	0.128	1.21	1.13	15.00	146	0.083	
1232	6.45	100	4.63	0.131	0.79	1.10	14.75	150	0.085	
1237	6.45	100	4.58	0.132	0.43	1.12	14.50	148	0.085	
1242	6.45	100	4.61	0.131	3.88	1.17	14.64	143	0.085	
1300	6.46	100	—	—	—	—	—	—	—	End Purge

SIGNATURE(S):

PAGE___OF___

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW30I-05512
Sample Location: MW30I
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1020	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Peri Pump	Clear	4.60	0.187	17.87	24.1	0.74	140	0.1

PURGE DATA:

Date: 5/15/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 43.32								
Static Water Level (WL): 5.20								
One Casing Volume(gal/L):								
Start Purge (hrs): 0930								
End Purge (hrs): 1040								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 2gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom collected @

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW30I-051512
DATE: 5/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
0930	5.20	—	—	—	—	—	—	—	—	
0935	5.29	250	5.94	0.246	88.5	2.25	20.86	112	0.1	
0940	5.29	250	4.45	0.240	120	0.97	20.25	160	0.1	
0945	5.29	250	4.29	0.221	83.4	0.91	19.63	168	0.1	
0950	5.29	250	4.16	0.207	66.5	0.87	18.95	175	0.1	
0955	5.29	250	4.21	0.196	53.2	0.83	18.41	170	0.1	
1000	5.29	250	4.26	0.189	49.9	0.81	18.03	165	0.1	
1005	5.29	250	4.31	0.188	35.2	0.79	18.01	158	0.1	
1010	5.29	250	4.44	0.188	28.4	0.78	17.79	153	0.1	
1015	5.29	250	4.53	0.187	26.3	0.76	17.83	146	0.1	
1020	5.29	250	4.60	0.187	24.1	0.74	17.87	140	0.1	
Sampled VOCs, Total & Dissolved metals, perchlorate, 1,4-Dioxane, +Hex Chrom										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW32I-050112
Sample Location: MW32D
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/1/12								
Time: 1424								ORP
Method: Low Flow	Clear	5.82	0.668	14.19	24.7	1.72	0.3	57

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/1/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): 64.9								
Static Water Level (WL): 5.68								
One Casing Volume(gal/L):								
Start Purge (hrs): 1352								
End Purge (hrs): 1452								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass vites	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM + Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM + Hg	HNO_3	1-500mL plastic bottle	
Hex. Chrom.	—	1-125mL plastic bottle	@ 1446

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): [signature]

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-MW32I-050112
DATE: 5/1/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.) ±0.1	S. Cond. (mS/cm) ±3%	Turb. (NTU) <10	DO (mg/L) ±10%	Temp. (Celcius) ±3%	ORP mV ±10%	Salinity % or ppt	Comments
1352	5.68	—	—	—	—	—	—	—	—	Begin Purge
1354	5.69	120	6.84	0.558	86.4	5.74	15.05	157	0.3	
1359	5.69	120	6.31	0.601	54.0	3.59	14.67	84	0.3	
1404	5.69	120	6.01	0.635	37.8	2.90	14.56	68	0.3	
1409	5.69	120	5.94	0.646	31.5	2.00	14.45	63	0.3	
1414	5.69	120	5.85	0.657	29.6	1.83	14.31	59	0.3	
1419	5.69	120	5.81	0.661	24.7	1.77	14.24	56	0.3	
1424	5.69	120	5.82	0.668	24.7	1.72	14.19	57	0.3	Sample
1452	5.70	—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW33I-050112
Sample Location: MW33I
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/1/12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1126	(Visual)	(S.U.)	(mS/cm)	(^{0}C)	(NTU)	(mg/l)	(%)	ORP
Method: Low Flow	Clear	10.34	0.247	14.54	25.3	1.55	0.1	-62

PURGE DATA:

Date: 5/1/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material								
Type: 2" PVC								
Total Well Depth (TD): 70.07'								
Static Water Level (WL): 7.02								
One Casing Volume(gal/L):								
Start Purge (hrs): 1054								
End Purge (hrs): 1158								
Total Purge Time (min): 64								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass vials	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM + Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM + Hg	HNO_3	1-500mL plastic bottle	
Hex. Chrom.	—	1-125mL plastic bottle.	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Diane L Mulhern

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-MW33I-050112
DATE: 5/1/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
			±0.1	±3%	<10	±10%	±3%	±10%		
1054	7.02	—	—	—	—	—	—	—	—	
1056	7.05	120	8.73	0.215	27.1	9.16	15.33	62	0.1	Begin Purge
1101	7.06	120	9.84	0.235	26.5	2.26	14.75	-10	0.1	
1106	7.06	120	10.22	0.242	26.5	1.89	14.79	-39	0.1	
1111	7.06	120	10.29	0.245	25.5	1.71	14.68	-55	0.1	
1116	7.06	120	10.30	0.245	24.0	1.65	14.50	-61	0.1	
1121	7.06	120	10.35	0.246	24.9	1.59	14.63	-67	0.1	
1126	7.06	120	10.34	0.247	25.3	1.55	14.54	-62	0.1	
1158	7.06	—	—	—	—	—	—	—	—	Sample End Purge.

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112TC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW34F-041912
Sample Location: MW34F
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4/19/12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1110								
Method: Peri Pump	Clear	4.89	0.146	14.56	3.41	1.29	0.1	186

PURGE DATA:

Date: 4/19/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 55.59								
Static Water Level (WL): 4.95								
One Casing Volume(gal/L):								
Start Purge (hrs): 1035								
End Purge (hrs): ~~1200~~ 1155								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 2 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO3	1-500 mL plastic	✓
Dissolved Metals	HNO3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Perchlorate	—	1-250 mL plastic	✓
~~GRO + DRO~~	~~HCl / None~~	~~2-40mL vials / 2-1L Ambers~~	✓
Hexavalent Chromium	—	1-250mL plastic	✓

OBSERVATIONS / NOTES:

Hex chrom Collected @ 1200

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW34I-041912
DATE: 4/19/12

Time (hrs)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1035	4.95	—	—	—	—	—	—	—	—	
1040	5.17	250	4.95	0.144	4.43	4.99	15.13	265	0.1	
1045	5.17	200	4.82	0.139	2.50	2.01	14.12	256	0.1	
1050	5.17	200	4.84	0.142	3.82	2.00	14.19	218	0.1	
1055	5.17	200	4.86	0.145	4.68	1.15	14.23	206	0.1	
1100	5.17	200	4.88	0.147	2.70	1.12	14.37	196	0.1	
1105	5.17	200	4.89	0.146	2.14	1.21	14.42	191	0.1	
1110	5.17	200	4.89	0.146	3.91	1.29	14.56	186	0.1	
Sampling VOCs, Total Metals, Dissolved metals, 1,4-Dioxane, Perchlorate, CrVI & DRO, & Hex Chrom										

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

Sample ID No.: MSA-DMW1B-050912
Sample Location: DMW1B
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (^{0}C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/2/12								ORP
Time: 1115								146
Method: Low Flow	Clear	5.00	0.785	13.56	33.2	1.35	0.4	

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/2/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 81.24								
Static Water Level (WL): 10.27								
One Casing Volume(gal/L):								
Start Purge (hrs): 1045								
End Purge (hrs): 1135								
Total Purge Time (min): 50								
Total Vol. Purged (gal/L): 1.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40mL glass viles	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM + Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM + Hg	HNO_3	1-500mL plastic bottle	
Hex. Chrom.	—	1-125mL plastic bottle	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Diane L Mueller

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-DMW1B-050212
DATE: 5/2/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
			±0.1	±3%	<10	±10%	±3%	±10%		
1045	10.37	—	—	—	—	—	—	—	—	Begin Purge
1055	11.14	120	4.46	0.792	30	2.90	14.16	248	0.4	
1100	11.41	120	4.92	0.814	32.6	1.72	13.75	183	0.4	
1105	11.45	100	5.01	0.797	34.6	1.54	13.79	159	0.4	
1110	11.53	100	5.01	0.790	34.6	1.45	13.68	151	0.4	
1115	11.68	100	5.00	0.785	33.2	1.35	13.56	146	0.4	Sample
1135	13.06	—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): David J. Mullen

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: DMW-3D
Sample Location: MSA
Sampled By: DC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/14/12								
Time: 1235								
Method: Low flow	cloudy	4.40	0.166	12.93	589	2.42	0.110	-

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/14/12								
Method: Low flow								
Monitor Reading (ppm): NA								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): -								
Static Water Level (WL): 15.20								
One Casing Volume(gal/L): -								
Start Purge (hrs): 1145								
End Purge (hrs): 1305								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 8L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40ml VOAs	
1,4-Dioxane	-	2-1L Amber glass	
Perchlorate	-	1-250 plastic	
Total PPM + Mercury	HNO_3	1-500 plastic	
Dissolved PPM + Mercury	HNO_3	1-500 plastic	
Radium	HNO_3	3-1L plastic	
Hex Chrome	-	1-125ml plastic	1250

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: DMW-3D
DATE: 5/14/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1145	15.20	–	–	–	–	–	–	–	–	Begin Purge
1150	15.20	100	4.63	0.495	1405	3.89	14.02	229	0.304	
1155	15.20	100	4.39	0.295	1905	2.26	13.36	247	0.180	
1200	15.20	100	4.71	0.034	11964	3.55	12.98	235	0.021	
1205	15.20	100	4.65	0.035	5501	3.15	12.83	242	0.023	
1210	15.20	100	4.62	0.054	1405	3.06	12.80	245	0.038	
1215	15.20	100	4.52	0.102	1090	2.64	12.81	254	0.064	
1220	15.20	100	4.44	0.143	547	2.53	13.15	265	0.097	
1225	15.20	100	4.41	0.157	522	2.45	12.97	268	0.103	
1230	15.20	100	4.40	0.166	589	2.42	12.93	268	0.110	
1235	–	–	–	–	–	–	–	–	–	
1300										sample and purge

SIGNATURE(S): Dustin Otto

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW4D-050312
Sample Location: DMW4D
Sampled By: DLM
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/3/12								
Time: 1046								ORP
Method: Low Flow	Clear	3.93	1.67	13.20	43.2	1.82	0.8	355

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/3/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 76.3								
Static Water Level (WL): 19.48								
One Casing Volume(gal/L):								
Start Purge (hrs): 1006								
End Purge (hrs): 1106								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40 mL glass vials	
1,4-Dioxane	—	2-1L amber glass bottles	
Perchlorate	—	1-250mL plastic bottle	
Total PPM+Hg	HNO_3	1-500mL plastic bottle	
Dissolved PPM+Hg	HNO_3	1-500 mL plastic bottle	
Hex. Chrom.	—	1-125 mL plastic bottle	1249

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s): Daniel J Mucha

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-DMW4D-050312
DATE: 5/3/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.) ±0.1	S. Cond. (mS/cm) ±3%	Turb. (NTU) ±10	DO (mg/L) ±10%	Temp. (Celcius) ±3%	ORP mV ±10%	Salinity % or ppt	Comments
1006	19.48	—	—	—	—	—	—	—	—	Begin Purge
1011	19.53	100	3.63	1.68	100	8.77	13.69	325	0.8	
1016	19.54	100	3.65	1.66	72.8	4.33	13.37	345	0.8	
1021	19.55	100	3.79	1.67	98.6	2.90	13.17	348	0.8	
1026	19.57	100	3.88	1.68	99.7	2.33	13.03	348	0.8	
1031	19.58	120	3.91	1.68	74.9	2.13	13.07	350	0.8	
1036	19.60	120	3.92	1.68	59.0	1.96	13.05	352	0.8	
1041	19.62	120	3.92	1.68	49.5	1.92	13.06	354	0.8	
1046	19.63	120	3.93	1.67	43.2	1.82	13.20	355	0.8	Sample
1106	19.67	—	—	—	—	—	—	—	—	End Purge

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW6D-050312
Sample Location: DMW6D
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Date: 5/3/12								
Time: 1300								
Method: Bladder Pump	Clear	4.53	0.547	14.68	40.3	3.15	206	0.3

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/3/12								
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 17.79								
One Casing Volume(gal/L):								
Start Purge (hrs): 1210								
End Purge (hrs): 1320								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Rad 224, 226, & 228	HNO_3	3-1L plastics	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1320

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-DMWGD-050312
DATE: 5/3/12

Time (Hrs)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1210	17.79	—	—	—	—	—	—	—	—	
1215	17.84	200	4.52	0.551	154	3.31	14.59	211	0.3	
1220	17.93	200	4.53	0.549	96.2	3.30	14.48	209	0.3	
1225	18.08	200	4.54	0.546	61.3	3.30	14.45	206	0.3	
1230	18.08	200	4.54	0.541	51.0	3.18	14.40	205	0.3	
1235	18.08	200	4.52	0.542	48.7	3.17	14.53	205	0.5	
1240	18.08	200	4.51	0.544	41.4	3.16	14.56	204	0.3	
1245	18.08	200	4.52	0.545	40.8	3.32	14.65	205	0.3	
1250	18.08	200	4.53	0.546	40.2	3.46	14.70	206	0.3	
1255	18.08	200	4.53	0.547	40.4	3.30	14.69	206	0.3	
1300	18.08	200	4.53	0.547	40.3	3.15	14.68	206	0.3	
Sampling Vials, Total & Dissolved Metals, Perchlorate, 1,4-Dioxane, Red 234, 226, 228 & Hexavalent Chromium										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-DMW8D-050212
Sample Location: DMW8D
Sampled By: SBC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Date: 5/2/12								
Time: 1345								
Method: ~~Dow~~ Bladder Pump	Clear	4.02	0.510	14.43	2.06	1.18	230	0.2

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/2/12								
Method: Bladder Pump		See Low Flow						
Monitor Reading (ppm): –								
Well Casing Diameter & Material: 2" PVC		Purge Data Sheet						
Total Well Depth (TD): –								
Static Water Level (WL): 15.14								
One Casing Volume(gal/L):								
Start Purge (hrs): 1310								
End Purge (hrs):								
Total Purge Time (min):								
Total Vol. Purged (gal/L):								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	–	1-250 mL plastic	✓
1,4-Dioxane	–	2-1L Ambers	✓
Hexavalent Chromium	–	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1410

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-0MW/8D-050212
DATE: 5/2/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1310	15.14	—	—	—	—	—	—	—	—	
1315	15.21	300	3.59	0.696	5.73	5.99	14.73	294	0.3	
1320	15.20	300	3.86	0.658	5.42	3.11	14.68	251	0.3	
1325	15.20	300	4.02	0.664	2.31	1.49	14.51	246	0.3	
1330	15.20	300	4.03	0.590	2.16	1.42	14.47	243	0.3	
1335	15.20	300	4.03	0.545	2.14	1.27	14.42	236	0.3	
1340	15.20	300	4.02	0.521	2.10	1.22	14.43	233	0.2	
1345	15.20	300	4.02	0.510	2.06	1.18	14.43	230	0.2	
Sampling VOCs, Total + Dissolved metals, 1,4 Dioxane, Perchlorate, + HEX Chrom.										

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: Mrw9D-050912
Sample Location: Mrw9D
Sampled By: WHT P.
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5-9-12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Time: 1338								
Method: Bladder pump								

PURGE DATA:

Date: 5-9-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Bladder pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See Low Flow Purge Data Sheet					
Total Well Depth (TD):								
Static Water Level (WL): 9.05								
One Casing Volume(gal/L):								
Start Purge (hrs): 1235								
End Purge (hrs): 1333								
Total Purge Time (min): 58								
Total Vol. Purged (gal/L): 5.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected

OBSERVATIONS / NOTES:

Ferrous & Total Iron 10 ppm (mg/L) @ 1338

Circle if Applicable:		Signature(s):
MS/MSD	Duplicate ID No.:	WHT P.

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112FC04021-02

WELL ID.: DMW ED-050912
DATE: 5-9-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1235	9.05	—	—	—	—	—	—	—	—	Initial, no odor
1238	9.10	300	3.80	0.378	17.4	9.41	15.01	290	0.2	Slightly Cloudy
1243	9.10	300	4.00	0.338	8.0	3.21	14.21	291	0.2	
1248	9.10	300	4.39	0.345	10.0	1.83	13.70	262	0.2	
1258	9.10	300	4.41	0.357	0.0	1.52	13.63	246	0.2	
1308	9.10	300	4.43	0.354	9.0	1.48	13.55	240	0.2	
1318	9.10	300	4.45	0.351	12.3	1.45	13.50	237	0.2	
1328	9.10	300	4.47	0.349	12.0	1.43	13.47	234	0.2	
1333	9.10	300	4.50	0.349	12.6	1.45	13.50	233	0.2	

SIGNATURE(S): [signature]

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: MSA-MW14D-050112
Sample Location: MW14D
Sampled By: SBC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/1/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1300	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Peri Pump	Clear	5.14	0.023	14.86	21.0	2.07	168	0.0

PURGE DATA:

Date: 5/1/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Peri Pump			See Low Flow					
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC			Purge Data Sheet					
Total Well Depth (TD): 137.4								
Static Water Level (WL): NM								
One Casing Volume(gal/L):								
Start Purge (hrs): 1215								
End Purge (hrs): 1330								
Total Purge Time (min): 85								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL VIALS	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Amber	✓
Perchlorate	—	1-250 mL plastic	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1330

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021

WELL ID.: MSA-MW14D-050112
DATE: 5/1/12

Time (hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1215	NM	—	—	—	—	—	—	—	—	
1220	↓	250	6.04	0.117	11.8	7.72	21.30	64	0.1	
1225		250	5.26	0.070	12.2	2.97	15.83	120	0.0	
1230		250	5.16	0.026	14.8	2.50	15.01	131	0.0	
1235		250	5.14	0.025	12.8	2.42	14.96	138	0.0	
1240		250	5.13	0.024	20.0	2.30	14.82	144	0.0	
1245		250	5.14	0.023	17.9	2.58	14.73	151	0.0	
1250		250	5.14	0.023	16.2	2.75	14.67	158	0.0	
1255		250	5.14	0.023	19.4	2.40	14.73	161	0.0	
1300		250	5.14	0.023	21.0	2.07	14.86	168	0.0	

Sampling VOCs, Total & Diss Metals, 1,4-Dioxane, Perchlorate, & Hex chrom

SIGNATURE(S):

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Marion State Airport
Project No.: 112IC04021-02

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW15D-041812
Sample Location: MW15D
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-18-12 / Time: 1535 / Method: Peristaltic pump	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
	Clear	4.84	0.055	12.01	4.0	1.53	0.0	256

PURGE DATA:

Date: 4-18-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			SEE	low	flow	purge		
Total Well Depth (TD):								
Static Water Level (WL): 6.06			Data	Sheet				
One Casing Volume(gal/L):								
Start Purge (hrs): 1443								
End Purge (hrs): 1530								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.0								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs (EPA 8260B)	HCl	3 - 40 ml VOA	✓
1,4 Dioxane (EPA 8270C SIM)	—	2 - 1L Ambers	✓
Perchlorate (EPA 314)	—	1 - 250 ml Poly	✓
Total PPM (EPA 6020B)	HNO3	1 - 500 ml Poly	✓
Diss PPM (EPA 6020B)	HNO3	1 - 500 ml Poly	✓
~~Gross Alpha (EPA 900.0)~~	—	~~2 - 40 ml VOA~~	
~~Ra~~	—	~~2 - 1L Ambers~~	
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walter P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MSA-MW15D-041812
DATE: 4-18-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1443	6.60	—	—	—	—	—	—	—	—	Initial, no odor
1445	6.63	300	5.47	0.143	14.5	2.38	12.36	237	0.1	Slighty cloudy
1450	6.63	200	5.56	0.146	10.1	2.00	12.18	234	0.1	Clean water
1455	6.63	200	5.37	0.110	8.4	1.79	12.12	238	0.1	
1505	6.63	200	5.18	0.087	7.6	1.64	12.08	244	0.0	
1515	6.63	200	4.91	0.062	5.0	1.60	12.04	253	0.0	
1520	6.63	200	4.87	0.057	4.2	1.58	12.02	255	0.0	
1525	6.63	200	4.85	0.056	4.1	1.53	12.04	255	0.0	
1530	6.63	200	4.84	0.055	4.0	1.53	12.01	256	0.0	

Well parameters Stabilize

Sampling Begins

SIGNATURE(S): Walter E Pa

PAGE 2 OF 2

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: MSA-MW16D-050912
Sample Location: MW16D
Sampled By: SBC
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Date: 5/9/12	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Time: 1410								
Method: Peri Pump	clear	4.77	0.035	13.44	14.9	1.18	145	0.0

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/9/12								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 70.60								
Static Water Level (WL): 7.58								
One Casing Volume(gal/L):								
Start Purge (hrs): 1320								
End Purge (hrs): 1445								
Total Purge Time (min): 85								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Radium 224, 226, + 228	HNO_3	3-1L plastic	✓
Hexavalent Chromium	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom collected @ 1440

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-MW16D-050912
DATE: 5/9/12

	Water Level (ft below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1320	7.58	—	—	—	—	—	—	—	—	
1325	7.78	250	5.55	0.047	>1000	6.81	15.26	144	0.0	
1330	7.80	250	5.96	0.126	>1000	1.03	13.79	76	0.1	
1335	7.82	250	5.90	0.103	>1000	1.02	13.66	62	0.0	
1340	7.83	250	5.52	0.059	412	1.05	13.59	90	0.0	
1345	7.82	250	4.92	0.038	179	1.37	13.46	141	0.0	
1350	7.82	250	4.74	0.036	35.2	1.19	13.47	143	0.0	
1355	7.82	250	4.75	0.036	27.4	1.21	13.45	143	0.0	
1400	7.82	250	4.73	0.035	21.3	1.19	13.46	144	0.0	
1405	7.82	250	4.74	0.035	20.4	1.18	13.45	145	0.0	
1410	7.82	250	4.77	0.033	14.9	1.18	13.44	145	0.0	
Sampling VOCs, Total + Dissolved Metals, 1,4-Dioxane, Perchlorate, Rad 224, 226, 228, + Hex Chrom.										

S).

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112SC04021-03

Sample ID No.: MSA-MW190-04[illegible]12
Sample Location: MW190
Sampled By: Walt P
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 4-19-12	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Time: 1107								
Method: Peristaltic pump	Clear	4.15	0.659	14.00	4.1	1.11	0.3	287

PURGE DATA:

Date: 4-19-12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC			See low flow purge					
Total Well Depth (TD):								
Static Water Level (WL): 6.55			Data Sheet					
One Casing Volume(gal/L):								
Start Purge (hrs): 1015								
End Purge (hrs): 1102								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 7.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PPM	HNO3	1 - 500 ml Poly	✓
Diss PPM	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Hex Chrom 1245

Circle if Applicable:

MS/MSD

Duplicate ID No.:

Signature(s):

Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC01021-02

WELL ID.: MSA-MW19D-041912
DATE: 4-19-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1015	6.55	—	—	—	—	—	—	—	—	Initial, no odor
1017	6.56	300	4.75	0.658	166	3.82	14.47	264	0.3	cloudy water
1022	6.56	200	4.04	0.683	35.1	1.70	13.91	297	0.3	Slightly cloudy
1027	6.56	200	4.04	0.679	21.2	1.43	13.86	300	0.3	
1037	6.56	200	4.09	0.676	7.7	1.26	13.94	295	0.3	clean water
1047	6.56	200	4.13	0.664	6.3	1.20	13.94	291	0.3	
1052	6.56	200	4.13	0.662	4.1	1.15	13.97	290	0.3	
1057	6.56	200	4.14	0.660	4.0	1.12	13.94	288	0.3	
1102	6.56	200	4.15	0.659	4.1	1.11	14.00	287	0.3	
			Well parameters Stabilized							
			Sampling Begins							

SIGNATURE(S): Walter E Re

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112EC04021-02

Sample ID No.: MSA-MW20D-042012
Sample Location: MW20D
Sampled By: Walt P
C.O.C. No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Date: 4-20-12								
Time: 1342								
Method: Peristaltic pump	Clear	4.68	0.385	16.30	10.0	4.18	0.2	185

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 4-20-12								
Method: Peristaltic pump								
Monitor Reading (ppm): 0.0								
Well Casing Diameter & Material Type: 2" PVC		See Low Flow Purge Data Sheet						
Total Well Depth (TD):								
Static Water Level (WL): 10.65								
One Casing Volume(gal/L):								
Start Purge (hrs): 1250								
End Purge (hrs): 1337								
Total Purge Time (min): 47								
Total Vol. Purged (gal/L): 2.5								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3 - 40 ml VOA	✓
Total PCBs	HNO3	1 - 500 ml Poly	✓
Diss PCBs	HNO3	1 - 500 ml Poly	✓
1,4 Dioxane	—	2 - 1L Ambers	✓
Perchlorate	—	1 - 250 ml Poly	✓
Hex Chrom	—	1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MSA-MW 20D-042012
DATE: 4-20-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1250	10.65	—	—	—	—	—	—	—	—	Initial, no odor Cloudy water
1252	10.70	300	5.84	0.458	331	7.50	18.10	65	0.2	
1257	10.70	200	5.00	0.421	202	6.17	16.94	135	0.2	
1302	10.70	200	4.69	0.403	169	6.05	16.46	161	0.2	
1312	10.70	200	4.61	0.390	104	5.84	16.11	177	0.2	
1322	10.70	200	4.66	0.388	23.2	5.75	16.40	191	0.2	@ Clean water
1327	10.70	200	4.67	0.389	10.2	4.62	16.15	194	0.2	
1332	10.70	200	4.68	0.386	10.0	4.20	16.25	189	0.2	
1337	10.70	200	4.68	0.385	10.0	4.18	16.30	185	0.2	

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MW-22D
Sample Location: MSA
Sampled By: DC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Date: 5/15/12								
Time: 1010								
Method: Low Flow	Clear	5.8	0.22	15.46	21.8	1.23	81	0.143

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/15/12								
Method: Low flow								
Monitor Reading (ppm): –								
Well Casing Diameter & Material: 2" PVC								
Total Well Depth (TD): –								
Static Water Level (WL): 8.42								
One Casing Volume(gal/L): –								
Start Purge (hrs): 932								
End Purge (hrs): 1055								
Total Purge Time (min): 80								
Total Vol. Purged (gal/L): 8L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40ml VOAs	
Dioxane	–	2-1L Amber glass	
Perchlorate	–	1-250ml plastic	
Total PPM + Hg	HNO_3	1-500ml plastic	
Dissolved PPM + Hg	HNO_3	1-500ml plastic	
~~GRO/DRO~~	~~—~~	~~1-1L Amber glass~~	
~~GRO/DRO~~	~~HCl~~	~~3-40ml VOAs~~	
Hex Chrom	–	1-125ml plastic	1240

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s): Dustin Cote

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MW-22D
DATE: 5/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
932	8.42	–	–	–	–	–	–	–	–	
940	8.50	100	6.47	0.271	33.3	1.48	16.56	74	0.177	begin purge
945	8.50	100	6.03	0.258	26.7	1.35	16.16	86	0.167	
950	8.51	100	5.83	0.230	22.2	1.27	15.85	87	0.149	
955	8.51	100	5.82	0.221	23.1	1.22	15.46	82	0.144	
1000	8.51	100	5.81	0.219	21.9	1.18	15.46	81	0.142	
1005	8.51	100	5.80	0.220	21.8	1.23	15.46	81	0.143	
1010	–	100	–	–	–	–	–	–	–	sample

SIGNATURE(S): Dustin Cole

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112G04021

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MSA-MW23D-051112
Sample Location: MW23D
Sampled By: SBL
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color Visual	pH Standard	S.C. mS/cm	Temp. °C	Turbidity NTU	DO mg/l	ORP mV	Sal %
Date: 5/11/12								
Time: 1140								
Method: Peri Pump	Clear	5.02	0.195	16.16	3.94	0.80	68	0.1

PURGE DATA:

	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Date: 5/11/12								
Method: Peri Pump		See Low Flow						
Monitor Reading (ppm): —								
Well Casing Diameter & Material 2" PVC		Purge Data Sheet						
Total Well Depth (TD): 85.77								
Static Water Level (WL): 8.07								
One Casing Volume(gal/L):								
Start Purge (hrs): 1105								
End Purge (hrs): 1200								
Total Purge Time (min): 55								
Total Vol. Purged (gal/L): 1.5 gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3-40 mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved Metals	HNO_3	1-500 mL plastic	✓
Perchlorate	—	1-250 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	
Hexavalent Chromium	—	1-250 mL plastic	

OBSERVATIONS / NOTES:

Hex Chrom collected on @

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112Eco4021

WELL ID.: MSA-MW23D-051112
DATE: 5/11/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1105	8.07	—	—	—	—	—	—	—	—	
1110	8.07	300	7.03	0.258	8.88	5.09	16.99	-83	0.1	
1115	8.07	300	6.52	0.230	8.04	3.12	16.54	-21	0.1	
1120	8.07	300	5.19	0.211	7.68	0.96	16.28	47	0.1	
1125	8.07	300	5.09	0.201	6.32	0.91	16.26	55	0.1	
1130	8.07	300	5.07	0.194	4.16	0.85	16.22	62	0.1	
1135	8.07	300	5.01	0.195	4.08	0.82	16.17	67	0.1	
1140	8.07	300	5.02	0.195	3.94	0.80	16.16	68	0.1	
Sampling VOCs, Total & Dissolved Metals, 1,4-Dioxane, Perchlorate, & Hex Chrom										

SIGNATURE(S): [signature]

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Page___ of ___

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.:
Sample Location: MW27D
Sampled By: DC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

	Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other
Date: 5/4/12								
Time:								
Method: Low Flow	Clear	4.80	0.024	14.49	7.43	2.98	0.015	

PURGE DATA:

	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Date: 5/4/12								
Method: Low Flow								
Monitor Reading (ppm): N/A								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): ~~2.50~~	?							
Static Water Level (WL): 2.30								
One Casing Volume(gal/L):								
Start Purge (hrs): 1020								
End Purge (hrs): 1157								
Total Purge Time (min): 97								
Total Vol. Purged (gal/L): 2.6								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOC	HCl	3-40ml glass VOAs	
1,4 Dioxane	—	2-1L amber glass	
Perchlorate	—	1-250 mL plastic	
Total PPM + Hg	HNO_3	1-500 mL plastic	
Dissolved PPM + Hg	HNO_3	1-500 mL plastic	
Radium	HNO_3	3-1L plastic	
Hex. Chrom	—	1-125 mL plastic	

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MSA-MW27D
DATE:

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
			±0.1	±3%	<10	±10%	±3%	±10%		
1020	2.36	—	—	—	—	—	—	—	—	Begin Purge
1025	2.36	100	4.95	0.029	8.68	6.03	18.21	257	0.019	
1030	2.36	100	5.06	0.028	7.32	5.02	17.85	248	0.018	
1035	2.36	100	5.14	0.027	5.86	4.97	17.20	248	0.017	
1040	2.36	100	5.13	0.026	6.27	4.87	16.60	245	0.017	
1045	2.36	100	5.08	0.017	4.65	4.48	16.10	245	0.017	
1050	2.36	100	4.88	0.024	5.36	4.45	15.12	257	0.015	
1055	2.36	100	4.86	0.024	6.73	3.58	15.06	257	0.015	
1100	2.37	100	4.85	0.024	6.08	3.22	15.04	258	0.015	
1105	2.39	100	4.81	0.023	5.66	2.80	14.85	261	0.015	
1110	2.38	100	4.78	0.023	5.90	2.59	14.76	262	0.015	
1115	2.38	100	4.79	0.023	3.70	2.87	14.64	263	0.015	
1120	2.38	100	4.81	0.024	6.47	2.91	14.54	262	0.015	
1125	2.39	100	4.80	0.024	7.43	2.98	14.49	262	0.015	
1157	2.40	—	—	—	—	—	—	—	—	End purge

SIGNATURE(S): Jonathan Cates

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.: 112IC04021

Sample ID No.: DMSA-MW240-051612
Sample Location: MW240
Sampled By: SRC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

SAMPLING DATA:

Date: 5/16/12	Color	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Time: 1330	(Visual)	(S.U.)	(mS/cm)	(°C)	(NTU)	(mg/l)	(%)	ORP
Method: Peri Pump	Clear	4.99	0.027	18.58	2.41	6.18	0.0	239

PURGE DATA:

Date: 5/16/12	Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other
Method: Peri Pump		See Low Flow Purge Data Sheet						
Monitor Reading (ppm): —								
Well Casing Diameter & Material Type: 2" PVC								
Total Well Depth (TD): 160								
Static Water Level (WL): 7.79								
One Casing Volume(gal/L):								
Start Purge (hrs): 1255								
End Purge (hrs): 1405								
Total Purge Time (min): 70								
Total Vol. Purged (gal/L): 3gal								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	2-40mL vials	✓
Total Metals	HNO_3	1-500 mL plastic	✓
Dissolved metals	HNO_3	1-500 mL plastic	✓
1,4-Dioxane	—	2-1L Ambers	✓
Radium 224, 226, & 228	HNO_3	3-1L plastics	✓
Perchlorate	—	1-250 mL plastic	✓
Hex Chrom	—	1-250 mL plastic	✓

OBSERVATIONS / NOTES:

Hex Chrom Collected @ 1400

Circle if Applicable:

MS/MSD	Duplicate ID No.:

Signature(s):

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER: 112IC04021
WELL ID.: MSA-MW29D-051612
DATE: 5/16/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1255	7.79	—	—	—	—	—	—	—	—	
1300	8.01	250	5.26	0.113	21.5	6.06	24.17	220	0.1	
1305	8.02	250	5.21	0.054	10.83	5.02	22.51	222	0.0	
1310	8.02	250	5.14	0.040	3.50	5.35	20.01	225	0.0	
1315	8.02	250	5.08	0.036	2.84	5.46	19.43	229	0.0	
1320	8.02	250	5.03	0.032	2.62	5.56	18.71	234	0.0	
1325	8.02	250	5.01	0.029	2.56	5.01	18.65	236	0.0	
1330	8.02	250	4.99	0.027	2.41	6.18	18.58	239	0.0	
Sampling for VOCs, Total + Dissolved Metals, Perchlorate, 1,4-Dioxane, Radium 224, 226, & 228, Hex Chrom.										

SIGNATURE(S):

PAGE 1 OF 1

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: MSA
Project No.:

[] Domestic Well Data
[X] Monitoring Well Data
[] Other Well Type:
[] QA Sample Type:

Sample ID No.: MW-30D
Sample Location: MSA
Sampled By: DC
C.O.C. No.:
Type of Sample:
[] Low Concentration
[] High Concentration

SAMPLING DATA:

Date: 5/15/12	Color	pH	S.C.	Temp.	Turbidity	DO	ORP	Sal
Time: 1447	Visual	Standard	mS/cm	°C	NTU	mg/l	mV	%
Method: Low Flow	Clear	4.65	0.03	16.32	11.5	5.46	282	0.02

PURGE DATA:

Date: 5/15/12	Volume	pH	S.C.	Temp. (C)	Turbidity	DO	Salinity	TDS
Method: Low Flow								
Monitor Reading (ppm): –								
Well Casing Diameter & Material								
Total Well Depth (TD): 100+								
Static Water Level (WL): 4.12								
One Casing Volume(gal/L): –								
Start Purge (hrs): 1412								
End Purge (hrs): 1510								
Total Purge Time (min): 60								
Total Vol. Purged (gal/L): 6L								

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3/ 40ml VOAs	
Dioxane	–	2- 1L Amber glass	
Perchlorate	–	1-125ml plastic	
Total PPM+Hg	HNO_3	1-500ml plastic	
Dissolved PPM+Hg	HNO_3	1-500ml plastic	
Hex Chromium	–	1-125ml plastic	1505

OBSERVATIONS / NOTES:

Circle if Applicable:

MS/MSD | Duplicate ID No.:

Signature(s):

Dustin Etz

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: MSA
PROJECT NUMBER:

WELL ID.: MW-30D
DATE: 5/15/12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1412	4.12	–	–	–	–	–	–	–	–	
1417	4.12	100	4.55	0.030	24.5	4.76	21.00	290	0.020	begin purge
1422	4.11	100	4.68	0.031	20.1	5.99	16.60	288	0.020	
1427	4.11	100	4.65	0.031	15.5	5.78	16.49	288	0.020	
1432	4.11	100	4.66	0.031	14.9	5.51	16.35	289	0.020	
1437	4.11	100	4.66	0.031	12.3	5.48	16.39	288	0.020	
1442	4.11	100	4.65	0.030	11.5	5.46	16.32	282	0.020	
1447	4.11	100	–	–	–	–	–	–	–	
1510	–	–	–	–	–	–	–	–	–	sample and purge
1505										Hex Chrom

SIGNATURE(S): Dustin Tate

Tetra Tech NUS, Inc.

GROUNDWATER SAMPLE LOG SHEET

Project Site Name: Martin State Airport
Project No.: 112FC04521-02

[ ] Domestic Well Data
[X] Monitoring Well Data
[ ] Other Well Type:
[ ] QA Sample Type:

Sample ID No.: MW31D-051012
Sample Location: MW31D
Sampled By: Walt P
C.O.C. No.:
Type of Sample:
[ ] Low Concentration
[ ] High Concentration

SAMPLING DATA:

Date: 5-10-12
Time: 1242
Method: Mastersonpump

Color (Visual)	pH (S.U.)	S.C. (mS/cm)	Temp. (°C)	Turbidity (NTU)	DO (mg/l)	Salinity (%)	Other ORP
Cloudy	6.41	0.148	13.89	141	1.42	0.1	-31

PURGE DATA:

Date: 5-10-12
Method: Masoon pump
Monitor Reading (ppm): 0.0
Well Casing Diameter & Material Type: 2" PVC
Total Well Depth (TD):
Static Water Level (WL): 3.35
One Casing Volume(gal/L):
Start Purge (hrs): 1154
End Purge (hrs):
Total Purge Time (min):
Total Vol. Purged (gal/L):

Volume	pH	S.C.	Temp.	Turbidity	DO	Salinity	Other

See Low flow Purge Data Sheet

SAMPLE COLLECTION INFORMATION:

Analysis	Preservative	Container Requirements	Collected
VOCs	HCl	3x3 - 40-ml VOA	✓
Total PPM	HNO3	3x1 - 500 ml Poly	✓
Diss PPM	HNO3	3x1 - 500 ml Poly	✓
1,4 Dioxane	—	3x2 - 1L Ambers	✓
Perchlorate	—	3x1 - 250 ml Poly	✓
Hex Chrom	—	3x1 - 250 ml Poly	✓

OBSERVATIONS / NOTES:

Circle if Applicable:
MS/MSD
Duplicate ID No.:

Signature(s):
Walt P

LOW FLOW PURGE DATA SHEET

PROJECT SITE NAME: Martin State Airport
PROJECT NUMBER: 112IC04021-02

WELL ID.: MSA-MW31D-051012
DATE: 5-10-12

Time (Hrs.)	Water Level (Ft. below TOC)	Flow (mL/Min.)	pH (S.U.)	S. Cond. (mS/cm)	Turb. (NTU)	DO (mg/L)	Temp. (Celcius)	ORP mV	Salinity % or ppt	Comments
1151	3.35	—	—	—	—	—	—	—	—	Initial, no odor
1152	4.15	300	6.59	0.133	5.0	5.00	14.80	38	0.1	Clear water
1157	4.15	300	6.57	0.136	3.4	2.52	14.42	38	0.1	Clear water
1202	4.15	300	6.38	0.164	206	1.72	14.06	27	0.1	Cloudy water
1212	4.15	300	6.49	0.191	159	1.49	13.94	-13	0.1	
1222	4.15	300	6.38	0.165	120	1.40	13.86	-29	0.1	
1227	4.15	300	6.41	0.150	112	1.42	13.93	-31	0.1	
1232	4.15	300	6.41	0.149	110	1.42	13.93	-30	0.1	
1237	4.15	300	6.41	0.148	111	1.42	13.89	-31	0.1	

Well Parameters Stabilize

Sampling Begins

SIGNATURE(S): [signature]

APPENDIX C—ANALYTICAL DATA TABLE

FirstOfCAS	FirstOfUNITS	parameter	fraction	Pos_detects	No_samples	MinOfVAL_RES	MinQual	MaxOfVAL_RES	MaxQual
		Explosives							
121-82-4	UG/L	RDX	EXP	0	9				
		Inorganics							
7440-36-0	UG/L	ANTIMONY	M	14	71	0.13	J	1.8	J
7440-38-2	UG/L	ARSENIC	M	66	71	0.52	J	49	
7440-39-3	UG/L	BARIUM	M	63	71	4.9	J	1300	
7440-41-7	UG/L	BERYLLIUM	M	37	71	0.2	J	16	
7440-41-7	UG/L	BERYLLIUM	M	37	71	0.2	J	16	
7440-43-9	UG/L	CADMIUM	M	36	71	0.13	J	1000	
7440-70-2	UG/L	CALCIUM	M	6	6	9100		200000	
7440-47-3	UG/L	CHROMIUM	M	62	71	0.71	J	150	
7440-48-4	UG/L	COBALT	M	69	71	0.12	J	570	
7440-50-8	UG/L	COPPER	M	46	71	1	J	700	
7439-89-6	UG/L	IRON	M	6	6	11000		170000	
7439-92-1	UG/L	LEAD	M	48	71	0.19	J	14	
7439-95-4	UG/L	MAGNESIUM	M	6	6	6600		210000	
7439-96-5	UG/L	MANGANESE	M	6	6	950		5000	
7439-97-6	UG/L	MERCURY	M	15	71	0.12	J	1.7	
7439-98-7	UG/L	MOLYBDENUM	M	6	71	1	J	5	J
7440-02-0	UG/L	NICKEL	M	68	71	0.97	J	570	
7440-09-7	UG/L	POTASSIUM	M	5	6	5800		43000	
7782-49-2	UG/L	SELENIUM	M	38	71	0.6	J	67	
14808-60-7	UG/L	SILICON DIOXIDE	M	6	6	4000		36000	
7440-22-4	UG/L	SILVER	M	5	71	0.09	J	0.47	J
7440-23-5	UG/L	SODIUM	M	6	6	11000		590000	
7440-28-0	UG/L	THALLIUM	M	0	71				
7440-33-7	UG/L	TUNGSTEN	M	2	71	9.9	J	14	
7440-62-2	UG/L	VANADIUM	M	60	71	0.5	J	210	
7440-66-6	UG/L	ZINC	M	48	71	6.2	J	6800	
		Inorganics, Filtered							
7440-36-0	UG/L	ANTIMONY	MF	4	71	0.14	J	1.8	J
7440-38-2	UG/L	ARSENIC	MF	62	71	0.55	J	48	
7440-39-3	UG/L	BARIUM	MF	59	71	4.7	J	1500	
7440-41-7	UG/L	BERYLLIUM	MF	40	71	0.2	J	7.6	
7440-43-9	UG/L	CADMIUM	MF	28	71	0.13	J	1100	
7440-47-3	UG/L	CHROMIUM	MF	44	71	0.73	J	86	
7440-48-4	UG/L	COBALT	MF	67	71	0.11	J	550	
7440-50-8	UG/L	COPPER	MF	30	71	0.57	J	300	
7439-92-1	UG/L	LEAD	MF	22	71	0.19	J	5.6	J
7439-97-6	UG/L	MERCURY	MF	2	71	0.12	J	0.41	
7439-98-7	UG/L	MOLYBDENUM	MF	1	71	5.8	J	5.8	J
7440-02-0	UG/L	NICKEL	MF	68	71	0.34	J	570	
7782-49-2	UG/L	SELENIUM	MF	33	71	0.64	J	66	

7440-22-4	UG/L	SILVER	MF	0	71				
7440-28-0	UG/L	THALLIUM	MF	0	71				
7440-33-7	UG/L	TUNGSTEN	MF	2	71	8.6	J	18	
7440-62-2	UG/L	VANADIUM	MF	42	71	0.46	J	180	
7440-66-6	UG/L	ZINC	MF	44	71	2.4	J	5000	
		Miscellaneous Parameters							
TTNUS008	MG/L	ALKALINITY	MISC	5	6	32		430	
TTNUS493	MG/L	AMMONIA-N	MISC	5	6	0.84		17	
16887-00-6	MG/L	CHLORIDE	MISC	6	6	49		760	
TTNUS019	MG/L	DISSOLVED ORGANIC CARBON	MISC	6	6	2.5		43	
18540-29-9	UG/L	HEXAVALENT CHROMIUM	MISC	8	69	0.013	J	0.547	
TTNUS495	MG/L	NITRATE-N	MISC	2	6	0.032	J	0.18	
TTNUS496	MG/L	NITRITE-N	MISC	0	6				
TTNUS032	MG/L	ORTHOPHOSPHATE	MISC	3	6	0.056	J	0.19	J
14797-73-0	UG/L	PERCHLORATE	MISC	14	71	0.11	J	4.6	
14808-79-8	MG/L	SULFATE	MISC	6	6	65		1700	
TTNUS040	MG/L	TOTAL DISSOLVED SOLIDS	MISC	6	6	170		3300	

		Semivolatile Organics							
123-91-1	UG/L	1,4-DIOXANE	OS	40	71	0.6	J	300	
		Volatile Organics							
541-73-1	UG/L	CIS-1,2-DICHLOROETHENE	OV	57	81	0.41	J	27000	
111-13-7	UG/L	VINYL CHLORIDE	OV	52	81	0.33	J	11000	
TIC	UG/L	TRICHLOROETHENE	OV	46	81	0.24	J	16000	
TIC	UG/L	BENZENE	OV	26	81	0.13	J	280	J
591-78-6	UG/L	TRANS-1,2-DICHLOROETHENE	OV	21	81	0.3	J	250	
96-18-4	UG/L	1,2-DICHLOROETHANE	OV	15	81	0.22	J	23	J
78-87-5	UG/L	CHLOROBENZENE	OV	13	81	0.24	J	250	
96-12-8	UG/L	ACETONE	OV	10	81	1.2	J	8.3	J
106-93-4	UG/L	ACETONE	OV	10	81	1.2	J	8.3	J
79-34-5	UG/L	1,1-DICHLOROETHENE	OV	9	81	0.2	J	220	J
95-49-8	UG/L	TOLUENE	OV	9	81	0.24	J	1800	
108-67-8	UG/L	CHLOROFORM	OV	6	81	0.2	J	220	J
75-35-4	UG/L	1,2,4-TRICHLOROBENZENE	OV	5	81	2.6	J	540	
87-61-6	UG/L	1,2-DICHLOROBENZENE	OV	4	81	0.13	J	4.3	J
95-63-6	UG/L	2-BUTANONE	OV	4	80	0.73	J	3.3	J
95-50-1	UG/L	CARBON DISULFIDE	OV	4	81	0.17	J	0.57	J
107-06-2	UG/L	CARBON TETRACHLORIDE	OV	3	81	6.4	J	41	J
123-91-1	UG/L	M+P-XYLENES	OV	3	81	0.61	J	6900	
TIC	UG/L	O-XYLENE	OV	3	81	0.4	J	450	
TIC	UG/L	TOTAL XYLENES	OV	3	81	1	J	7400	
630-20-6	UG/L	1,1,1-TRICHLOROETHANE	OV	2	81	59	J	130	J
71-55-6	UG/L	1,1-DICHLOROETHANE	OV	2	81	0.84	J	51	J
76-13-1	UG/L	1,2,3-TRICHLOROBENZENE	OV	2	81	66	J	130	J
142-28-9	UG/L	ETHYLBENZENE	OV	2	81	0.21	J	1100	
594-20-7	UG/L	METHYLENE CHLORIDE	OV	2	81	28	J	49	J
75-34-3	UG/L	1,2,3-TRIMETHYLBENZENE	OV	1	81	34	J	34	J
563-58-6	UG/L	1,2,4-TRIMETHYLBENZENE	OV	1	81	99	J	99	J
526-73-8	UG/L	1,3-DICHLOROBENZENE	OV	1	81	1.7	J	1.7	J
120-82-1	UG/L	1,4-DICHLOROBENZENE	OV	1	81	2.1	J	2.1	J
106-46-7	UG/L	HEXACHLOROBUTADIENE	OV	1	81	210	J	210	J
71-36-3	UG/L	METHYL TERT-BUTYL ETHER	OV	1	81	0.22	J	0.22	J
108-88-3	UG/L	NAPHTHALENE	OV	1	81	2.1		2.1	
78-93-3	UG/L	TERT-BUTYLBENZENE	OV	1	81	0.33	J	0.33	J
110-82-7	UG/L	1,1,1,2-TETRACHLOROETHANE	OV	0	81				
TIC	UG/L	1,1,2,2-TETRACHLOROETHANE	OV	0	81				
TIC	UG/L	1,1,2-TRICHLOROTRIFLUOROETHANE	OV	0	81				
631-64-1	UG/L	1,1-DICHLOROPROPENE	OV	0	81				
74-95-3	UG/L	1,2,3-TRICHLOROPROPANE	OV	0	81				
79-43-6	UG/L	1,2-DIBROMO-3-CHLOROPROPANE	OV	0	81				
75-71-8	UG/L	1,2-DIBROMOETHANE	OV	0	81				
TIC	UG/L	1,2-DICHLOROPROPANE	OV	0	81				

108-20-3	UG/L	1,3-DICHLOROPROPANE	OV	0	81				
141-78-6	UG/L	2,2-DICHLOROPROPANE	OV	0	81				
637-92-3	UG/L	2-CHLOROETHYL VINYL ETHER	OV	0	77				
100-41-4	UG/L	2-CHLOROTOLUENE	OV	0	81				
TIC	UG/L	2-HEXANONE	OV	0	81				
TIC	UG/L	4-CHLOROTOLUENE	OV	0	81				
87-68-3	UG/L	4-ISOPROPYLTOLUENE	OV	0	81				
75-28-5	UG/L	4-METHYL-2-PENTANONE	OV	0	81				
TTNUS054	UG/L	BROMOBENZENE	OV	0	81				
108-87-2	UG/L	BROMOCHLOROMETHANE	OV	0	81				
TIC	UG/L	BROMODICHLOROMETHANE	OV	0	81				
1634-04-4	UG/L	BROMOFORM	OV	0	81				
75-09-2	UG/L	BROMOMETHANE	OV	0	81				
104-51-8	UG/L	CHLORODIBROMOMETHANE	OV	0	81				
103-65-1	UG/L	CHLOROETHANE	OV	0	81				
91-20-3	UG/L	CHLOROMETHANE	OV	0	81				
95-47-6	UG/L	CIS-1,3-DICHLOROPROPENE	OV	0	81				
135-98-8	UG/L	DIBROMOMETHANE	OV	0	81				
994-05-8	UG/L	DICHLORODIFLUOROMETHANE	OV	0	81				
98-06-6	UG/L	DIISOPROPYL ETHER	OV	0	81				
75-65-0	UG/L	ETHYL TERT-BUTYL ETHER	OV	0	81				
127-18-4	UG/L	ISOPROPYLBENZENE	OV	0	81				
TIC	UG/L	N-BUTYLBENZENE	OV	0	81				
109-99-9	UG/L	N-PROPYLBENZENE	OV	0	81				
1330-20-7	UG/L	SEC-BUTYLBENZENE	OV	0	81				
156-60-5	UG/L	STYRENE	OV	0	81				
10061-02-6	UG/L	TERT-AMYL METHYL ETHER	OV	0	81				
76-03-9	UG/L	TETRACHLOROETHENE	OV	0	81				
79-01-6	UG/L	TRANS-1,3-DICHLOROPROPENE	OV	0	81				
75-01-4	UG/L	TRICHLOROFLUOROMETHANE	OV	0	81				
		ACIDS							
110-75-8	UG/L	TERTIARY-BUTYL ALCOHOL	OV	3	3	4.8	J	6.6	J
98-82-8	UG/L	BROMOACETIC ACID	OV	0	1				
142-96-1	UG/L	CHLOROACETIC ACID	OV	0	1				
TIC	UG/L	DIBROMOACETIC ACID	OV	0	1				
100-42-5	UG/L	DICHLOROACETIC ACID	OV	0	1				
75-69-4	UG/L	TRICHLOROACETIC ACID	OV	0	1				
		Miscellaneous Organics							
79-08-3	UG/L	BROMOACETIC ACID	MISCO	0	2				
79-11-8	UG/L	CHLOROACETIC ACID	MISCO	0	2				
631-64-1	UG/L	DIBROMOACETIC ACID	MISCO	0	2				
79-43-6	UG/L	DICHLOROACETIC ACID	MISCO	0	2				
76-03-9	UG/L	TRICHLOROACETIC ACID	MISCO	0	2				

TENTATIVELY IDENTIFIED COMPOUNDS

TIC	UG/L	1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	OV	1	1	1.1	NJ	1.1	NJ
106-43-4	UG/L	1,3,5-TRIMETHYLBENZENE	OV	1	1	59	NJ	59	NJ
99-87-6	UG/L	1,4-DIOXANE	OV	1	1	360	NJ	360	NJ
108-10-1	UG/L	1-BUTANOL	OV	2	2	12	NJ	14	NJ
67-64-1	UG/L	2,4-DIMETHYL-1-HEPTENE	OV	1	1	1.8	NJ	1.8	NJ
67-64-1	UG/L	2-HEPTENE, 2,3-DIMETHYL-	OV	1	1	2.1	NJ	2.1	NJ
71-43-2	UG/L	2-METHYLBUTANE	OV	3	3	1.1	NJ	2	NJ
79-08-3	UG/L	2-OCTANONE	OV	1	1	1.8	NJ	1.8	NJ
108-86-1	UG/L	3-BUTEN-1-OL	OV	1	1	1.2	NJ	1.2	NJ
74-97-5	UG/L	BUTANE, 2,2,3,3-TETRAMETHYL-	OV	1	1	1.6	NJ	1.6	NJ
75-27-4	UG/L	CIS-3-NONENE	OV	1	1	2.6	NJ	2.6	NJ
75-25-2	UG/L	CYCLOHEXANE	OV	2	2	0.38	NJ	48	NJ
74-83-9	UG/L	CYCLOHEXANE	OV	8	8	0.13	NJ	7.7	NJ
TIC	UG/L	CYCLOHEXANE, 1,2,3-TRIMETHYL-	OV	1	1	6	NJ	6	NJ
56-23-5	UG/L	DIETHYL ETHER	OV	3	3	0.4	NJ	0.43	NJ
75-15-0	UG/L	DI-SEC-BUTYL ETHER	OV	1	1	1.9	NJ	1.9	NJ
79-11-8	UG/L	ETHYL ACETATE	OV	3	3	0.78	NJ	2.6	NJ
108-90-7	UG/L	FLUORODICHLOROMETHANE	OV	1	1	3.6	NJ	3.6	NJ
124-48-1	UG/L	GAMMA-BHC (LINDANE)	OV	1	1	2.9	NJ	2.9	NJ
75-00-3	UG/L	ISOBUTANE	OV	4	4	1.1	NJ	3.2	NJ
67-66-3	UG/L	METHYL CYCLOHEXANE	OV	1	1	0.52	NJ	0.52	NJ
74-87-3	UG/L	METHYL CYCLOHEXANE	OV	13	13	0.21	NJ	82	NJ
156-59-2	UG/L	N-BUTYL ETHER	OV	1	1	1.2	NJ	1.2	NJ
10061-01-5	UG/L	PENTANE, 2,3,3-TRIMETHYL-	OV	1	1	1.3	NJ	1.3	NJ
TIC	UG/L	TETRAHYDROFURAN	OV	2	2	1.3	NJ	1.9	NJ
TIC	UG/L	TETRAHYDROFURAN	OV	9	9	0.44	NJ	3.3	NJ

		Volatile Gases						
74-84-0	UG/L	ETHANE	OVG	5	6	0.74		56
74-85-1	UG/L	ETHENE	OVG	6	6	4.9		1900
74-82-8	UG/L	METHANE	OVG	6	6	180		1000
		Petroleum Hydrocarbons						
TTNUS634	UG/L	TPH (C06-C10)	PET	16	31	32	J	24000
TTNUS827	UG/L	TPH (C10-C32)	PET	7	31	240	J	4400
		Radiological						
15262-20-1	PCI/L	RADIUM-228	RAD	8	11	0.481	J	15.4
TTNUS513	PCI/L	TOTAL RADIUM	RAD	8	11	0.283	J	15.4

Location_MaxHit	Sample_MaxHit	MinND	MaxND	Avg_POS	AvgALL	StdDev
		0.036	0.038		0.018222	0.000363242
MSA-DMW-01S	MSA-DMW1S-051012	0.13	2.6	0.451428	0.223591	0.315916109
MSA-MW-24S	MSA-MW24S-050712	0.4	2.7	8.942878	8.364014	9.943875345
MSA-MW-26S	MSA-MW26S-050112	11	20	59.522222	53.716901	152.8324919
MSA-MW-18I	MSA-MW18I-051012	0.2	4	2.765135	1.530774	3.018843162
MSA-MW-16S	MSA-MW16S-050912	0.2	4	2.765135	1.530774	3.018843162
MSA-DMW-01A	MSA-DMW1A-050212	0.13	0.22	81.750555	41.483732	156.8856292
MSA-MW-18S	MSA-MW18S-051012			80183.33333	80183.33333	63737.91389
MSA-DMW-02A	MSA-DMW2A-050312	0.71	0.71	13.779516	12.077816	29.54017888
MSA-DMW-02A	MSA-DMW2A-050312	0.5	1.3	76.759855	74.610281	113.9863743
MSA-DMW-05I	MSA-DMW5I-050412	0.29	3.7	57.360869	37.393169	101.9808955
MSA-MW-18S	MSA-MW18S-051012			50166.66667	50166.66667	60562.08935
MSA-MW-31D	MSA-MW31D-051012	0.18	1.5	2.558958	1.795915	2.694940804
MSA-MW-18S	MSA-MW18S-051012			64933.33333	64933.33333	74033.14573
MSA-DMW-09I	MSA-DMW9I-050912			3125	3125	1345.26949
MSA-DMW-06D	MSA-DMW6D-050312	0.12	0.26	0.630666	0.18183	0.360204545
MSA-DMW-03S	MSA-DMW3S-051412	0.093	2.4	2.8	0.465225	0.842675386
MSA-MW-24S	MSA-MW24S-050712	0.2	2.8	55.617205	53.303802	85.39112432
MSA-MW-18S	MSA-MW18S-051012	1000	1000	16000	13416.66667	15029.89244
MSA-MW-24S	MSA-MW24S-050712	0.57	0.57	7.390526	4.087957	9.660632284
MSA-MW-18I	MSA-MW18I-051012			17166.66667	17166.66667	14094.77445
MSA-MW-31D	MSA-MW31D-051012	0.08	0.08	0.2264	0.053126	0.060788845
MSA-MW-18S	MSA-MW18S-051012			184166.6667	184166.6667	213285.1769
		0.14	3		0.202183	0.253076403
MSA-DMW-03S	MSA-DMW3S-051412	0.37	7.4	11.95	0.744859	2.033260747
MSA-MW-24S	MSA-MW24S-050712	0.44	5.8	11.087333	9.469436	28.24200665
MSA-MW-32I	MSA-MW32I-050112	2.3	39	529.641666	360.170422	957.7008537
MSA-DMW-01S	MSA-DMW1S-051012	0.13	2.6	0.5725	0.163591	0.270429794
MSA-MW-24S	MSA-MW24S-050712	0.4	2.4	8.254032	7.27183	9.259049212
MSA-MW-26S	MSA-MW26S-050112	3.2	19	63.527118	53.748591	176.6348265
MSA-MW-24S	MSA-MW24S-050712	0.2	0.2	2.0315	1.188169	1.862957947
MSA-DMW-01A	MSA-DMW1A-050212	0.13	0.54	95.041428	37.52345	158.9971087
MSA-DMW-01A	MSA-DMW1A-050212	0.71	0.71	5.815	3.738661	11.23278998
MSA-DMW-02A	MSA-DMW2A-050312	0.41	1.2	79.128507	74.698098	114.1376734
MSA-MW-24S	MSA-MW24S-050712	0.29	2.5	34.528333	14.811549	43.87890062
MSA-DMW-08I	MSA-DMW8I-050212	0.18	3.6	1.673636	0.63014	1.119172198
MSA-DMW-06D	MSA-DMW6D-050312	0.12	0.16	0.265	0.066056	0.042070651
MSA-DMW-03S	MSA-DMW3S-051412	0.093	2.3	5.8	0.256147	0.699584644
MSA-MW-24S	MSA-MW24S-050712	1.2	2.5	55.285	52.98845	86.10653293
MSA-MW-24S	MSA-MW24S-050712	0.57	0.73	7.642424	3.705774	9.398565075

		0.08	0.08		0.04	0
		0.14	2.8		0.158943	0.203443421
MSA-DMW-03S	MSA-DMW3S-051412	0.37	7.4	13.3	0.736197	2.356724947
MSA-MW-24S	MSA-MW24S-050712	0.44	2.2	7.085	4.300845	21.35157569
MSA-MW-32I	MSA-MW32I-050112	2.3	53	407.668181	255.14014	699.1047157
MSA-DMW-09S	MSA-DMW9S-050912	9.3	9.3	204.4	171.108333	166.178971
MSA-MW-18S	MSA-MW18S-051012	0.089	0.089	5.548	4.63075	6.2503521
MSA-MW-18S	MSA-MW18S-051012			258	258	273.6048245
MSA-MW-18I	MSA-MW18I-051012			18.5	18.5	15.15915565
MSA-MW-30D	MSA-MW30D-051512	0.02	0.02	0.10375	0.020869	0.066583409
MSA-MW-18S	MSA-MW18S-051012	0.023	0.023	0.106	0.043	0.067615087
		0.012	0.12		0.015	0.022045408
MSA-DMW-09I	MSA-DMW9I-050912	0.044	0.044	0.128666	0.075333	0.0724394
MSA-DMW-04D	MSA-DMW4D-050312	0.082	0.082	0.647142	0.160521	0.567175429
MSA-MW-18S	MSA-MW18S-051012			485.833333	485.833333	614.6740329
MSA-MW-18S	MSA-MW18S-051012			1168.333333	1168.333333	1122.629354

MSA-DMW-02A	MSA-DMW2A-050312	0.47	0.49	53.58475	30.292957	62.97703712
MSA-DMW-11S	DMW11S-051112	0.17	4.9	1587.32228	1117.077037	3505.747213
MSA-DMW-09S	MSA-DMW9S-050912	0.22	55	732.314615	470.744074	1453.006739
MSA-DMW-11S	DMW11S-051112	0.17	28	1901.487608	1080.657592	2852.923967
MSA-DMW-09S	MSA-DMW9S-050912	0.13	130	16.12923	8.556296	32.00808423
MSA-DMW-03S	MSA-DMW3S-051412	0.19	190	37.44619	13.803271	34.4186176
MSA-DMW-02S	MSA-DMW2S-051012	0.22	220	3.888	7.289691	15.68568715
MSA-MW-20S	MSA-MW20S-042012	0.15	150	51.10923	12.410123	41.55092227
MSA-MW-04	MSA-MW4-060712-18-PDB	1.1	1100	4.08	34.493827	77.92601755
MSA-MW-04	MSA-MW4-060712-25-PDB	1.1	1100	4.08	34.493827	77.92601755
MSA-DMW-11S	DMW11S-051112	0.19	79	64.966666	11.001172	33.2422566
MSA-DMW-09S	MSA-DMW9S-050912	0.13	54	265.468888	31.805123	204.4767816
MSA-DMW-11S	DMW11S-051112	0.16	67	63.943333	8.545493	29.20624832
MSA-DMW-03I	MSA-DMW3I-051412	0.15	150	230.28	17.792901	78.56385999
MSA-MW-16S	MSA-MW16S-050912	0.13	130	1.22	4.066543	9.183062828
MSA-MW-04	MSA-MW4-060712-11-PDB	0.57	570	2.3575	17.787687	40.61857164
MSA-MW-31D	MSA-MW31D-051012	0.13	130	0.2775	4.023765	9.189876751
MSA-DMW-09I	MSA-DMW9I-050912	0.13	130	19.1	4.660802	10.06763603
MSA-DMW-09S	MSA-DMW9S-050912	0.24	240	2302.77	92.193024	766.0575196
MSA-DMW-09S	MSA-DMW9S-050912	0.14	140	150.966666	9.629135	50.47604173
MSA-DMW-09S	MSA-DMW9S-050912	0.28	280	2470.333333	99.595555	821.525412
MSA-DMW-07S	MSA-DMW7S-050312	0.22	220	94.5	8.386851	21.0707573
MSA-DMW-04I	MSA-DMW4I-050312	0.15	150	25.92	5.163456	11.80751354
MSA-MW-18I	MSA-MW18I-051012	0.17	170	98	6.957592	19.22073283
MSA-DMW-09S	MSA-DMW9S-050912	0.17	170	550.105	18.46895	122.239666
MSA-DMW-01A	MSA-DMW1A-050212	0.33	330	38.5	10.821049	23.90690507
MSA-DMW-09S	MSA-DMW9S-050912	0.0059	5.9	34	0.590859	3.78085076
MSA-DMW-09S	MSA-DMW9S-050912	0.12	120	99	4.679197	13.46875947
MSA-MW-16S	MSA-MW16S-050912	0.14	140	1.7	4.345246	9.909564632
MSA-MW-16S	MSA-MW16S-050912	0.13	130	2.1	4.034629	9.1876571
MSA-MW-18I	MSA-MW18I-051012	0.3	300	210	11.300987	30.6050592
MSA-MW-35S	MSA-MW35S-042012	0.17	170	0.22	5.240679	12.05184661
MSA-MW-39S	MSA-MW39S-041912	0.24	240	2.1	7.427098	16.98175552
MSA-MW-23S	MSA-MW23S-051112	0.13	130	0.33	4.017345	9.192524207
		0.23	230		7.111172	16.30429386
		0.18	180		5.555925	12.74562521
		0.28	280		8.68	19.91859314
		0.13	130		4.014074	9.193899986
		0.43	430		13.240802	30.37353522
		0.67	670		20.642839	47.35971399
		0.24	240		7.402654	16.99094206
		0.18	180		5.555925	12.74562521

		0.16	160		4.948148	11.3288981
		0.13	130		4.014074	9.193899986
		0.99	990		31.806168	71.60784703
		0.11	110		3.406481	7.809798831
		0.41	410		12.685	29.10045905
		0.18	180		5.555925	12.74562521
		0.12	120		3.703888	8.495485823
		0.32	320		9.898703	22.67380639
		0.13	130		4.014074	9.193899986
		0.29	290		8.936913	20.51547513
		0.15	150		4.641666	10.63975661
		0.64	640		19.759074	45.30944726
		0.41	410		12.685	29.10045905
		0.18	180		5.555925	12.74562521
		0.29	290		8.936913	20.51547513
		0.3	300		9.323024	21.4002505
		0.14	140		4.33	9.914634291
		0.28	280		8.68	19.91859314
		0.31	310		9.523765	21.86173557
		1.5	1500		46.416666	106.3975661
		0.11	110		3.406481	7.809798831
		0.13	130		4.014074	9.193899986
		0.12	120		3.703888	8.495485823
		0.14	140		4.33	9.914634291
		0.13	130		4.014074	9.193899986
		0.11	110		3.406481	7.809798831
		0.067	67		2.064283	4.735971399
		0.29	290		8.936913	20.51547513
		0.19	190		5.870246	13.44043124
		0.21	210		6.490432	14.88519978
MSA-MW-04	MSA-MW4-060712-18-PDB			5.8	5.8	0.916515139
		0.75	0.75		0.375	
		0.4	0.4		0.2	
		0.38	0.38		0.19	
		0.98	0.98		0.49	
		0.38	0.38		0.19	
		0.75	0.75		0.375	0
		0.4	0.4		0.2	0
		0.38	0.38		0.19	0
		0.98	0.98		0.49	0
		0.38	0.38		0.19	0

MSA-MW-35S	MSA-MW35S-042012	1.1	1.1	
MSA-DMW-09S	MSA-DMW9S-050912	59	59	
MSA-MW-16S	MSA-MW16S-050912	360	360	
MSA-MW-25I	MSA-MW25I-050812	13	13	1.414213562
MSA-MW-32S	MSA-MW32S-050412	1.8	1.8	
MSA-MW-32S	MSA-MW32S-050412	2.1	2.1	
MSA-MW-04	MSA-MW4-060712-18-PDB	1.466666	1.466666	0.472581563
MSA-MW-33I	MSA-MW33I-050112	1.8	1.8	
MSA-MW-04	MSA-MW4-060712-25-PDB	1.2	1.2	
MSA-MW-23S	MSA-MW23S-051112	1.6	1.6	
MSA-MW-32S	MSA-MW32S-050412	2.6	2.6	
MSA-MW-20S	MSA-MW20S-042012	24.19	24.19	
MSA-MW-14I	MSA-MW14I-050112	1.52	1.52	
MSA-MW-32S	MSA-MW32S-050412	6	6	
MSA-MW-04	MSA-MW4-051512-11	0.416666	0.416666	0.015275252
MSA-MW-23S	MSA-MW23S-051112	1.9	1.9	
MSA-MW-04	MSA-MW4-060712-25-PDB	1.826666	1.826666	0.940283645
MSA-MW-35S	MSA-MW35S-042012	3.6	3.6	
MSA-MW-39S	MSA-MW39S-041912	2.9	2.9	
MSA-MW-04	MSA-MW4-051512-11	2.275	2.275	1.040432602
MSA-MW26S	MSA-MW26S-050112	0.52	0.52	
MSA-DMW-07S	MSA-DMW7S-050312	21.3	21.3	
MSA-MW-23S	MSA-MW23S-051112	1.2	1.2	
MSA-MW-23S	MSA-MW23S-051112	1.3	1.3	
MSA-MW34I	MSA-MW34I-041912	1.6	1.6	
MSA-MW26S	MSA-MW26S-050112	2.91	2.91	

MSA-DMW-11S	DMW11S-051112	0.1	0.1	22.168	18.481666	26.13246289
MSA-DMW-09S	MSA-DMW9S-050912			375.3	375.3	751.4560373
MSA-DMW-09S	MSA-DMW9S-050912			465	465	323.774613
MSA-DMW-11S	DMW11S-051112	38	120	3969.4375	2062.951612	5450.499762
MSA-MW-20S	MSA-MW20S-042012	230	1200	1514.285714	501.451612	901.6680778
MSA-DMW-06I	MSA-DMW6I-050312	0.136	0.283	4.86675	3.568863	5.19602833
MSA-DMW-06I	MSA-DMW6I-050312	0.0687	0.128	3.71125	2.712577	4.908575474

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-02A	MSA-DMW-02S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW2A-050312	MSA-DMW-02S-20120510	MSA-DMW2S-051012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120510	20120510
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	96 U	NA	21 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	92 U	NA	20 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	75 U	NA	16 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	120 U	NA	25 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	63 U	NA	14 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	79 U	NA	17 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	71 U	NA	15 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	180 U	NA	39 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	2.5 U	NA	0.54 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	440	NA	14 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	50 U	NA	11 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	280 U	NA	61 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	100 U	NA	22 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	92 U	NA	23 J
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	75 U	NA	16 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	58 U	NA	13 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	67 U	NA	15 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
2-BUTANONE	57 U	44 U	NA	0.57 U	240 U	NA	52 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	410 U	NA	90 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	46 U	NA	10 U
2-HEXANONE	41 U	32 U	NA	0.41 U	170 U	NA	37 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	75 U	NA	16 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	50 U	NA	11 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	130 U	NA	29 U
ACETONE	110 U	85 U	NA	1.1 U	460 U	NA	100 U
BENZENE	13 U	16 J	NA	0.13 U	54 U	NA	12 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	120 U	NA	26 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	63 U	NA	14 U
BROMOFORM	64 U	49 U	NA	0.64 U	270 U	NA	58 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	170 U	NA	37 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	63 U	NA	14 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	75 U	NA	16 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	120 U	NA	26 U
CHLOROFORM	16 U	12 U	NA	0.16 U	67 U	NA	15 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	130 U	NA	27 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	3400	NA	1900
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	58 U	NA	13 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	120 U	NA	25 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	130 U	NA	28 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	630 U	NA	140 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	46 U	NA	10 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	71 U	NA	15 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-02A	MSA-DMW-02S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW2A-050312	MSA-DMW-02S-20120510	MSA-DMW2S-051012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120510	20120510
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	130 U	NA	27 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	100 U	NA	22 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	71 U	NA	15 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	140 U	NA	30 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	100 U	NA	22 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	50 U	NA	11 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	58 U	NA	13 U
O-XYLENE	14 U	11 U	NA	0.14 U	58 U	NA	13 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
STYRENE	11 U	8.5 U	NA	0.11 U	46 U	NA	10 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	28 U	NA	6.1 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	54 U	NA	12 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	1600 UR	NA	350 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	120 U	NA	26 U
TOLUENE	43 J	10 U	NA	0.13 U	54 U	NA	12 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	120 U	NA	25 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	79 U	NA	17 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	79 U	NA	17 U
TRICHLOROETHENE	2300	110	NA	0.17 U	11000	NA	2800
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	88 U	NA	19 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	79 UR	NA	17 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	810	NA	640
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	300	NA	81
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.12 J	NA	0.11 J
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	2200
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	490 B
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.65 UJ	NA	0.65 UJ
ARSENIC	6.6	11	NA	1.5 J	7.5	NA	8.1
BARIUM	13	16	NA	82	12 B	NA	13 B
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	2.1	NA	4.7
CADMIUM	1100	170	NA	0.41 J	740	NA	220
CHROMIUM	86	9.9	NA	0.71 U	4.3	NA	3.4
COBALT	51	35	NA	0.4 J	550	NA	240
COPPER	9.6	9.5	NA	7.2	41	NA	49
LEAD	0.46 J	0.62 J	NA	0.82 J	5.3 J	NA	0.9 UJ
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	NA	0.093 U
NICKEL	150	43	NA	1.9 J	160	NA	100
SELENIUM	5	2 J	NA	0.57 U	10	NA	11
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.7 UJ	NA	0.7 UJ
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	1.9 UJ	NA	1.9 UJ
VANADIUM	0.44 U	0.44 U	NA	1.5 J	3.9 J	NA	0.44 U
ZINC	460	160	NA	10 J	560	NA	300

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-02A	MSA-DMW-02S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW2A-050312	MSA-DMW-02S-20120510	MSA-DMW2S-051012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120510	20120510
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.65 UJ	NA	0.65 UJ
ARSENIC	6.3	16	NA	1.5 J	9.9	NA	8.6
BARIUM	13	16	NA	81	33 J	NA	13 B
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	2.4	NA	4.9
CADMIUM	1000	180	NA	1.1	800	NA	230
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	150	NA	3.7
COBALT	49	33	NA	0.4 J	570	NA	240
COPPER	11	16	NA	8.5	140	NA	52
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	12 J	NA	0.9 UJ
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.6	NA	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	3.3 J	NA	0.093 U
NICKEL	150	42	NA	1.7 J	160	NA	110
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	11	NA	12
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.22 J	NA	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.7 UJ	NA	0.7 UJ
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	1.9 UJ	NA	1.9 UJ
VANADIUM	0.44 U	3.4 J	NA	1.5 J	73	NA	0.44 U
ZINC	440	170	NA	9.5 B	620	NA	310
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	0.75 U
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.4 U
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	0.38 U
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.98 U
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.38 U
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-02A	MSA-DMW-02S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW2A-050312	MSA-DMW-02S-20120510	MSA-DMW2S-051012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120510	20120510
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-03D	MSA-DMW-03I	MSA-DMW-03S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW3D-051412	MSA-DMW3I-051412	MSA-DMW3S-051412	MSA-DMW3S-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120514	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	77 U	38 U	NA
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	73 U	37 U	NA
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	60 U	30 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	93 U	47 U	NA
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	50 U	25 U	NA
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	63 U	32 U	NA
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	66 J	28 U	NA
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	140 U	72 U	NA
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	2 U	0.98 U	NA
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	540	25 U	NA
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	40 U	20 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	220 U	110 U	NA
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	80 U	40 U	NA
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	73 U	37 U	NA
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	60 U	30 U	NA
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	47 U	23 U	NA
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	53 U	27 U	NA
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	190 U	95 U	NA
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	330 U	170 U	NA
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	37 U	18 U	NA
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	140 U	68 U	NA
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	60 U	30 U	NA
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	40 U	20 U	NA
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	110 U	53 U	NA
ACETONE	110 U	85 U	NA	1.1 U	3 J	370 U	180 U	NA
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	43 U	22 U	NA
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	97 U	48 U	NA
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	50 U	25 U	NA
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	210 U	110 U	NA
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 UJ	140 UJ	68 UJ	NA
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	50 U	25 U	NA
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	60 U	30 U	NA
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 UJ	97 UJ	48 UJ	NA
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	53 U	27 U	NA
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	100 U	50 U	NA
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	5800	1200	NA
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	47 U	23 U	NA
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	93 U	47 U	NA
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	100 U	52 U	NA
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	500 U	250 U	NA
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	0.11 U	37 U	18 U	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	57 U	28 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-03D	MSA-DMW-03I	MSA-DMW-03S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW3D-051412	MSA-DMW3I-051412	MSA-DMW3S-051412	MSA-DMW3S-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120514	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	100 U	50 U	NA
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	80 U	40 U	NA
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	57 U	28 U	NA
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	110 U	55 U	NA
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	80 U	40 U	NA
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	40 U	20 U	NA
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	47 U	23 U	NA
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	47 U	23 U	NA
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	37 U	18 U	NA
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	0.067 U	22 U	11 U	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	43 U	22 U	NA
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	1300 UR	650 UR	NA
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	97 U	48 U	NA
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	43 U	44 J	NA
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	93 U	47 U	NA
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	63 U	250	NA
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	63 U	32 U	NA
TRICHLOROETHENE	2300	110	NA	0.17 U	0.45 J	10000	28 U	NA
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	70 U	35 U	NA
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	63 UR	32 UR	NA
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	1900	5100	NA
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	0.49 U	230	140	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	0.036 U	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	0.082 U	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA	870
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	660 B	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	0.18 J	NA
ARSENIC	6.6	11	NA	1.5 J	0.55 J	3.9 J	13	NA
BARIUM	13	16	NA	82	68	11	97	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.73 J	0.2 U	0.2 U	NA
CADMIUM	1100	170	NA	0.41 J	4.9	65	0.13 U	NA
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	2.2	1.3 J	NA
COBALT	51	35	NA	0.4 J	46	220	0.87 J	NA
COPPER	9.6	9.5	NA	7.2	82	12	0.35 B	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	1.5 K	0.77 J	0.18 U	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	0.093 U	5.8 J	NA
NICKEL	150	43	NA	1.9 J	55	70	0.57 J	NA
SELENIUM	5	2 J	NA	0.57 U	0.57 U	2.4 J	0.57 U	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	0.14 U	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	18	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	5.9 J	2 J	NA
ZINC	460	160	NA	10 J	250	260	2.3 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-03D	MSA-DMW-03I	MSA-DMW-03S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW3D-051412	MSA-DMW3I-051412	MSA-DMW3S-051412	MSA-DMW3S-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120514	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.19 J	0.13 J	0.38 J	NA
ARSENIC	6.3	16	NA	1.5 J	2.9 J	4.3 J	13	NA
BARIUM	13	16	NA	81	95	12	89	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.82 J	0.2 U	0.2 U	NA
CADMIUM	1000	180	NA	1.1	5.3	280	0.13 U	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	11	4.3	2.8	NA
COBALT	49	33	NA	0.4 J	44	230	0.76 J	NA
COPPER	11	16	NA	8.5	93	18	2.2 B	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	5.3	0.94 J	4.1	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.15 B	0.12 U	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.63 B	0.12 B	5 J	NA
NICKEL	150	42	NA	1.7 J	55	74	0.97 J	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	2.8 J	0.57 U	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	0.22 B	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	14	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	15 J	7.3 J	2 J	NA
ZINC	440	170	NA	9.5 B	280	290	13 B	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	0.75 U	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.4 U	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	0.38 U	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.98 U	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.38 U	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-03D	MSA-DMW-03I	MSA-DMW-03S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW3D-051412	MSA-DMW3I-051412	MSA-DMW3S-051412	MSA-DMW3S-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120514	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	1.99	9.06	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	1.82	0.996	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	48 NJ	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	4.9 R	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-04D	MSA-DMW-04I	MSA-DMW-04S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW4D-050312	MSA-DMW4I-050312	MSA-DMW4S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	33 U	29 U	9.2 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	31 U	59 J	8.8 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	26 U	23 U	7.2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	40 U	35 U	11 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	21 U	51 J	6 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	27 U	150	24 J
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	24 U	21 U	6.8 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	61 U	54 U	17 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.84 U	0.74 U	0.24 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	21 U	19 U	6 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	17 U	15 U	4.8 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	96 U	84 U	27 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	34 U	30 U	9.6 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	31 U	28 U	20 J
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	26 U	23 U	7.2 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	20 U	18 U	5.6 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	23 U	20 U	6.4 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
2-BUTANONE	57 U	44 U	NA	0.57 U	81 U	71 U	23 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	140 U	120 U	40 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	16 U	14 U	4.4 U
2-HEXANONE	41 U	32 U	NA	0.41 U	59 U	51 U	16 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	26 U	23 U	7.2 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	17 U	15 U	4.8 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	46 U	40 U	13 U
ACETONE	110 U	85 U	NA	1.1 U	160 U	140 U	44 U
BENZENE	13 U	16 J	NA	0.13 U	19 U	16 U	5.2 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	41 U	36 U	12 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	21 U	19 U	6 U
BROMOFORM	64 U	49 U	NA	0.64 U	91 U	80 U	26 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	59 U	51 U	16 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	21 U	19 U	6 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	26 U	23 U	7.2 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	41 U	36 U	12 U
CHLOROFORM	16 U	12 U	NA	0.16 U	23 U	20 U	6.4 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	43 U	38 U	12 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	530	1800	120
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	20 U	18 U	5.6 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	40 U	35 U	11 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	44 U	39 U	12 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	210 U	190 U	60 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	16 U	14 U	4.4 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	24 U	21 U	6.8 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-04D	MSA-DMW-04I	MSA-DMW-04S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW4D-050312	MSA-DMW4I-050312	MSA-DMW4S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	43 U	38 U	12 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	34 U	30 U	9.6 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	24 U	21 U	6.8 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	47 U	41 U	13 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	34 U	30 U	9.6 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	17 U	15 U	4.8 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	20 U	18 U	5.6 U
O-XYLENE	14 U	11 U	NA	0.14 U	20 U	18 U	5.6 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
STYRENE	11 U	8.5 U	NA	0.11 U	16 U	14 U	4.4 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	9.6 U	8.4 U	2.7 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	19 U	16 U	5.2 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	560 UR	490 UR	160 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	41 U	36 U	12 U
TOLUENE	43 J	10 U	NA	0.13 U	19 U	16 U	5.2 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	40 U	35 U	11 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	27 U	27 J	7.6 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	27 U	24 U	7.6 U
TRICHLOROETHENE	2300	110	NA	0.17 U	4700	4100	1600
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	30 U	26 U	8.4 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	27 UR	24 UR	7.6 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	31 U	1500	27 J
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	29	29	21
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	4.6	1.3	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	690
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	240 U
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	1.3 UJ	0.65 UJ	0.65 UJ
ARSENIC	6.6	11	NA	1.5 J	23	15	6
BARIUM	13	16	NA	82	17 B	9.8 B	9.1 B
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	4.6	6.8	1.7
CADMIUM	1100	170	NA	0.41 J	23	11	10
CHROMIUM	86	9.9	NA	0.71 U	1.7 J	5.6	0.71 U
COBALT	51	35	NA	0.4 J	160	67	72
COPPER	9.6	9.5	NA	7.2	68	59	3
LEAD	0.46 J	0.62 J	NA	0.82 J	1.8 UJ	2.3 J	1.3 J
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	0.093 U	0.093 U
NICKEL	150	43	NA	1.9 J	120	44	39
SELENIUM	5	2 J	NA	0.57 U	32	16	5.4
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	1.4 UJ	0.7 UJ	0.7 UJ
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	3.7 UJ	1.9 UJ	1.9 UJ
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	16 J	0.44 U
ZINC	460	160	NA	10 J	360	190	120

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-04D	MSA-DMW-04I	MSA-DMW-04S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW4D-050312	MSA-DMW4I-050312	MSA-DMW4S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	1.3 UJ	0.65 UJ	0.65 UJ
ARSENIC	6.3	16	NA	1.5 J	22	17	6.5
BARIUM	13	16	NA	81	19 B	23 J	11 B
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	4.4	6.1	2.1
CADMIUM	1000	180	NA	1.1	22	14	43
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	3.8	21	2.5
COBALT	49	33	NA	0.4 J	150	62	87
COPPER	11	16	NA	8.5	65	150	9
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	1.9 J	5.2 J	3.7 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	1.6	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.093 U	1 J	0.093 U
NICKEL	150	42	NA	1.7 J	110	41	46
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	31	14	6.5
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.26 J	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	1.4 UJ	0.7 UJ	0.7 UJ
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	3.7 UJ	1.9 UJ	1.9 UJ
VANADIUM	0.44 U	3.4 J	NA	1.5 J	1.5 J	30	1.8 J
ZINC	440	170	NA	9.5 B	350	200	180
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-04D	MSA-DMW-04I	MSA-DMW-04S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW4D-050312	MSA-DMW4I-050312	MSA-DMW4S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-05I		MSA-DMW-05S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW5I-050412	MSA-DMW5I-050712	MSA-DMW5S-050412	MSA-DMW5S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	1.2 U	NA	58 U	NA
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	1.1 U	NA	55 U	NA
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.9 U	NA	45 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	1.4 U	NA	70 U	NA
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.75 U	NA	38 U	NA
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.95 U	NA	48 U	NA
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.85 U	NA	43 U	NA
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	2.2 U	NA	110 U	NA
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.03 U	NA	1.5 U	NA
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.75 U	NA	38 U	NA
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.6 U	NA	30 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	3.4 U	NA	170 U	NA
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	1.2 U	NA	60 U	NA
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	1.1 U	NA	55 U	NA
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.9 U	NA	45 U	NA
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.7 U	NA	35 U	NA
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.8 U	NA	40 U	NA
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
2-BUTANONE	57 U	44 U	NA	0.57 U	2.9 U	NA	140 U	NA
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	5 U	NA	250 U	NA
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.55 U	NA	28 U	NA
2-HEXANONE	41 U	32 U	NA	0.41 U	2.1 U	NA	100 U	NA
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.9 U	NA	45 U	NA
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.6 U	NA	30 U	NA
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	1.6 U	NA	80 U	NA
ACETONE	110 U	85 U	NA	1.1 U	5.5 U	NA	280 U	NA
BENZENE	13 U	16 J	NA	0.13 U	0.65 U	NA	33 U	NA
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	1.5 U	NA	73 U	NA
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.75 U	NA	38 U	NA
BROMOFORM	64 U	49 U	NA	0.64 U	3.2 U	NA	160 U	NA
BROMOMETHANE	41 U	32 U	NA	0.41 U	2.1 U	NA	100 U	NA
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.75 U	NA	38 U	NA
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.9 U	NA	45 U	NA
CHLOROETHANE	29 U	22 U	NA	0.29 U	1.5 U	NA	73 U	NA
CHLOROFORM	16 U	12 U	NA	0.16 U	0.8 U	NA	40 U	NA
CHLOROMETHANE	30 U	23 U	NA	0.3 U	1.5 U	NA	75 U	NA
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	49	NA	1300	NA
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.7 U	NA	35 U	NA
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	1.4 U	NA	70 U	NA
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	1.6 U	NA	78 U	NA
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	7.5 U	NA	380 U	NA
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.85 U	NA	43 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-05I		MSA-DMW-05S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW5I-050412	MSA-DMW5I-050712	MSA-DMW5S-050412	MSA-DMW5S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	1.5 U	NA	75 U	NA
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
M+P-XYLENES	24 U	18 U	NA	0.24 U	1.2 U	NA	60 U	NA
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.85 U	NA	43 U	NA
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	1.7 U	NA	83 U	NA
NAPHTHALENE	24 U	18 U	NA	0.24 U	1.2 U	NA	60 U	NA
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.6 U	NA	30 U	NA
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.7 U	NA	35 U	NA
O-XYLENE	14 U	11 U	NA	0.14 U	0.7 U	NA	35 U	NA
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
STYRENE	11 U	8.5 U	NA	0.11 U	0.55 U	NA	28 U	NA
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	20 UR	NA	980 UR	NA
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	1.5 U	NA	73 U	NA
TOLUENE	43 J	10 U	NA	0.13 U	0.65 U	NA	33 U	NA
TOTAL XYLENES	28 U	22 U	NA	0.28 U	1.4 U	NA	70 U	NA
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	2.1 J	NA	48 U	NA
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.95 U	NA	48 U	NA
TRICHLOROETHENE	2300	110	NA	0.17 U	99	NA	7500	NA
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	1.1 U	NA	53 U	NA
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.95 UR	NA	48 UR	NA
VINYL CHLORIDE	1300	2200	NA	0.33 J	6.5	NA	55 U	NA
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	2.4	NA	11	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	NA	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	NA	0.7 J	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	3900	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	230 B	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.65 U	NA	0.65 U	NA
ARSENIC	6.6	11	NA	1.5 J	7.8	NA	13	NA
BARIUM	13	16	NA	82	13 B	NA	12 B	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	2.2	NA	4.3	NA
CADMIUM	1100	170	NA	0.41 J	3.2	NA	3	NA
CHROMIUM	86	9.9	NA	0.71 U	5.1	NA	7.3	NA
COBALT	51	35	NA	0.4 J	67	NA	68	NA
COPPER	9.6	9.5	NA	7.2	11	NA	7.3	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	3.5 J	NA	3.2 J	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.19 B	NA	0.41 B	NA
NICKEL	150	43	NA	1.9 J	67	NA	63	NA
SELENIUM	5	2 J	NA	0.57 U	9.2	NA	16	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.7 U	NA	0.7 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	1.9 U	NA	1.9 U	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	2.3 J	NA	11 J	NA
ZINC	460	160	NA	10 J	230	NA	190	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-05I		MSA-DMW-05S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW5I-050412	MSA-DMW5I-050712	MSA-DMW5S-050412	MSA-DMW5S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.65 U	NA	0.65 U	NA
ARSENIC	6.3	16	NA	1.5 J	8.2	NA	13	NA
BARIUM	13	16	NA	81	18 B	NA	12 B	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	2.1 B	NA	4 B	NA
CADMIUM	1000	180	NA	1.1	5.4	NA	3.5	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	14	NA	83	NA
COBALT	49	33	NA	0.4 J	64	NA	63	NA
COPPER	11	16	NA	8.5	700	NA	120	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	8.3 J	NA	4.2 J	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.13 J	NA	0.12 U	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	1.2 B	NA	1.7 B	NA
NICKEL	150	42	NA	1.7 J	65	NA	59	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	10	NA	15	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	1.3 B	NA	2.1 B	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	1.9 U	NA	3.1 B	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	4 J	NA	9.2 J	NA
ZINC	440	170	NA	9.5 B	250	NA	190	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-05I		MSA-DMW-05S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW5I-050412	MSA-DMW5I-050712	MSA-DMW5S-050412	MSA-DMW5S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	0.75 U	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.4 U	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	0.38 U	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.98 U	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.55 U	NA	28 U	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.34 U	NA	17 U	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	0.38 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-06D	MSA-DMW-06I	MSA-DMW-06S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW6D-050312	MSA-DMW6I-050312	MSA-DMW6S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	0.22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	0.99 U	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	0.32 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	1.1 U	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	0.13 U	0.13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	0.64 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	0.15 U	0.29 J
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	0.17 U	1.4
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	0.31 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	0.11 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-06D	MSA-DMW-06I	MSA-DMW-06S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW6D-050312	MSA-DMW6I-050312	MSA-DMW6S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	0.33 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	0.067 U	0.067 U	0.067 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	0.17 U	0.57 J
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	0.21 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.19 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	0.22 U	0.22 U
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	0.47 U	0.48 U	0.48 UL
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.13 J	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	42 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	430 B
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	0.17 J
ARSENIC	6.6	11	NA	1.5 J	1.1 J	3.8 J	7
BARIUM	13	16	NA	82	52	13	38
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.58 J	7.1	0.2 U
CADMIUM	1100	170	NA	0.41 J	0.75 J	6.9	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	38	0.71 U
COBALT	51	35	NA	0.4 J	29	91	4.2
COPPER	9.6	9.5	NA	7.2	15	24	0.4 B
LEAD	0.46 J	0.62 J	NA	0.82 J	1.9 K	2 K	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.41	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.17 B	0.28 B	0.23 B
NICKEL	150	43	NA	1.9 J	38	110	2.1 K
SELENIUM	5	2 J	NA	0.57 U	2.2 J	4.2 J	0.66 J
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.15 B	0.19 B	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	0.44 U	0.44 U
ZINC	460	160	NA	10 J	94	430	2.3 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-06D	MSA-DMW-06I	MSA-DMW-06S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW6D-050312	MSA-DMW6I-050312	MSA-DMW6S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 J	0.18 J	0.18 J
ARSENIC	6.3	16	NA	1.5 J	2.4 J	3.4 J	6.8
BARIUM	13	16	NA	81	54	13	37
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.57 J	6.5	0.2 U
CADMIUM	1000	180	NA	1.1	0.75 J	7.3	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	5.8	110	1.6 J
COBALT	49	33	NA	0.4 J	27	86	4.1
COPPER	11	16	NA	8.5	20	53	1.5 B
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	3.5	2.5	0.89 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	1.7	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.53 B	2.4 B	0.24 B
NICKEL	150	42	NA	1.7 J	41	99	2.4 K
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	2.3 J	3.7 J	0.67 J
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.21 B	0.19 B	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	1 B	0.37 U	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	5.8 B	0.44 U	1.9 B
ZINC	440	170	NA	9.5 B	120	440	6.4 B
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-06D	MSA-DMW-06I	MSA-DMW-06S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW6D-050312	MSA-DMW6I-050312	MSA-DMW6S-050312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120503	20120503
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	9.16	15.4	0.987 J
TOTAL RADIUM	NA	NA	NA	NA	8.84	15.4	1.19
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	2.3 R	3.1 R	1.6 R
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-07S	MSA-DMW-08D	MSA-DMW-08I	MSA-DMW-08S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW7S-050312	MSA-DMW8D-050212	MSA-DMW8I-050212	MSA-DMW8S-050212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120502	20120502	20120502
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	96 U	3.8 U	3.8 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	130 J	3.7 U	3.7 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	75 U	3 U	3 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	120 U	4.7 U	4.7 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	63 U	2.5 U	2.5 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	140 J	3.2 U	3.2 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	71 U	2.8 U	2.8 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	180 U	7.2 U	7.2 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	2.5 U	0.098 U	0.098 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	63 U	2.5 U	2.5 U	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	50 U	2 U	2 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	280 U	11 U	11 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	100 U	4 U	4 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	92 U	3.7 U	4.9 J	0.22 J
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	75 U	3 U	3 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	58 U	2.3 U	2.3 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	67 U	2.7 U	2.7 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	240 U	9.5 U	9.5 U	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	410 U	17 U	17 U	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	46 U	1.8 U	1.8 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	170 U	6.8 U	6.8 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	75 U	3 U	3 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	50 U	2 U	2 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	130 U	5.3 U	5.3 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	460 U	18 U	18 U	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	54 U	2.9 J	2.2 J	0.13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	120 U	4.8 U	4.8 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	63 U	2.5 U	2.5 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	270 U	11 U	11 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	170 U	6.8 U	6.8 U	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	63 U	2.5 U	2.5 U	0.15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	75 U	3 U	3 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	120 U	4.8 U	4.8 U	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	67 U	2.7 U	2.7 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	130 U	5 U	5 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	15000	530	370	1.2
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	58 U	2.3 U	2.3 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	120 U	4.7 U	4.7 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	130 U	5.2 U	5.2 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	630 U	25 U	25 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	46 U	1.8 U	1.8 U	0.11 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	71 U	2.8 U	2.8 U	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-07S	MSA-DMW-08D	MSA-DMW-08I	MSA-DMW-08S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW7S-050312	MSA-DMW8D-050212	MSA-DMW8I-050212	MSA-DMW8S-050212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120502	20120502	20120502
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	130 U	5 U	5 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	100 U	4 U	4 U	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	71 U	2.8 U	2.8 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	140 U	5.5 U	5.5 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	100 U	4 U	4 U	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	50 U	2 U	2 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	58 U	2.3 U	2.3 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	58 U	2.3 U	2.3 U	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	46 U	1.8 U	1.8 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	28 U	1.1 U	1.1 U	0.067 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	54 U	2.2 U	2.2 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	1600 UR	65 UR	65 UR	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	120 U	4.8 U	4.8 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	63 J	2.2 U	2.2 U	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	120 U	4.7 U	4.7 U	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	120 J	3.6 J	3.2 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	79 U	3.2 U	3.2 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	4700	570	530	0.33 J
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	88 U	3.5 U	3.5 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	79 UR	3.2 UR	3.2 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	2200	270	210	0.22 U
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	89	47	42	13
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	7500	NA	NA	42 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	770 B	NA	NA	230 U
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	1.3 U	0.13 U
ARSENIC	6.6	11	NA	1.5 J	4.5 J	2.4 J	19	5.4
BARIUM	13	16	NA	82	9.8	22	11 B	17
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.93 J	3.2	6.7	0.57 J
CADMIUM	1100	170	NA	0.41 J	0.89 J	120	72	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.88 J	1.6 J	17	1.4 J
COBALT	51	35	NA	0.4 J	22	100	160	9.7
COPPER	9.6	9.5	NA	7.2	8.2	38	37	1.8 B
LEAD	0.46 J	0.62 J	NA	0.82 J	0.22 J	2.3	5.6 J	0.5 J
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.18 B	0.22 B	0.74 B	0.36 B
NICKEL	150	43	NA	1.9 J	23	57	120	18
SELENIUM	5	2 J	NA	0.57 U	5.4	2.6 J	26	1.6 J
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	0.4 B	1.6 B	0.22 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	3.7 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	1.6 J	2.5 J	1 J
ZINC	460	160	NA	10 J	30	170	330	52

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-07S	MSA-DMW-08D	MSA-DMW-08I	MSA-DMW-08S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW7S-050312	MSA-DMW8D-050212	MSA-DMW8I-050212	MSA-DMW8S-050212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120502	20120502	20120502
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	0.13 U	1.3 U	0.2 B
ARSENIC	6.3	16	NA	1.5 J	5.2	2.6 J	20	6.6
BARIUM	13	16	NA	81	9.5	22	15 B	16
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.94 J	3.3	6.5	0.6 J
CADMIUM	1000	180	NA	1.1	0.85 J	130	70	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	4.2	90	3.5
COBALT	49	33	NA	0.4 J	22	100	150	9.7
COPPER	11	16	NA	8.5	10	40	66	7.8
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	1 K	2.4	6.4 J	0.48 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	0.31	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.1 B	0.25 B	3.2 J	0.74 B
NICKEL	150	42	NA	1.7 J	26	58	120	17
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	5.3	2.8 J	25	1.8 J
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	0.45 B	1.4 U	0.48 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	3.7 U	0.69 B
VANADIUM	0.44 U	3.4 J	NA	1.5 J	0.44 U	1.4 J	10 J	1.8 J
ZINC	440	170	NA	9.5 B	29	170	330	45
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-07S	MSA-DMW-08D	MSA-DMW-08I	MSA-DMW-08S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW7S-050312	MSA-DMW8D-050212	MSA-DMW8I-050212	MSA-DMW8S-050212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120503	20120502	20120502	20120502
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	82 NJ	3.5 J	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	1.2 R
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-09D	MSA-DMW-09I	MSA-DMW-09S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-DMW9D-050912	MSA-DMW9I-050912	MSA-DMW9S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	19 U	15 U	77 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	18 U	15 U	73 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	15 U	12 U	60 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	23 U	19 U	93 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	12 U	10 U	50 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	16 U	13 J	63 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	14 U	11 U	57 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	36 U	29 U	140 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.49 U	0.39 U	34 J
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	12 U	10 U	50 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	10 U	8 U	99 J
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	56 U	45 U	220 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	20 U	16 U	80 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	18 U	15 U	73 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	15 U	12 U	60 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	12 U	9.3 U	47 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	13 U	11 U	53 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
2-BUTANONE	57 U	44 U	NA	0.57 U	47 U	38 U	190 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	82 U	66 U	330 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	9.2 U	7.3 U	37 U
2-HEXANONE	41 U	32 U	NA	0.41 U	34 U	27 U	140 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	15 U	12 U	60 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	10 U	8 U	40 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	27 U	21 U	110 U
ACETONE	110 U	85 U	NA	1.1 U	92 U	73 U	370 U
BENZENE	13 U	16 J	NA	0.13 U	11 J	21 J	280 J
BROMOBENZENE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	24 U	19 U	97 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	12 U	10 U	50 U
BROMOFORM	64 U	49 U	NA	0.64 U	53 U	43 U	210 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	34 U	27 U	140 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	11 U	41 J	43 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	12 U	10 U	140 J
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	15 U	12 U	60 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	24 U	19 U	97 U
CHLOROFORM	16 U	12 U	NA	0.16 U	140	19 J	53 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	25 U	20 U	100 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	350	2000	4400
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	12 U	9.3 U	47 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	23 U	19 U	93 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	26 U	21 U	100 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	120 U	100 U	500 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	14 U	11 U	1100

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-09D	MSA-DMW-09I	MSA-DMW-09S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW9D-050912	MSA-DMW9I-050912	MSA-DMW9S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	25 U	20 U	100 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	20 U	16 U	6900
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	14 U	11 U	57 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	27 U	28 J	110 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	20 U	16 U	80 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	10 U	8 U	40 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	12 U	9.3 U	47 U
O-XYLENE	14 U	11 U	NA	0.14 U	12 U	9.3 U	450
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
STYRENE	11 U	8.5 U	NA	0.11 U	9.2 U	7.3 U	37 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	11 U	8.7 U	43 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	320 UR	260 UR	1300 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	24 U	19 U	97 U
TOLUENE	43 J	10 U	NA	0.13 U	11 U	8.7 U	1800
TOTAL XYLENES	28 U	22 U	NA	0.28 U	23 U	19 U	7400
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	16 U	13 U	63 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	16 U	13 U	63 U
TRICHLOROETHENE	2300	110	NA	0.17 U	2500	1000	120 J
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	17 U	14 U	70 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	16 UR	13 UR	63 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	35 J	700	11000
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	46	150	33
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	0.036 U
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 UL	0.02 UL	0.02 UL
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	19000
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	3000
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	0.13 U
ARSENIC	6.6	11	NA	1.5 J	3.5 J	3.6 J	1.7 J
BARIUM	13	16	NA	82	42	35	84
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.58 J	2	0.2 UL
CADMIUM	1100	170	NA	0.41 J	0.13 U	0.14 J	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	0.71 U	1.2 J
COBALT	51	35	NA	0.4 J	330	320	0.11 J
COPPER	9.6	9.5	NA	7.2	1.5 B	2.8	0.29 U
LEAD	0.46 J	0.62 J	NA	0.82 J	1.3 K	1 K	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	0.41 B	0.093 U
NICKEL	150	43	NA	1.9 J	43	79	0.34 J
SELENIUM	5	2 J	NA	0.57 U	0.57 U	2 J	0.79 J
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	0.14 U	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	1.1 J	0.96 J	10 J
ZINC	460	160	NA	10 J	86	150	6.4 B

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-09D	MSA-DMW-09I	MSA-DMW-09S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW9D-050912	MSA-DMW9I-050912	MSA-DMW9S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	0.44 B	0.13 U
ARSENIC	6.3	16	NA	1.5 J	3.9 J	5.8	1.9 J
BARIUM	13	16	NA	81	43	46	87
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.58 J	2.2	0.2 UL
CADMIUM	1000	180	NA	1.1	0.13 U	0.72 J	0.13 U
CALCIUM	NA	NA	NA	NA	9100	60000	69000
CHROMIUM	130	29	NA	0.79 J	1.2 J	10	1.3 J
COBALT	49	33	NA	0.4 J	330	320	0.12 J
COPPER	11	16	NA	8.5	7	21	1.3 B
IRON	NA	NA	NA	NA	12000	11000	29000
LEAD	0.46 J	1.5 J	NA	2.4	2 K	7.7	0.18 U
MAGNESIUM	NA	NA	NA	NA	6600	34000	59000
MANGANESE	NA	NA	NA	NA	2500	5000	3200
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.26	0.13 J
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.093 U	0.98 B	0.093 U
NICKEL	150	42	NA	1.7 J	45	81	0.2 U
POTASSIUM	NA	NA	NA	NA	1000 B	9200	11000
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	2.6 J	0.67 J
SILICON DIOXIDE	NA	NA	NA	NA	8800	16000	5200
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	30000	94000	170000
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	0.14 U	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.92 B	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	1.9 J	13 J	11 J
ZINC	440	170	NA	9.5 B	87	210	5.6 B
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	9.3 B	110	430
AMMONIA-N	NA	NA	NA	NA	0.089 B	4.2	2.4
CHLORIDE	NA	NA	NA	NA	49	130	170
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	2.5	6.5	20
NITRATE-N	NA	NA	NA	NA	0.023 U	0.023 U	0.023 U
NITRITE-N	NA	NA	NA	NA	0.012 U	0.012 U	0.012 U
ORTHOPHOSPHATE	NA	NA	NA	NA	0.044 U	0.19 J	0.044 U
SULFATE	NA	NA	NA	NA	65	310	180
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	170	750	900
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	0.1 U	4.6	48
ETHENE	NA	NA	NA	NA	7.9	98	1900
METHANE	NA	NA	NA	NA	230	680	1000

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-09D	MSA-DMW-09I	MSA-DMW-09S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW9D-050912	MSA-DMW9I-050912	MSA-DMW9S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	59 NJ
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	9.2 U	7.3 U	37 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	5.6 U	4.5 U	22 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-10S		MSA-DMW-11I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW10S-20120510	MSA-DMW-10S-20120510	DMW11I-051112	MSA-MW11I-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120510	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	2.3 U	NA	0.33 U	NA
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	2.2 U	NA	0.31 U	NA
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	1.8 U	NA	0.26 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	2.8 U	NA	0.4 U	NA
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	1.5 U	NA	0.21 U	NA
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	1.9 U	NA	0.27 U	NA
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	1.7 U	NA	0.24 U	NA
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	4.3 U	NA	0.61 U	NA
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.059 U	NA	0.0084 U	NA
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	1.5 U	NA	0.21 U	NA
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	1.2 U	NA	0.17 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	6.7 U	NA	0.96 U	NA
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	2.4 U	NA	0.34 U	NA
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	2.2 U	NA	0.31 U	NA
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	1.8 U	NA	0.26 U	NA
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	1.4 U	NA	0.2 U	NA
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	1.6 U	NA	0.23 U	NA
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
2-BUTANONE	57 U	44 U	NA	0.57 U	5.7 U	NA	0.82 U	NA
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	9.9 U	NA	1.4 U	NA
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	1.1 U	NA	0.16 U	NA
2-HEXANONE	41 U	32 U	NA	0.41 U	4.1 U	NA	0.59 U	NA
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	1.8 U	NA	0.26 U	NA
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	1.2 U	NA	0.17 U	NA
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	3.2 U	NA	0.46 U	NA
ACETONE	110 U	85 U	NA	1.1 U	11 U	NA	1.6 U	NA
BENZENE	13 U	16 J	NA	0.13 U	2.3 J	NA	0.19 U	NA
BROMOBENZENE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	2.9 U	NA	0.41 U	NA
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	1.5 U	NA	0.21 U	NA
BROMOFORM	64 U	49 U	NA	0.64 U	6.4 U	NA	0.92 U	NA
BROMOMETHANE	41 U	32 U	NA	0.41 U	4.1 U	NA	0.59 U	NA
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
CHLOROBENZENE	15 U	12 U	NA	0.66 J	1.5 U	NA	0.21 U	NA
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	1.8 U	NA	0.26 U	NA
CHLOROETHANE	29 U	22 U	NA	0.29 U	2.9 U	NA	0.41 U	NA
CHLOROFORM	16 U	12 U	NA	0.16 U	1.6 U	NA	0.46 J	NA
CHLOROMETHANE	30 U	23 U	NA	0.3 U	3 U	NA	0.43 U	NA
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	1.7 U	NA	21	NA
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	1.4 U	NA	0.2 U	NA
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	2.8 U	NA	0.4 U	NA
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	3.1 U	NA	0.44 U	NA
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	15 U	NA	2.1 U	NA
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	1.1 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	1.7 U	NA	0.24 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-10S		MSA-DMW-11I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW10S-20120510	MSA-DMW-10S-20120510	DMW11I-051112	MSA-MW11I-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120510	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	3 U	NA	0.43 U	NA
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
M+P-XYLENES	24 U	18 U	NA	0.24 U	2.4 U	NA	0.34 U	NA
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	1.7 U	NA	0.24 U	NA
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	3.3 U	NA	0.47 U	NA
NAPHTHALENE	24 U	18 U	NA	0.24 U	2.4 U	NA	0.34 U	NA
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	1.2 U	NA	0.17 U	NA
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	1.4 U	NA	0.2 U	NA
O-XYLENE	14 U	11 U	NA	0.14 U	1.4 U	NA	0.2 U	NA
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
STYRENE	11 U	8.5 U	NA	0.11 U	1.1 U	NA	0.16 U	NA
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	0.67 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	39 UR	NA	5.6 UR	NA
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	2.9 U	NA	0.41 U	NA
TOLUENE	43 J	10 U	NA	0.13 U	1.3 U	NA	0.19 U	NA
TOTAL XYLENES	28 U	22 U	NA	0.28 U	2.8 U	NA	0.4 U	NA
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	1.9 U	NA	0.27 U	NA
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	1.9 U	NA	0.27 U	NA
TRICHLOROETHENE	2300	110	NA	0.17 U	1.7 U	NA	19	NA
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	2.1 U	NA	0.3 U	NA
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	1.9 UR	NA	0.27 UR	NA
VINYL CHLORIDE	1300	2200	NA	0.33 J	280	NA	1.4	NA
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	10	NA	0.47 U	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	NA	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	NA	0.082 U	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	97 J	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	620 B	NA	NA	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	NA	0.13 U	NA
ARSENIC	6.6	11	NA	1.5 J	17	NA	0.4 U	NA
BARIUM	13	16	NA	82	19 B	NA	3.2 B	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	NA	0.2 U	NA
CADMIUM	1100	170	NA	0.41 J	0.13 U	NA	0.13 U	NA
CHROMIUM	86	9.9	NA	0.71 U	0.81 J	NA	0.71 U	NA
COBALT	51	35	NA	0.4 J	4.3	NA	0.76 J	NA
COPPER	9.6	9.5	NA	7.2	0.29 U	NA	7.2	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	NA	0.5 J	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.16 B	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.23 B	NA	0.11 B	NA
NICKEL	150	43	NA	1.9 J	1.4 J	NA	1.4 J	NA
SELENIUM	5	2 J	NA	0.57 U	0.57 U	NA	0.57 U	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	NA	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	NA	0.44 U	NA
ZINC	460	160	NA	10 J	11 J	NA	13 B	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-10S		MSA-DMW-11I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW10S-20120510	MSA-DMW-10S-20120510	DMW11I-051112	MSA-MW11I-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120510	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	NA	0.13 U	NA
ARSENIC	6.3	16	NA	1.5 J	17	NA	1.7 J	NA
BARIUM	13	16	NA	81	20 B	NA	11	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	NA	0.2 U	NA
CADMIUM	1000	180	NA	1.1	0.13 U	NA	0.13 U	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	3.8	NA	5.6	NA
COBALT	49	33	NA	0.4 J	4.2	NA	1	NA
COPPER	11	16	NA	8.5	1.3 B	NA	8.2	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.33 J	NA	2.3	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	NA	1.4	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.19 B	NA	0.51 B	NA
NICKEL	150	42	NA	1.7 J	1.5 J	NA	2.1	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	NA	0.57 U	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	NA	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	2.3 J	NA	12 J	NA
ZINC	440	170	NA	9.5 B	21 B	NA	16 B	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-10S		MSA-DMW-11I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-DMW10S-20120510	MSA-DMW-10S-20120510	DMW11I-051112	MSA-MW11I-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120510	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	1.6 NJ	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	0.16 U	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	1.9 NJ	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	1.5 R	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	0.096 U	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-11S		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	DMW11S-051112	MSA-MW11S-051412	MSA-MW3-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	230 U	NA	1.2 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	220 U	NA	1.1 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	180 U	NA	0.9 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	280 U	NA	1.4 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	150 U	NA	0.75 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	220 J	NA	0.95 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	170 U	NA	0.85 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	430 U	NA	2.2 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	5.9 U	NA	0.03 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	150 U	NA	0.75 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	120 U	NA	0.6 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	670 U	NA	3.4 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	240 U	NA	1.2 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	220 U	NA	1.1 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	180 U	NA	0.9 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	140 U	NA	0.7 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	160 U	NA	0.8 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
2-BUTANONE	57 U	44 U	NA	0.57 U	570 U	NA	2.9 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	990 U	NA	5 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	110 U	NA	0.55 U
2-HEXANONE	41 U	32 U	NA	0.41 U	410 U	NA	2.1 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	180 U	NA	0.9 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	120 U	NA	0.6 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	320 U	NA	1.6 U
ACETONE	110 U	85 U	NA	1.1 U	1100 U	NA	5.5 U
BENZENE	13 U	16 J	NA	0.13 U	130 U	NA	0.65 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	290 U	NA	1.5 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	150 U	NA	0.75 U
BROMOFORM	64 U	49 U	NA	0.64 U	640 U	NA	3.2 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	410 U	NA	2.1 UJ
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	150 U	NA	0.75 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	180 U	NA	0.9 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	290 U	NA	1.5 UJ
CHLOROFORM	16 U	12 U	NA	0.16 U	220 J	NA	0.8 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	300 U	NA	1.5 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	27000	NA	120
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	140 U	NA	0.7 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	280 U	NA	1.4 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	310 U	NA	1.6 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1500 U	NA	7.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	170 U	NA	0.85 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-11S		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	DMW11S-051112	MSA-MW11S-051412	MSA-MW3-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	300 U	NA	1.5 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	240 U	NA	1.2 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	170 U	NA	0.85 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	330 U	NA	1.7 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	240 U	NA	1.2 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	120 U	NA	0.6 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	140 U	NA	0.7 U
O-XYLENE	14 U	11 U	NA	0.14 U	140 U	NA	0.7 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
STYRENE	11 U	8.5 U	NA	0.11 U	110 U	NA	0.55 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	130 U	NA	0.65 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3900 UR	NA	20 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	290 U	NA	1.5 U
TOLUENE	43 J	10 U	NA	0.13 U	420 J	NA	0.65 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	280 U	NA	1.4 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	190 U	NA	0.95 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	190 U	NA	0.95 U
TRICHLOROETHENE	2300	110	NA	0.17 U	16000	NA	5.4
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	210 U	NA	1.1 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	190 UR	NA	0.95 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	4200	NA	14
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	6.4	NA	5.6
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	NA	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	24000	NA	100 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	1200 B	NA	230 U
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	NA	0.13 U
ARSENIC	6.6	11	NA	1.5 J	5.3	NA	1.4 B
BARIUM	13	16	NA	82	48	NA	44
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	NA	0.2 U
CADMIUM	1100	170	NA	0.41 J	0.13 U	NA	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	NA	0.8 J
COBALT	51	35	NA	0.4 J	18	NA	3.9
COPPER	9.6	9.5	NA	7.2	0.29 U	NA	1.8 B
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	NA	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	NA	0.42 B
NICKEL	150	43	NA	1.9 J	6.9	NA	2.5 B
SELENIUM	5	2 J	NA	0.57 U	0.57 U	NA	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	NA	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.48 J	NA	0.46 J
ZINC	460	160	NA	10 J	22 B	NA	62

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-11S		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	DMW11S-051112	MSA-MW11S-051412	MSA-MW3-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 J	NA	0.16 B
ARSENIC	6.3	16	NA	1.5 J	5.3	NA	1.5 B
BARIUM	13	16	NA	81	50	NA	44
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	NA	0.2 U
CADMIUM	1000	180	NA	1.1	0.13 U	NA	0.14 B
CALCIUM	NA	NA	NA	NA	82000	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	NA	2
COBALT	49	33	NA	0.4 J	19	NA	3.8
COPPER	11	16	NA	8.5	0.41 B	NA	7.3
IRON	NA	NA	NA	NA	27000	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.18 U	NA	1.1 B
MAGNESIUM	NA	NA	NA	NA	21000	NA	NA
MANGANESE	NA	NA	NA	NA	950	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	NA	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.15 B	NA	0.5 B
NICKEL	150	42	NA	1.7 J	7	NA	2.8 B
POTASSIUM	NA	NA	NA	NA	5800	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.88 J	NA	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	4000	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U
SODIUM	NA	NA	NA	NA	11000	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	NA	0.14 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.43 B
VANADIUM	0.44 U	3.4 J	NA	1.5 J	0.44 U	NA	1.6 J
ZINC	440	170	NA	9.5 B	23 B	NA	66
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	140	NA	NA
AMMONIA-N	NA	NA	NA	NA	0.84	NA	NA
CHLORIDE	NA	NA	NA	NA	59 K	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	11	NA	NA
NITRATE-N	NA	NA	NA	NA	0.023 U	NA	NA
NITRITE-N	NA	NA	NA	NA	0.012 U	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	0.14 J	NA	NA
SULFATE	NA	NA	NA	NA	150	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	490	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	56	NA	NA
ETHENE	NA	NA	NA	NA	220	NA	NA
METHANE	NA	NA	NA	NA	470	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-DMW-11S		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	DMW11S-051112	MSA-MW11S-051412	MSA-MW3-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	110 U	NA	0.55 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	67 U	NA	0.34 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MW-03			
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW3-051612	MSA-MW4-051512	MSA-MW4-051512-11	MSA-MW4-051512-18
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	NA	NA	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	NA	NA	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	NA	NA	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	NA	NA	0.28 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	NA	NA	0.15 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	NA	NA	0.19 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	NA	NA	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	NA	NA	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	NA	NA	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	NA	NA	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	NA	NA	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	NA	NA	0.67 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	NA	NA	0.24 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	NA	NA	0.13 J	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	NA	NA	1.2	1.1
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	NA	NA	0.18 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	NA	NA	0.14 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	NA	NA	0.16 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	NA	NA	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	NA	NA	0.99 U	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	NA	NA	0.11 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	NA	NA	0.41 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	NA	NA	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	NA	NA	0.12 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	NA	NA	0.32 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	NA	NA	1.1 U	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	NA	NA	1.3	0.79 J
BROMOBENZENE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	NA	NA	0.29 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	NA	NA	0.15 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	NA	NA	0.64 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	NA	NA	0.41 UJ	0.41 UJ
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	NA	NA	0.27 J	0.25 J
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	NA	NA	0.18 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	NA	NA	0.29 UJ	0.29 UJ
CHLOROFORM	16 U	12 U	NA	0.16 U	NA	NA	0.16 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	NA	NA	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	NA	NA	0.67 J	0.58 J
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	NA	NA	0.14 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	NA	NA	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	NA	NA	0.31 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	NA	NA	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	NA	NA	0.17 U	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MW-03			
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW3-051612	MSA-MW4-051512	MSA-MW4-051512-11	MSA-MW4-051512-18
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	NA	NA	0.3 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	NA	NA	0.24 U	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	NA	NA	0.17 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	NA	NA	0.33 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	NA	NA	0.24 U	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	NA	NA	0.12 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	NA	NA	0.14 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	NA	NA	0.14 U	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	NA	NA	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	NA	NA	3.9 UR	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	NA	NA	0.29 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	NA	NA	0.13 U	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	NA	NA	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	NA	NA	0.91 J	0.87 J
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	NA	NA	0.19 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	NA	NA	0.17 U	0.17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	NA	NA	0.21 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	NA	NA	0.19 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	NA	NA	1.2	0.82 J
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	NA	0.6 J	NA	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	0.036 U	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	NA	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	NA	0.082 U	NA	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	43 B	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	240 J	NA	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	NA	0.48 B	NA	NA
ARSENIC	6.6	11	NA	1.5 J	NA	2.3 B	NA	NA
BARIUM	13	16	NA	82	NA	38	NA	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA
CADMIUM	1100	170	NA	0.41 J	NA	0.13 U	NA	NA
CHROMIUM	86	9.9	NA	0.71 U	NA	1.1 J	NA	NA
COBALT	51	35	NA	0.4 J	NA	0.41 B	NA	NA
COPPER	9.6	9.5	NA	7.2	NA	1.1 B	NA	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	NA	0.18 U	NA	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	NA	0.12 U	NA	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	NA	1.5 B	NA	NA
NICKEL	150	43	NA	1.9 J	NA	9.9	NA	NA
SELENIUM	5	2 J	NA	0.57 U	NA	0.57 U	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	0.08 U	NA	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	NA	0.3 B	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	8.6 J	NA	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	NA	0.44 U	NA	NA
ZINC	460	160	NA	10 J	NA	240	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MW-03			
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW3-051612	MSA-MW4-051512	MSA-MW4-051512-11	MSA-MW4-051512-18
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	NA	1.4 J	NA	NA
ARSENIC	6.3	16	NA	1.5 J	NA	2.7 B	NA	NA
BARIUM	13	16	NA	81	NA	40	NA	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA
CADMIUM	1000	180	NA	1.1	NA	3.6	NA	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	NA	1.8 J	NA	NA
COBALT	49	33	NA	0.4 J	NA	0.5 B	NA	NA
COPPER	11	16	NA	8.5	NA	13	NA	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	NA	4.3	NA	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	NA	0.12 U	NA	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	NA	1.7 J	NA	NA
NICKEL	150	42	NA	1.7 J	NA	9.9	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	NA	0.57 U	NA	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	0.092 J	NA	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	NA	0.59 B	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	9.9 J	NA	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	NA	0.98 J	NA	NA
ZINC	440	170	NA	9.5 B	NA	300	NA	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MW-03			
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW3-051612	MSA-MW4-051512	MSA-MW4-051512-11	MSA-MW4-051512-18
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	1.02	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	0.795	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	1.3 NJ	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	0.16 NJ	0.13 NJ
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	0.43 NJ	0.4 NJ
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	0.11 U	0.11 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	3.2 NJ	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	0.067 U	0.067 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	0.92 NJ	0.75 NJ
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-04		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW4-051512-25	MSA-MW4-060712-11-	MSA-MW4-060712-18-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	1.1	0.22 U	1
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	3.3 J	2.8 J
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	0.99 U	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	0.32 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	4.5 J	7.3 J	8.3 J
BENZENE	13 U	16 J	NA	0.13 U	0.65 J	0.13 U	0.82 J
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	0.64 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 UJ	0.41 U	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.24 J	0.15 U	0.31 J
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 UJ	0.29 U	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.61 J	0.17 U	0.8 J
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	0.31 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-04		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW4-051512-25	MSA-MW4-060712-11-	MSA-MW4-060712-18-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	0.33 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	4.8 J	6.6 J
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.89 J	0.19 U	1.1
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	0.17 U	0.17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	0.21 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.19 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.81 J	0.22 U	1.4
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	NA	NA	NA
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	NA	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	NA	NA	NA
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	NA
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	NA	NA	NA
ARSENIC	6.6	11	NA	1.5 J	NA	NA	NA
BARIUM	13	16	NA	82	NA	NA	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	NA	NA	NA
CADMIUM	1100	170	NA	0.41 J	NA	NA	NA
CHROMIUM	86	9.9	NA	0.71 U	NA	NA	NA
COBALT	51	35	NA	0.4 J	NA	NA	NA
COPPER	9.6	9.5	NA	7.2	NA	NA	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	NA	NA	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	NA	NA	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	NA	NA	NA
NICKEL	150	43	NA	1.9 J	NA	NA	NA
SELENIUM	5	2 J	NA	0.57 U	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	NA	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	NA	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	NA	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	NA	NA	NA
ZINC	460	160	NA	10 J	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-04		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW4-051512-25	MSA-MW4-060712-11-	MSA-MW4-060712-18-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	NA	NA	NA
ARSENIC	6.3	16	NA	1.5 J	NA	NA	NA
BARIUM	13	16	NA	81	NA	NA	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	NA	NA	NA
CADMIUM	1000	180	NA	1.1	NA	NA	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	NA	NA	NA
COBALT	49	33	NA	0.4 J	NA	NA	NA
COPPER	11	16	NA	8.5	NA	NA	NA
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	NA	NA	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	NA	NA	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	NA	NA	NA
NICKEL	150	42	NA	1.7 J	NA	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	NA	NA	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	NA	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	NA	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	NA	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	NA	NA	NA
ZINC	440	170	NA	9.5 B	NA	NA	NA
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-04		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW4-051512-25	MSA-MW4-060712-11-	MSA-MW4-060712-18-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	1.1 NJ	NA	2 NJ
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	0.13 NJ	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	0.42 NJ	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	0.78 NJ	2.1 NJ
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	0.11 U	0.11 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	3.1 NJ	NA	1.7 NJ
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	1.8 R	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	3.6 R	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	0.067 U	0.067 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	0.95 NJ	0.76 NJ	0.97 NJ
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S					
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW4-060712-25-20120607	MSA-MW5-051412	MSA-MW5-051412-25	MSA-MW5-051412-31
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120514	20120514	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	NA	23 U	23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	NA	22 U	22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	NA	18 U	18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	NA	28 U	28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	NA	15 U	15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	NA	19 U	19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	NA	17 U	17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	NA	43 U	43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	NA	0.59 U	0.59 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	NA	15 U	15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	12 U	12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	NA	67 U	67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	NA	24 U	24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	1.1	NA	22 U	22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	NA	18 U	18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	NA	14 U	14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	NA	16 U	16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	2.6 J	NA	57 U	57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	NA	99 U	99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	NA	11 U	11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	NA	41 U	41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	NA	18 U	18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	12 U	12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	NA	32 U	32 U
ACETONE	110 U	85 U	NA	1.1 U	8.3 J	NA	110 U	110 U
BENZENE	13 U	16 J	NA	0.13 U	0.9 J	NA	13 U	13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	NA	29 U	29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	NA	15 U	15 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	NA	64 U	64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	NA	41 UJ	41 UJ
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.34 J	NA	15 U	15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	NA	18 U	18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	NA	29 UJ	29 UJ
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	NA	16 U	16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	NA	30 U	30 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.86 J	NA	2500	2400
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	NA	14 U	14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	NA	28 U	28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	NA	31 U	31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	NA	150 U	150 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	11 U	11 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	NA	17 U	17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S					
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW4-060712-25-20120607	MSA-MW5-051412	MSA-MW5-051412-25	MSA-MW5-051412-31
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120514	20120514	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	NA	30 U	30 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	NA	24 U	24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	NA	17 U	17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	NA	33 U	33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	NA	24 U	24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	12 U	12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	NA	14 U	14 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	NA	14 U	14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	NA	11 U	11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	6.7 U	6.7 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	6 J	NA	390 UR	390 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	NA	29 U	29 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	NA	13 U	13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	NA	28 U	28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	1.2	NA	58 J	56 J
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	NA	19 U	19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	NA	17 U	17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	NA	21 U	21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	NA	19 UR	19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	1.4	NA	440	440
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	NA	6.1	NA	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	0.036 U	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	NA	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	NA	0.082 U	NA	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	1700	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	450 B	NA	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	NA	0.13 U	NA	NA
ARSENIC	6.6	11	NA	1.5 J	NA	1.5 J	NA	NA
BARIUM	13	16	NA	82	NA	16	NA	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA
CADMIUM	1100	170	NA	0.41 J	NA	0.13 U	NA	NA
CHROMIUM	86	9.9	NA	0.71 U	NA	0.71 U	NA	NA
COBALT	51	35	NA	0.4 J	NA	0.13 J	NA	NA
COPPER	9.6	9.5	NA	7.2	NA	0.29 U	NA	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	NA	0.18 U	NA	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	NA	0.12 U	NA	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	NA	1.4 B	NA	NA
NICKEL	150	43	NA	1.9 J	NA	0.57 J	NA	NA
SELENIUM	5	2 J	NA	0.57 U	NA	0.57 U	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	0.08 U	NA	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	NA	0.14 U	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	0.37 U	NA	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	NA	0.44 U	NA	NA
ZINC	460	160	NA	10 J	NA	2.3 U	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S					
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW4-060712-25-20120607	MSA-MW5-051412	MSA-MW5-051412-25	MSA-MW5-051412-31
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120514	20120514	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	NA	0.13 U	NA	NA
ARSENIC	6.3	16	NA	1.5 J	NA	2 J	NA	NA
BARIUM	13	16	NA	81	NA	19	NA	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	NA	0.2 U	NA	NA
CADMIUM	1000	180	NA	1.1	NA	0.13 U	NA	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	NA	1 J	NA	NA
COBALT	49	33	NA	0.4 J	NA	0.32 J	NA	NA
COPPER	11	16	NA	8.5	NA	4.8	NA	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	NA	0.92 J	NA	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	NA	0.12 U	NA	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	NA	1.6 B	NA	NA
NICKEL	150	42	NA	1.7 J	NA	1.4 J	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	NA	0.57 U	NA	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	0.08 U	NA	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	NA	0.14 U	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	0.37 U	NA	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	NA	2.4 J	NA	NA
ZINC	440	170	NA	9.5 B	NA	10 B	NA	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S					
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW4-060712-25-20120607	MSA-MW5-051412	MSA-MW5-051412-25	MSA-MW5-051412-31
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120514	20120514	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	1.2 NJ	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	0.14 NJ	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	2.6 NJ	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	1.1 NJ	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	31 NJ	36 NJ
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	1.4 R	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	1.1 NJ	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-05		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW5-051412-37	MSA-MW5-060712-25-	MSA-MW5-060712-31-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	21 U	15 U	23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	20 U	15 U	22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	16 U	12 U	18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	25 U	19 U	28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	14 U	10 U	15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	17 U	13 U	19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	15 U	11 U	17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	39 U	29 U	43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.54 U	0.39 U	0.59 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	14 U	10 U	15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	11 U	8 U	12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	61 U	45 U	67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	22 U	16 U	24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	20 U	15 U	22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	16 U	12 U	18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	13 U	9.3 U	14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	15 U	11 U	16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	52 U	38 U	57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	90 U	66 U	99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	10 U	7.3 U	11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	37 U	27 U	41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	16 U	12 U	18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	11 U	8 U	12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	29 U	21 U	32 U
ACETONE	110 U	85 U	NA	1.1 U	100 U	73 U	110 U
BENZENE	13 U	16 J	NA	0.13 U	12 U	8.7 U	13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	26 U	19 U	29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	14 U	10 U	15 U
BROMOFORM	64 U	49 U	NA	0.64 U	58 U	43 U	64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	37 UJ	27 U	41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	14 U	10 U	15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	16 U	12 U	18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	26 UJ	19 U	29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	15 U	11 U	16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	27 U	20 U	30 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	2400	1800	2600
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	13 U	9.3 U	14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	25 U	19 U	28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	28 U	21 U	31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	140 U	100 U	150 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	10 U	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	15 U	11 U	17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-05		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW5-051412-37	MSA-MW5-060712-25-	MSA-MW5-060712-31-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	27 U	20 U	30 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	22 U	16 U	24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	15 U	11 U	17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	30 U	22 U	33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	22 U	16 U	24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	11 U	8 U	12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	13 U	9.3 U	14 U
O-XYLENE	14 U	11 U	NA	0.14 U	13 U	9.3 U	14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
STYRENE	11 U	8.5 U	NA	0.11 U	10 U	7.3 U	11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	6.1 U	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	12 U	8.7 U	13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	350 UR	260 UR	390 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	26 U	19 U	29 U
TOLUENE	43 J	10 U	NA	0.13 U	12 U	8.7 U	13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	25 U	19 U	28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	53 J	34 J	54 J
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	17 U	13 U	19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	15 U	11 U	17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	19 U	14 U	21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	17 UR	13 UR	19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	410	230	530
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	NA	NA	NA
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	NA	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	NA	NA	NA
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	NA
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	NA	NA	NA
ARSENIC	6.6	11	NA	1.5 J	NA	NA	NA
BARIUM	13	16	NA	82	NA	NA	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	NA	NA	NA
CADMIUM	1100	170	NA	0.41 J	NA	NA	NA
CHROMIUM	86	9.9	NA	0.71 U	NA	NA	NA
COBALT	51	35	NA	0.4 J	NA	NA	NA
COPPER	9.6	9.5	NA	7.2	NA	NA	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	NA	NA	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	NA	NA	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	NA	NA	NA
NICKEL	150	43	NA	1.9 J	NA	NA	NA
SELENIUM	5	2 J	NA	0.57 U	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	NA	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	NA	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	NA	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	NA	NA	NA
ZINC	460	160	NA	10 J	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-05		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW5-051412-37	MSA-MW5-060712-25-	MSA-MW5-060712-31-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	NA	NA	NA
ARSENIC	6.3	16	NA	1.5 J	NA	NA	NA
BARIUM	13	16	NA	81	NA	NA	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	NA	NA	NA
CADMIUM	1000	180	NA	1.1	NA	NA	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	NA	NA	NA
COBALT	49	33	NA	0.4 J	NA	NA	NA
COPPER	11	16	NA	8.5	NA	NA	NA
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	NA	NA	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	NA	NA	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	NA	NA	NA
NICKEL	150	42	NA	1.7 J	NA	NA	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	NA	NA	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	NA	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	NA	NA	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	NA	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	NA	NA	NA
ZINC	440	170	NA	9.5 B	NA	NA	NA
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-05		
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW5-051412-37	MSA-MW5-060712-25-	MSA-MW5-060712-31-
SAMPLE DATE	20120502	20120502	20120510	20120510	20120514	20120607	20120607
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	7.3 U	11 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	32 NJ	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	4.5 U	6.7 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S			MSA-MW-06		MSA-MW-14D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW5-060712-37-20120607	MSA-MW06-050712	MSA-MW-06-050712	MSA-MW14D-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120507	20120507	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	23 U	NA	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	22 U	NA	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	18 U	NA	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	28 U	NA	0.28 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	15 U	NA	0.15 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	19 U	NA	0.19 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	17 U	NA	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	43 U	NA	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.59 U	NA	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	15 U	NA	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	12 U	NA	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	67 U	NA	0.67 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	24 U	NA	0.24 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	22 U	NA	0.22 U	0.22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	18 U	NA	0.18 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	14 U	NA	0.14 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	16 U	NA	0.16 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	57 U	NA	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	99 U	NA	0.99 U	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	11 U	NA	0.11 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	41 U	NA	0.41 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	18 U	NA	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	12 U	NA	0.12 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	32 U	NA	0.32 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	110 U	NA	1.1 U	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	13 U	NA	0.13 U	0.13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	29 U	NA	0.29 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	15 U	NA	0.15 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	64 U	NA	0.64 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	41 U	NA	0.41 U	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	15 U	NA	0.15 U	0.15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	18 U	NA	0.18 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	29 U	NA	0.29 U	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	16 U	NA	0.16 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	30 U	NA	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	2400	NA	0.41 J	0.17 U
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	14 U	NA	0.14 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	28 U	NA	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	31 U	NA	0.31 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	150 U	NA	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	17 U	NA	0.17 U	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S			MSA-MW-06		MSA-MW-14D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW5-060712-37-	MSA-MW06-050712	MSA-MW-06-050712	MSA-MW14D-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120507	20120507	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	30 U	NA	0.3 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	24 U	NA	0.24 U	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	17 U	NA	0.17 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	33 U	NA	0.33 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	24 U	NA	0.24 U	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	12 U	NA	0.12 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	14 U	NA	0.14 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	14 U	NA	0.14 U	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	11 U	NA	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	390 UR	NA	3.9 UR	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	29 U	NA	0.29 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	13 U	NA	0.13 U	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	28 U	NA	0.28 U	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	56 J	NA	0.19 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	19 U	NA	0.19 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	17 U	NA	0.17 U	0.17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	21 U	NA	0.21 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	19 UR	NA	0.19 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	520	NA	0.22 U	0.22 U
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	NA	NA	1.3	0.47 U
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	NA	0.04
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	NA	NA	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	42 B	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	280 B	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	NA	NA	0.13 U	0.13 U
ARSENIC	6.6	11	NA	1.5 J	NA	NA	2.6 J	1 B
BARIUM	13	16	NA	82	NA	NA	8.8	4.7 J
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	NA	NA	0.26 J	0.2 U
CADMIUM	1100	170	NA	0.41 J	NA	NA	0.52 J	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	NA	NA	0.71 U	0.71 U
COBALT	51	35	NA	0.4 J	NA	NA	50	5.4
COPPER	9.6	9.5	NA	7.2	NA	NA	0.76 B	2
LEAD	0.46 J	0.62 J	NA	0.82 J	NA	NA	0.18 U	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	NA	NA	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	NA	NA	0.1 B	0.26 B
NICKEL	150	43	NA	1.9 J	NA	NA	15	8.4
SELENIUM	5	2 J	NA	0.57 U	NA	NA	1.6 J	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	NA	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	NA	NA	0.14 U	0.19 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	NA	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	NA	NA	0.93 J	0.63 B
ZINC	460	160	NA	10 J	NA	NA	48	98

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S			MSA-MW-06		MSA-MW-14D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW5-060712-37-20120607	MSA-MW06-050712	MSA-MW-06-050712	MSA-MW14D-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120507	20120507	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	NA	NA	0.13 U	0.18 B
ARSENIC	6.3	16	NA	1.5 J	NA	NA	4.8 J	2.2 B
BARIUM	13	16	NA	81	NA	NA	9.7	6.3
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	NA	NA	0.9 J	0.2 J
CADMIUM	1000	180	NA	1.1	NA	NA	0.62 J	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	NA	NA	1.1 J	2.6
COBALT	49	33	NA	0.4 J	NA	NA	48	5.6
COPPER	11	16	NA	8.5	NA	NA	6.1	5.1
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	NA	NA	1.2 K	0.46 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	NA	NA	0.13 J	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	NA	NA	0.093 U	0.19 B
NICKEL	150	42	NA	1.7 J	NA	NA	15	8.9
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	NA	NA	2.3 J	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	NA	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	NA	NA	0.14 U	0.21 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	NA	0.37 U	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	NA	NA	21	3.3 J
ZINC	440	170	NA	9.5 B	NA	NA	56	100
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S			MSA-MW-06		MSA-MW-14D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW5-060712-37-20120607	MSA-MW06-050712	MSA-MW-06-050712	MSA-MW14D-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120607	20120507	20120507	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	11 U	NA	0.11 U	0.11 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	1.3 R	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	6.7 U	NA	0.067 U	0.067 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	4.1 R
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-14I	MSA-MW-15D	MSA-MW-15I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW14I-050112	MSA-MW15D-041812	MSA-MW15I-041812
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120418	20120418
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	9.2 U	0.23 U	4.6 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	8.8 U	0.22 U	4.4 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	7.2 U	0.18 U	3.6 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	11 U	0.28 U	5.6 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	6 U	0.15 U	3 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	16 J	0.19 U	3.8 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	6.8 U	0.17 U	3.4 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	17 U	0.43 U	8.6 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.24 U	0.0059 U	0.12 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	6 U	0.15 U	3 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	4.8 U	0.12 U	2.4 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	27 U	0.67 U	13 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	9.6 U	0.24 U	4.8 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	8.8 U	0.22 U	4.4 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	7.2 U	0.18 U	3.6 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	5.6 U	0.14 U	2.8 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	6.4 U	0.16 U	3.2 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
2-BUTANONE	57 U	44 U	NA	0.57 U	23 UR	0.57 U	11 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	40 UR	0.99 UR	20 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	4.4 U	0.11 U	2.2 U
2-HEXANONE	41 U	32 U	NA	0.41 U	16 U	0.41 U	8.2 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	7.2 U	0.18 U	3.6 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	4.8 U	0.12 U	2.4 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	13 U	0.32 U	6.4 U
ACETONE	110 U	85 U	NA	1.1 U	44 U	1.1 U	22 U
BENZENE	13 U	16 J	NA	0.13 U	12 J	0.13 U	2.6 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	12 U	0.29 U	5.8 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	6 U	0.15 U	3 U
BROMOFORM	64 U	49 U	NA	0.64 U	26 U	0.64 U	13 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	16 U	0.41 U	8.2 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	240	0.15 U	3 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	7.2 U	0.18 U	3.6 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	12 U	0.29 U	5.8 U
CHLOROFORM	16 U	12 U	NA	0.16 U	6.4 U	0.16 U	3.2 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	12 U	0.3 U	6 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	1400	0.17 U	150
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	5.6 U	0.14 U	2.8 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	11 U	0.28 U	5.6 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	12 U	0.31 U	6.2 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	60 U	1.5 U	30 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	0.11 U	2.2 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	6.8 U	0.17 U	3.4 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-14I	MSA-MW-15D	MSA-MW-15I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW14I-050112	MSA-MW15D-041812	MSA-MW15I-041812
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120418	20120418
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	12 U	0.3 U	6 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	9.6 U	0.24 U	4.8 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	6.8 U	0.17 U	3.4 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	13 U	0.33 U	6.6 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	9.6 U	0.24 U	4.8 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	4.8 U	0.12 U	2.4 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	5.6 U	0.14 U	2.8 U
O-XYLENE	14 U	11 U	NA	0.14 U	5.6 U	0.14 U	2.8 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
STYRENE	11 U	8.5 U	NA	0.11 U	4.4 U	0.11 U	2.2 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	0.067 U	1.3 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	5.2 U	0.13 U	2.6 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	160 UR	3.9 UR	78 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	12 U	0.29 U	5.8 U
TOLUENE	43 J	10 U	NA	0.13 U	6 J	0.13 U	2.6 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	11 U	0.28 U	5.6 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	14 J	0.19 U	3.8 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	7.6 U	0.19 U	3.8 U
TRICHLOROETHENE	2300	110	NA	0.17 U	50	0.17 U	580
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	8.4 U	0.21 U	4.2 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	7.6 UR	0.19 UR	3.8 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	910	0.22 U	12 J
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	61 K	0.47 U	0.49 U
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.016 J	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.72 J	0.25 J
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	NA
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.24 B	0.13 U	0.13 U
ARSENIC	6.6	11	NA	1.5 J	26	0.63 J	1.6 J
BARIUM	13	16	NA	82	14	5.9	6.5
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 J	0.2 U	0.22 J
CADMIUM	1100	170	NA	0.41 J	0.13 J	0.13 U	0.15 J
CHROMIUM	86	9.9	NA	0.71 U	0.88 J	0.71 U	1.5 J
COBALT	51	35	NA	0.4 J	13 L	12	22
COPPER	9.6	9.5	NA	7.2	0.29 UL	5	1.7 B
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	0.18 U	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 J	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.6 B	0.093 U	0.093 U
NICKEL	150	43	NA	1.9 J	7 L	17	28
SELENIUM	5	2 J	NA	0.57 U	1 J	0.57 U	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.46 B	0.14 U	0.15 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.66 B	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.88 B	0.44 U	0.68 J
ZINC	460	160	NA	10 J	4 J	21 B	39 B

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-14I	MSA-MW-15D	MSA-MW-15I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW14I-050112	MSA-MW15D-041812	MSA-MW15I-041812
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120418	20120418
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.3 B	0.13 U	0.13 U
ARSENIC	6.3	16	NA	1.5 J	27	0.69 J	1.8 J
BARIUM	13	16	NA	81	16	6.4	7.3
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 UL	0.2 U	0.22 J
CADMIUM	1000	180	NA	1.1	0.13 U	0.13 U	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	1.9 J	0.99 J	1.7 J
COBALT	49	33	NA	0.4 J	13 L	12	21
COPPER	11	16	NA	8.5	1 J	5.6	2.8 B
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.7 J	0.18 U	0.28 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.74 B	0.13 B	0.19 B
NICKEL	150	42	NA	1.7 J	7.9 L	17	26
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	1.1 J	0.57 U	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.37 B	0.14 U	0.17 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.75 B	0.37 U	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	1.9 B	0.5 J	1 J
ZINC	440	170	NA	9.5 B	7.6 J	23	48
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-14I	MSA-MW-15D	MSA-MW-15I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW14I-050112	MSA-MW15D-041812	MSA-MW15I-041812
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120418	20120418
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	7.7 NJ	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	4.4 U	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	0.21 NJ	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	2.7 U	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	17 NJ	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-15S	MSA-MW-16D	MSA-MW-16I	MSA-MW-16S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW15S-041812	MSA-MW16D-050912	MSA-MW16I-050912	MSA-MW16S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120418	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	0.23 U	5.1 U	1.5 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	4.9 U	1.5 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	4 U	1.2 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	6.2 U	1.9 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	3.3 U	1 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	4.2 U	1.3 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	3.8 U	1.1 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	0.43 U	9.6 U	2.9 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.0059 U	0.13 U	0.039 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	3.3 U	2.6 J
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	2.7 U	0.8 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	0.67 U	15 U	4.5 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	5.3 U	1.6 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	4.3 J
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	4.9 U	1.5 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	4 U	1.2 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	3.1 U	1.7 J
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	3.6 U	1.1 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	2.1 J
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	0.57 U	13 U	3.8 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	0.99 U	22 U	6.6 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	2.4 U	0.73 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	9.1 U	2.7 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	4 U	1.2 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	2.7 U	0.8 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	0.32 U	7.1 U	2.1 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	1.1 U	24 U	7.3 U
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	0.13 U	2.9 U	8.9
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	6.4 U	1.9 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	3.3 U	1 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	0.64 U	14 U	4.3 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	9.1 U	2.7 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	0.15 U	3.3 U	1 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	4 U	1.2 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	6.4 U	1.9 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	3.6 U	1.1 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	6.7 U	2 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	10	0.17 U	140	78
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	3.1 U	0.93 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	6.2 U	1.9 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	0.31 U	6.9 U	2.1 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	1.5 U	33 U	10 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	0.11 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	3.8 U	1.1 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-15S	MSA-MW-16D	MSA-MW-16I	MSA-MW-16S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW15S-041812	MSA-MW16D-050912	MSA-MW16I-050912	MSA-MW16S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120418	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	6.7 U	2 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	5.3 U	1.6 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	3.8 U	1.1 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	0.33 U	7.3 U	2.2 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	5.3 U	1.6 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	2.7 U	0.8 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	3.1 U	0.93 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	3.1 U	0.93 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	2.4 U	0.73 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	0.067 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	3.9 UR	87 UR	26 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	6.4 U	1.9 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.13 U	2.9 U	0.87 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	6.2 U	1.9 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	0.19 U	4.2 U	1.3 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	4.2 U	1.3 U
TRICHLOROETHENE	2300	110	NA	0.17 U	37	0.6 J	640	1.1 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	0.21 U	4.7 U	1.4 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.19 UR	4.2 UR	1.3 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.5 J	0.22 U	12 J	160
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	0.65 J	0.49 U	0.49 U	210
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	0.037 U	NA	NA	0.036 U
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 UL	0.02 UL	0.02 UL
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.43 J	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	62 B	NA	NA	98 J
TPH-DRO (C10-C32)	NA	NA	NA	380 B	330 J	NA	NA	620 B
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	0.13 U	0.13 U
ARSENIC	6.6	11	NA	1.5 J	3.6 J	0.4 U	36	2.5 J
BARIUM	13	16	NA	82	16	5.3	5.4	39
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	1.5	0.2 UL	0.24 J	1.2
CADMIUM	1100	170	NA	0.41 J	0.98 J	0.13 U	0.13 U	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	5	0.71 U	0.71 U	2.8
COBALT	51	35	NA	0.4 J	110	7.1	21	87
COPPER	9.6	9.5	NA	7.2	190	0.9 B	0.29 U	0.29 U
LEAD	0.46 J	0.62 J	NA	0.82 J	1.3	0.18 U	0.18 U	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	0.093 U	0.44 B	0.3 B
NICKEL	150	43	NA	1.9 J	130	10	28	93
SELENIUM	5	2 J	NA	0.57 U	3.7 J	0.57 U	0.57 U	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.34 B	0.14 U	0.22 B	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	1.7 J	0.44 U	0.48 J	1.4 J
ZINC	460	160	NA	10 J	140	16 B	36 B	3.5 B

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-15S	MSA-MW-16D	MSA-MW-16I	MSA-MW-16S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW15S-041812	MSA-MW16D-050912	MSA-MW16I-050912	MSA-MW16S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120418	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.23 J	0.13 U	0.31 J	0.65 U
ARSENIC	6.3	16	NA	1.5 J	3.4 J	0.71 J	38	9.7
BARIUM	13	16	NA	81	14	7.5	33	43
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	1.4	0.2 UL	0.6 J	16
CADMIUM	1000	180	NA	1.1	0.98 J	0.13 U	0.13 U	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	5	1.4 J	1.5 J	48
COBALT	49	33	NA	0.4 J	110	7	30	100
COPPER	11	16	NA	8.5	180	4.3	2.1 B	0.73 B
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	1.3	0.35 J	3	0.9 U
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.49 B	0.093 U	1.1 B	0.39 B
NICKEL	150	42	NA	1.7 J	120	9.9	41	120
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	3.7 J	0.57 U	0.57 U	5.9
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	1.2 B	0.14 U	0.61 B	1.2 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.7 B	0.37 U	0.53 B	1.9 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	2.3 J	2 J	1.9 J	96
ZINC	440	170	NA	9.5 B	130	39 B	68	650
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-15S	MSA-MW-16D	MSA-MW-16I	MSA-MW-16S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW15S-041812	MSA-MW16D-050912	MSA-MW16I-050912	MSA-MW16S-050912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120418	20120509	20120509	20120509
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	0.283 U	0.481 J	0.836 J
TOTAL RADIUM	NA	NA	NA	NA	NA	0.128 U	0.366 J	0.283 J
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	360 NJ
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	0.11 U	2.4 U	0.73 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	1 NJ
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	2.2 R	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	0.067 U	1.5 U	0.45 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-17I		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW17I-042012	MSA-MW17I-042312	MSA-MW17S-042012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	7.7 U	NA	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	7.3 U	NA	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	6 U	NA	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	9.3 U	NA	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	5 U	NA	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	6.3 U	NA	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	5.7 U	NA	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	14 U	NA	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.2 U	NA	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	5 U	NA	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	4 U	NA	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	22 U	NA	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	8 U	NA	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	7.3 U	NA	0.22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	6 U	NA	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	4.7 U	NA	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	5.3 U	NA	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	19 U	NA	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	33 U	NA	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	3.7 U	NA	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	14 U	NA	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	6 U	NA	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	4 U	NA	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	11 U	NA	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	37 U	NA	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	4.3 U	NA	0.22 J
BROMOBENZENE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	9.7 U	NA	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	5 U	NA	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	21 U	NA	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	14 U	NA	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	5 U	NA	0.15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	6 U	NA	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	9.7 U	NA	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	5.3 U	NA	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	10 U	NA	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	110	NA	1.4
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	4.7 U	NA	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	9.3 U	NA	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	10 U	NA	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	50 U	NA	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	3.7 U	NA	0.11 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	5.7 U	NA	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-17I		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW17I-042012	MSA-MW17I-042312	MSA-MW17S-042012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	10 U	NA	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	8 U	NA	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	5.7 U	NA	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	11 U	NA	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	8 U	NA	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	4 U	NA	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	4.7 U	NA	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	4.7 U	NA	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	3.7 U	NA	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	2.2 U	NA	0.067 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	4.3 U	NA	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	130 UR	NA	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	9.7 U	NA	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	4.3 U	NA	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	9.3 U	NA	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	6.3 U	NA	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	6.3 U	NA	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	830	NA	0.17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	7 U	NA	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	6.3 UR	NA	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	9.1 J	NA	11
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	0.47 U	NA	0.94 J
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	0.038 U
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 UR	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.19 J	NA	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	46 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	240 U
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	NA	0.13 U
ARSENIC	6.6	11	NA	1.5 J	5.8	NA	7.6
BARIUM	13	16	NA	82	10	NA	66
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	NA	0.2 UJ
CADMIUM	1100	170	NA	0.41 J	0.13 U	NA	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	NA	0.71 U
COBALT	51	35	NA	0.4 J	17	NA	0.42 J
COPPER	9.6	9.5	NA	7.2	0.42 B	NA	0.29 B
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	NA	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.094 B	NA	0.48 B
NICKEL	150	43	NA	1.9 J	21	NA	1.1 J
SELENIUM	5	2 J	NA	0.57 U	0.57 U	NA	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	NA	0.17 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.46 J	NA	0.74 J
ZINC	460	160	NA	10 J	31 B	NA	2.5 B

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-17I		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW17I-042012	MSA-MW17I-042312	MSA-MW17S-042012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	NA	0.13 U
ARSENIC	6.3	16	NA	1.5 J	6.1	NA	8.3
BARIUM	13	16	NA	81	11	NA	66
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	NA	0.2 UJ
CADMIUM	1000	180	NA	1.1	0.13 U	NA	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	NA	1.1 J
COBALT	49	33	NA	0.4 J	16	NA	0.5 J
COPPER	11	16	NA	8.5	1.1 B	NA	0.86 B
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.28 J	NA	0.25 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	NA	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.13 B	NA	0.5 B
NICKEL	150	42	NA	1.7 J	22	NA	1.8 J
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	NA	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.15 B	NA	0.2 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	1.1 J	NA	1.2 J
ZINC	440	170	NA	9.5 B	35 B	NA	2.5 B
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-17I		MSA-M
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW17I-042012	MSA-MW17I-042312	MSA-MW17S-042012
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		W-17S	MSA-MW-18I	MSA-MW-18S	MSA-MW-19D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW17S-042312	MSA-MW18I-051012	MSA-MW18S-051012	MSA-MW19D-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120423	20120510	20120510	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	NA	77 U	13 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	NA	73 U	12 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	NA	60 U	10 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	NA	93 U	16 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	NA	50 U	8.3 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	NA	63 U	11 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	NA	130 J	9.4 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	NA	140 U	24 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	NA	2 U	0.33 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	NA	160 J	8.8 J	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	NA	40 U	6.7 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	NA	220 U	37 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	NA	80 U	13 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	NA	73 U	12 U	0.22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	NA	60 U	10 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	NA	47 U	7.8 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	NA	53 U	8.9 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	NA	190 U	32 U	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	NA	330 U	55 U	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	NA	37 U	6.1 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	NA	140 U	23 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	NA	60 U	10 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	NA	40 U	6.7 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	NA	110 U	18 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	NA	370 U	61 U	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	NA	43 U	7.2 U	0.13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	NA	97 U	16 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	NA	50 U	8.3 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	NA	210 U	36 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	NA	140 U	23 U	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	NA	50 U	8.3 U	0.15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	NA	60 U	10 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	NA	97 U	16 U	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	NA	53 U	8.9 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	NA	100 U	17 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	NA	1200	180	0.17 U
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	NA	47 U	7.8 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	NA	93 U	16 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	NA	100 U	17 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	NA	500 U	83 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	37 U	6.1 U	0.11 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	NA	57 U	9.4 U	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		W-17S	MSA-MW-18I	MSA-MW-18S	MSA-MW-19D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW17S-042312	MSA-MW18I-051012	MSA-MW18S-051012	MSA-MW19D-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120423	20120510	20120510	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	NA	210 J	17 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	NA	80 U	13 U	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	NA	57 U	9.4 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	NA	110 U	18 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	NA	80 U	13 U	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	NA	40 U	6.7 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	NA	47 U	7.8 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	NA	47 U	7.8 U	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	NA	37 U	6.1 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	22 U	3.7 U	0.067 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	NA	1300 UR	220 UR	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	NA	97 U	16 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	NA	43 U	7.2 U	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	NA	93 U	16 U	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	NA	63 U	11 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	NA	63 U	11 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	NA	11000	1800	8.7
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	NA	70 U	12 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	NA	63 UR	11 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	NA	540	73	0.22 U
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	NA	140	45	0.49 U
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	0.036 U	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	NA	0.16 J	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	910	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	380 B	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	NA	0.65 UJ	0.14 J	0.13 U
ARSENIC	6.6	11	NA	1.5 J	NA	6.3	1.9 J	2.5 J
BARIUM	13	16	NA	82	NA	53 J	46	61
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	NA	3.7	0.2 U	1.7
CADMIUM	1100	170	NA	0.41 J	NA	100	0.13 U	1.1
CHROMIUM	86	9.9	NA	0.71 U	NA	1.2 J	1.9 J	9.1
COBALT	51	35	NA	0.4 J	NA	310	61	230
COPPER	9.6	9.5	NA	7.2	NA	30	0.45 B	0.85 B
LEAD	0.46 J	0.62 J	NA	0.82 J	NA	0.9 UJ	0.18 U	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	NA	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	NA	0.093 U	0.22 B	0.17 B
NICKEL	150	43	NA	1.9 J	NA	230	45	100
SELENIUM	5	2 J	NA	0.57 U	NA	7.7	0.69 J	1.4 J
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	NA	0.7 UJ	0.14 U	0.23 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	1.9 UJ	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	NA	0.53 J	1.1 J	4.3 J
ZINC	460	160	NA	10 J	NA	500	57	270

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		W-17S	MSA-MW-18I	MSA-MW-18S	MSA-MW-19D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW17S-042312	MSA-MW18I-051012	MSA-MW18S-051012	MSA-MW19D-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120423	20120510	20120510	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	NA	1.3 UJ	0.19 J	0.13 U
ARSENIC	6.3	16	NA	1.5 J	NA	21	2.2 J	2.4 J
BARIUM	13	16	NA	81	NA	55 J	49	61
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	NA	16	0.2 U	1.8
CADMIUM	1000	180	NA	1.1	NA	130	0.13 U	1.5
CALCIUM	NA	NA	NA	NA	NA	61000	200000	NA
CHROMIUM	130	29	NA	0.79 J	NA	9.8	2.7	9.6
COBALT	49	33	NA	0.4 J	NA	290	48	230
COPPER	11	16	NA	8.5	NA	350	2.3 B	0.77 B
IRON	NA	NA	NA	NA	NA	52000	170000	NA
LEAD	0.46 J	1.5 J	NA	2.4	NA	4.1 J	0.5 J	0.18 U
MAGNESIUM	NA	NA	NA	NA	NA	59000	210000	NA
MANGANESE	NA	NA	NA	NA	NA	3700	3400	NA
MERCURY	0.2	0.87	NA	0.13 B	NA	0.26 B	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	NA	0.24 B	0.35 B	0.41 B
NICKEL	150	42	NA	1.7 J	NA	220	35	100
POTASSIUM	NA	NA	NA	NA	NA	11000 J	43000	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	NA	24	0.78 J	1.5 J
SILICON DIOXIDE	NA	NA	NA	NA	NA	36000	33000	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	NA	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	210000	590000	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	NA	1.4 UJ	0.14 U	0.26 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	NA	3.7 UJ	0.37 U	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	NA	13 J	2.3 J	4.5 J
ZINC	440	170	NA	9.5 B	NA	490	56	280
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	32	310	NA
AMMONIA-N	NA	NA	NA	NA	NA	3.3	17	NA
CHLORIDE	NA	NA	NA	NA	NA	380	760	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	43	28	NA
NITRATE-N	NA	NA	NA	NA	NA	0.032 J	0.18	NA
NITRITE-N	NA	NA	NA	NA	NA	0.012 U	0.12 U	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	0.044 U	0.056 J	NA
SULFATE	NA	NA	NA	NA	NA	510	1700	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	1400	3300	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	1.5	0.74	NA
ETHENE	NA	NA	NA	NA	NA	21	4.9	NA
METHANE	NA	NA	NA	NA	NA	230	180	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		W-17S	MSA-MW-18I	MSA-MW-18S	MSA-MW-19D
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW17S-042312	MSA-MW18I-051012	MSA-MW18S-051012	MSA-MW19D-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120423	20120510	20120510	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-19I	MSA-MW-20D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW19I-041912	MSA-MW20D-042012	MSA-MW20D-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	1.2 U	0.23 U	NA
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	1.1 U	0.22 U	NA
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.9 U	0.18 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	1.4 U	0.28 U	NA
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.75 U	0.15 U	NA
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.95 U	0.19 U	NA
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.85 U	0.17 U	NA
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	2.2 U	0.43 U	NA
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.03 U	0.0059 U	NA
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.75 U	0.15 U	NA
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.6 U	0.12 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	3.4 U	0.67 U	NA
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	1.2 U	0.24 U	NA
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	1.3 J	0.43 J	NA
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.9 U	0.18 U	NA
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.7 U	0.14 U	NA
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.8 U	0.16 U	NA
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
2-BUTANONE	57 U	44 U	NA	0.57 U	2.9 U	0.57 U	NA
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	5 U	0.99 U	NA
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.55 U	0.11 U	NA
2-HEXANONE	41 U	32 U	NA	0.41 U	2.1 U	0.41 U	NA
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.9 U	0.18 U	NA
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.6 U	0.12 U	NA
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	1.6 U	0.32 U	NA
ACETONE	110 U	85 U	NA	1.1 U	5.5 U	1.1 U	NA
BENZENE	13 U	16 J	NA	0.13 U	0.74 J	0.13 U	NA
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	1.5 U	0.29 U	NA
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.75 U	0.15 U	NA
BROMOFORM	64 U	49 U	NA	0.64 U	3.2 U	0.64 U	NA
BROMOMETHANE	41 U	32 U	NA	0.41 U	2.1 U	0.41 U	NA
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.75 U	0.15 U	NA
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.9 U	0.18 U	NA
CHLOROETHANE	29 U	22 U	NA	0.29 U	1.5 U	0.29 U	NA
CHLOROFORM	16 U	12 U	NA	0.16 U	0.8 U	0.2 J	NA
CHLOROMETHANE	30 U	23 U	NA	0.3 U	1.5 U	0.3 U	NA
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	110	1.4	NA
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.7 U	0.14 U	NA
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	1.4 U	0.28 U	NA
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	1.6 U	0.31 U	NA
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	7.5 U	1.5 U	NA
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	0.55 U	0.11 U	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.85 U	0.17 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-19I	MSA-MW-20D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW19I-041912	MSA-MW20D-042012	MSA-MW20D-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	1.5 U	0.3 U	NA
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
M+P-XYLENES	24 U	18 U	NA	0.24 U	1.2 U	0.24 U	NA
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.85 U	0.17 U	NA
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	1.7 U	0.33 U	NA
NAPHTHALENE	24 U	18 U	NA	0.24 U	1.2 U	0.24 U	NA
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.6 U	0.12 U	NA
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.7 U	0.14 U	NA
O-XYLENE	14 U	11 U	NA	0.14 U	0.7 U	0.14 U	NA
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
STYRENE	11 U	8.5 U	NA	0.11 U	0.55 U	0.11 U	NA
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	0.34 U	0.067 U	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.65 U	0.13 U	NA
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	20 UR	3.9 UR	NA
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	1.5 U	0.29 U	NA
TOLUENE	43 J	10 U	NA	0.13 U	0.65 U	0.13 U	NA
TOTAL XYLENES	28 U	22 U	NA	0.28 U	1.4 U	0.28 U	NA
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.95 U	0.19 U	NA
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.95 U	0.19 U	NA
TRICHLOROETHENE	2300	110	NA	0.17 U	39	15	NA
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	1.1 U	0.21 U	NA
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.95 UR	0.19 UR	NA
VINYL CHLORIDE	1300	2200	NA	0.33 J	52	0.22 U	NA
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	7.8	1.8	NA
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	NA	0.02 UR
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	NA
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	NA
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	NA
ARSENIC	6.6	11	NA	1.5 J	3 J	1 J	NA
BARIUM	13	16	NA	82	70	140	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.63 J	0.95 J	NA
CADMIUM	1100	170	NA	0.41 J	0.13 U	2.2	NA
CHROMIUM	86	9.9	NA	0.71 U	3	1.5 J	NA
COBALT	51	35	NA	0.4 J	52	90	NA
COPPER	9.6	9.5	NA	7.2	0.33 B	2 B	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	0.18 U	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.33 B	0.093 U	NA
NICKEL	150	43	NA	1.9 J	40	51	NA
SELENIUM	5	2 J	NA	0.57 U	0.87 J	0.77 J	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 B	0.16 B	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	1.7 J	0.44 U	NA
ZINC	460	160	NA	10 J	110	140	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-19I	MSA-MW-20D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW19I-041912	MSA-MW20D-042012	MSA-MW20D-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	0.13 U	NA
ARSENIC	6.3	16	NA	1.5 J	3.2 J	1.1 J	NA
BARIUM	13	16	NA	81	71	130	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.64 J	1	NA
CADMIUM	1000	180	NA	1.1	0.13 U	2.2	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	3.5	1.9 J	NA
COBALT	49	33	NA	0.4 J	51	89	NA
COPPER	11	16	NA	8.5	0.8 B	6	NA
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.25 B	0.18 U	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.44 B	0.093 U	NA
NICKEL	150	42	NA	1.7 J	40	51	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.89 J	0.67 J	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.16 B	0.17 B	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	2.3 J	0.44 U	NA
ZINC	440	170	NA	9.5 B	130	140	NA
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-19I	MSA-MW-20D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW19I-041912	MSA-MW20D-042012	MSA-MW20D-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	1.6 R	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	1.3 NJ	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-20I		MSA-MW-20S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW20I-042012	MSA-MW20I-042312	MSA-MW20S-042012	MSA-MW20S-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	4.6 U	NA	15 U	NA
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	4.4 U	NA	15 U	NA
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	3.6 U	NA	12 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	5.6 U	NA	19 U	NA
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	3 U	NA	10 U	NA
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	4.5 J	NA	17 J	NA
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	3.4 U	NA	11 U	NA
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	8.6 U	NA	29 U	NA
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.12 U	NA	0.39 U	NA
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	3 U	NA	10 U	NA
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	2.4 U	NA	8 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	13 U	NA	45 U	NA
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	4.8 U	NA	16 U	NA
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	4.4 U	NA	15 U	NA
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	3.6 U	NA	12 U	NA
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	2.8 U	NA	9.3 U	NA
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	3.2 U	NA	11 U	NA
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
2-BUTANONE	57 U	44 U	NA	0.57 U	11 U	NA	38 U	NA
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	20 U	NA	66 U	NA
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	2.2 U	NA	7.3 U	NA
2-HEXANONE	41 U	32 U	NA	0.41 U	8.2 U	NA	27 U	NA
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	3.6 U	NA	12 U	NA
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	2.4 U	NA	8 U	NA
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	6.4 U	NA	21 U	NA
ACETONE	110 U	85 U	NA	1.1 U	22 U	NA	73 U	NA
BENZENE	13 U	16 J	NA	0.13 U	2.6 U	NA	23 J	NA
BROMOBENZENE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	5.8 U	NA	19 U	NA
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	3 U	NA	10 U	NA
BROMOFORM	64 U	49 U	NA	0.64 U	13 U	NA	43 U	NA
BROMOMETHANE	41 U	32 U	NA	0.41 U	8.2 U	NA	27 U	NA
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
CHLOROBENZENE	15 U	12 U	NA	0.66 J	27	NA	250	NA
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	3.6 U	NA	12 U	NA
CHLOROETHANE	29 U	22 U	NA	0.29 U	5.8 U	NA	19 U	NA
CHLOROFORM	16 U	12 U	NA	0.16 U	3.2 U	NA	11 U	NA
CHLOROMETHANE	30 U	23 U	NA	0.3 U	6 U	NA	20 U	NA
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	510	NA	1700	NA
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	2.8 U	NA	9.3 U	NA
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	5.6 U	NA	19 U	NA
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	6.2 U	NA	21 U	NA
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	30 U	NA	100 U	NA
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	2.2 U	NA	7.3 U	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	3.4 U	NA	11 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-20I		MSA-MW-20S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW20I-042012	MSA-MW20I-042312	MSA-MW20S-042012	MSA-MW20S-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	6 U	NA	20 U	NA
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
M+P-XYLENES	24 U	18 U	NA	0.24 U	4.8 U	NA	16 U	NA
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	3.4 U	NA	11 U	NA
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	6.6 U	NA	22 U	NA
NAPHTHALENE	24 U	18 U	NA	0.24 U	4.8 U	NA	16 U	NA
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	2.4 U	NA	8 U	NA
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	2.8 U	NA	9.3 U	NA
O-XYLENE	14 U	11 U	NA	0.14 U	2.8 U	NA	9.3 U	NA
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
STYRENE	11 U	8.5 U	NA	0.11 U	2.2 U	NA	7.3 U	NA
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	1.3 U	NA	4.5 U	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	2.6 U	NA	8.7 U	NA
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	78 UR	NA	260 UR	NA
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	5.8 U	NA	19 U	NA
TOLUENE	43 J	10 U	NA	0.13 U	2.6 U	NA	12 J	NA
TOTAL XYLENES	28 U	22 U	NA	0.28 U	5.6 U	NA	19 U	NA
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	3.8 U	NA	25 J	NA
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	3.8 U	NA	13 U	NA
TRICHLOROETHENE	2300	110	NA	0.17 U	60	NA	510	NA
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	4.2 U	NA	14 U	NA
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	3.8 UR	NA	13 UR	NA
VINYL CHLORIDE	1300	2200	NA	0.33 J	210	NA	920	NA
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	11	NA	240	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	0.037 U	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	NA	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	NA	0.082 U	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	2200	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	4400	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	NA	0.13 U	NA
ARSENIC	6.6	11	NA	1.5 J	5.3	NA	16	NA
BARIUM	13	16	NA	82	15	NA	14	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 UJ	NA	1.4 J	NA
CADMIUM	1100	170	NA	0.41 J	0.13 U	NA	0.13 U	NA
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	NA	2.8	NA
COBALT	51	35	NA	0.4 J	16	NA	4.8	NA
COPPER	9.6	9.5	NA	7.2	0.36 B	NA	0.29 U	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	NA	0.18 U	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.33 B	NA	0.19 B	NA
NICKEL	150	43	NA	1.9 J	2.8	NA	2.3	NA
SELENIUM	5	2 J	NA	0.57 U	0.57 U	NA	7.1	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.21 B	NA	0.23 B	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.57 J	NA	11 J	NA
ZINC	460	160	NA	10 J	3.8 B	NA	7.5 B	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-20I		MSA-MW-20S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW20I-042012	MSA-MW20I-042312	MSA-MW20S-042012	MSA-MW20S-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	NA	0.15 B	NA
ARSENIC	6.3	16	NA	1.5 J	5.4	NA	17	NA
BARIUM	13	16	NA	81	14	NA	15	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 UJ	NA	1.5 J	NA
CADMIUM	1000	180	NA	1.1	0.13 U	NA	0.13 U	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	NA	3	NA
COBALT	49	33	NA	0.4 J	16	NA	5	NA
COPPER	11	16	NA	8.5	0.33 B	NA	0.38 B	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.18 U	NA	0.18 U	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	NA	0.12 U	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.31 B	NA	0.23 B	NA
NICKEL	150	42	NA	1.7 J	2.7	NA	2.4	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	NA	7.1	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.25 B	NA	0.31 B	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	0.72 J	NA	14 J	NA
ZINC	440	170	NA	9.5 B	3.7 B	NA	5.9 B	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-20I		MSA-MW-20S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW20I-042012	MSA-MW20I-042312	MSA-MW20S-042012	MSA-MW20S-042312
SAMPLE DATE	20120502	20120502	20120510	20120510	20120420	20120423	20120420	20120423
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	48 NJ	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	31 NJ	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-22D	MSA-MW-23D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW22D-051512	MSA-MW23D-051112	MSA-MW23D-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	0.23 U	NA
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	NA
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	NA
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	NA
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.2 J	NA
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	NA
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	0.43 U	NA
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.0059 U	NA
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	NA
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	0.67 U	NA
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	NA
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	NA
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	NA
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
2-BUTANONE	57 U	44 U	NA	0.57 U	0.73 J	0.57 U	NA
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	0.99 U	NA
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	NA
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	NA
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	NA
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	0.32 U	NA
ACETONE	110 U	85 U	NA	1.1 U	2.5 J	1.4 J	NA
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	0.13 U	NA
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	NA
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	NA
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	0.64 U	NA
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 UJ	0.41 U	NA
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.19 J	NA
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	9.9	NA
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	0.15 U	NA
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 UJ	0.29 U	NA
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	4	NA
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	NA
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	0.17 U	NA
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	NA
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	0.31 U	NA
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	1.5 U	NA
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-22D	MSA-MW-23D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW22D-051512	MSA-MW23D-051112	MSA-MW23D-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	NA
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	NA
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	NA
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	0.33 U	NA
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	NA
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	NA
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	NA
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	3.9 UR	NA
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	NA
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.13 U	NA
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	NA
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	0.19 U	NA
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	NA
TRICHLOROETHENE	2300	110	NA	0.17 U	0.24 J	1.7	NA
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	0.21 U	NA
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.19 UR	NA
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	0.22 U	NA
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	0.48 U	0.47 U	NA
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	NA	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	NA
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	NA
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.34 B	0.13 U	NA
ARSENIC	6.6	11	NA	1.5 J	17	0.4 U	NA
BARIUM	13	16	NA	82	48	74	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	1.2	NA
CADMIUM	1100	170	NA	0.41 J	0.13 U	0.93 J	NA
CHROMIUM	86	9.9	NA	0.71 U	1.8 J	0.71 U	NA
COBALT	51	35	NA	0.4 J	13	29	NA
COPPER	9.6	9.5	NA	7.2	2.1 B	0.91 B	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	0.29 B	0.18 U	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	1.3 B	0.093 U	NA
NICKEL	150	43	NA	1.9 J	11	22	NA
SELENIUM	5	2 J	NA	0.57 U	0.57 U	0.57 U	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.17 B	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	5.4 J	0.44 U	NA
ZINC	460	160	NA	10 J	930	53 B	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-22D	MSA-MW-23D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW22D-051512	MSA-MW23D-051112	MSA-MW23D-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.41 B	0.13 U	NA
ARSENIC	6.3	16	NA	1.5 J	17	1.3 J	NA
BARIUM	13	16	NA	81	45	74	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	1.2	NA
CADMIUM	1000	180	NA	1.1	0.13 U	2.2	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	2.5	1.1 J	NA
COBALT	49	33	NA	0.4 J	13	38	NA
COPPER	11	16	NA	8.5	3.7 B	46	NA
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	1.1 B	0.39 J	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	1.5	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	1.3 B	0.69 B	NA
NICKEL	150	42	NA	1.7 J	10	38	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	2.2 J	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.24 B	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.38 B	0.37 U	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	6.7 J	0.55 J	NA
ZINC	440	170	NA	9.5 B	1000	81	NA
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-22D	MSA-MW-23D	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW22D-051512	MSA-MW23D-051112	MSA-MW23D-051412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120515	20120511	20120514
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	12 NJ	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	0.11 U	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	1 R	2.7 R	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	0.067 U	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-23S		MSA-MW-24I	MSA-MW-24S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW23S-051112	MSA-MW23S-051412	MSA-MW24I-050712	MSA-MW24S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120507	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	NA	1.8 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	NA	1.8 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	NA	1.4 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	NA	2.2 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	NA	1.2 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	NA	1.5 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	NA	1.4 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	NA	3.4 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	NA	0.047 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	NA	1.2 U	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	0.96 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	NA	5.4 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	NA	1.9 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.27 J	NA	1 U	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	NA	1.8 U	0.22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	NA	1.4 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	NA	1.1 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	NA	1.3 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	NA	4.6 U	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	NA	7.9 UR	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	NA	0.88 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	NA	3.3 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	NA	1.4 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	0.96 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	NA	2.6 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	NA	8.8 U	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	2.5	NA	1 U	0.17 J
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	NA	2.3 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	NA	1.2 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	NA	5.1 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	NA	3.3 U	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.4 J	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.26 J	NA	1.2 U	0.15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	NA	1.4 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	NA	2.3 U	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	NA	1.3 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	NA	2.4 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	1.9	NA	1.4 U	0.17 U
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	NA	1.1 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	NA	2.2 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	NA	2.5 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	NA	12 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	NA	1.4 U	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-23S		MSA-MW-24I	MSA-MW-24S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW23S-051112	MSA-MW23S-051412	MSA-MW24I-050712	MSA-MW24S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120507	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	NA	2.4 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	NA	1.9 U	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	NA	1.4 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	NA	2.6 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	NA	1.9 U	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	0.96 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	NA	1.1 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	NA	1.1 U	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	NA	0.88 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.33 J	NA	1 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	NA	31 UR	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	NA	2.3 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	NA	1 U	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	NA	2.2 U	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	NA	1.5 U	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	NA	1.5 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	NA	180	0.17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	NA	1.7 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	NA	1.5 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	11	NA	1.8 U	0.22 U
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	4.4	NA	0.47 U	1
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	NA	0.11 J	0.082 U
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	76 B	NA	NA	38 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	480 B	NA	NA	250 B
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	NA	0.13 U	2.6 U
ARSENIC	6.6	11	NA	1.5 J	9.4	NA	0.96 J	48
BARIUM	13	16	NA	82	110	NA	7.1	13 B
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	NA	0.65 J	7.6
CADMIUM	1100	170	NA	0.41 J	0.13 U	NA	0.13 U	3.8
CHROMIUM	86	9.9	NA	0.71 U	1.6 J	NA	0.71 U	16
COBALT	51	35	NA	0.4 J	3.6	NA	7.1	430
COPPER	9.6	9.5	NA	7.2	0.39 B	NA	8.6	300
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	NA	0.24 J	3.6 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	1.3 B	NA	0.093 U	0.11 B
NICKEL	150	43	NA	1.9 J	3	NA	2.7 K	570
SELENIUM	5	2 J	NA	0.57 U	0.57 U	NA	0.57 U	66
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	NA	0.14 U	2.8 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U	7.4 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	NA	0.44 U	180
ZINC	460	160	NA	10 J	2.3 U	NA	6.4 B	2000

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-23S		MSA-MW-24I	MSA-MW-24S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW23S-051112	MSA-MW23S-051412	MSA-MW24I-050712	MSA-MW24S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120507	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.3 J	NA	0.13 B	2.6 U
ARSENIC	6.3	16	NA	1.5 J	12	NA	1.2 J	49
BARIUM	13	16	NA	81	120	NA	7.3	20 B
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	NA	0.65 J	7.5
CADMIUM	1000	180	NA	1.1	0.29 J	NA	0.13 J	3.8
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	3.5	NA	1.4 J	17
COBALT	49	33	NA	0.4 J	4.1	NA	6.9	430
COPPER	11	16	NA	8.5	3	NA	8.6	310
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	1.1 K	NA	0.65 J	4.3 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	NA	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	2 B	NA	0.33 B	0.093 U
NICKEL	150	42	NA	1.7 J	3.7	NA	2.7 K	570
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	NA	0.88 J	67
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.2 B	NA	0.45 B	3 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.47 B	NA	0.45 B	7.4 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	1.8 J	NA	1 J	210
ZINC	440	170	NA	9.5 B	5.3 B	NA	7.8 B	2000
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-23S		MSA-MW-24I	MSA-MW-24S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW23S-051112	MSA-MW23S-051412	MSA-MW24I-050712	MSA-MW24S-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120511	20120514	20120507	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	1.6 NJ	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	1.1 J	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	1.9 NJ	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	NA	0.88 U	0.11 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	0.37 J	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	1.2 NJ	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	1.3 NJ	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	1.2 R	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	3.3 R	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	1.3 R
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	NA	0.54 U	0.067 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-25I	MSA-MW-25S	MSA-MW-26S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW25I-050812	MSA-MW25S-050812	MSA-MW26S-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120508	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	2.1 U	0.51 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	2 U	0.49 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	1.6 U	0.4 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	2.5 U	0.62 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	1.4 U	0.33 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	1.7 U	0.42 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	1.5 U	0.79 B
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	3.9 U	0.95 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.054 U	0.013 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	1.4 U	0.33 B
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	1.1 U	0.27 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	6.1 U	1.5 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	2.2 U	0.53 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	2 U	0.6 J
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	1.6 U	0.4 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	1.3 U	0.31 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	1.5 U	0.36 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	5.2 U	1.3 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	9 U	2.2 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	1 U	0.24 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	3.7 U	0.91 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	1.6 U	0.4 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	1.1 U	0.27 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	2.9 U	0.71 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	10 U	2.4 U
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	1.2 U	18
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	2.6 U	0.64 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	1.4 U	0.33 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	5.8 U	1.4 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	3.7 U	0.91 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	1.4 U	0.33 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	1.6 U	0.4 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	2.6 U	0.64 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	1.5 U	0.36 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	2.7 U	0.67 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	190	10
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	1.3 U	0.31 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	2.5 U	0.62 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	2.8 U	0.69 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	14 U	3.3 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	1.5 U	0.38 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-25I	MSA-MW-25S	MSA-MW-26S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW25I-050812	MSA-MW25S-050812	MSA-MW26S-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120508	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	2.7 U	1.1 B
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	2.2 U	0.53 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	1.5 U	0.38 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	3 U	0.73 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	2.2 U	0.53 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	1.1 U	0.27 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	1.3 U	0.31 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	1.3 U	0.31 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	1 U	0.24 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	35 UR	8.7 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	2.6 U	0.64 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	1.2 U	0.29 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	2.5 U	0.62 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	5.4 J	0.42 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	1.7 U	0.42 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.27 J	3.3 J	0.38 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	1.9 U	0.47 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	1.7 UR	0.42 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	7 J	61
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	0.47 U	0.47 U	3.3
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	120	120 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	400 B	860
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	0.14 B
ARSENIC	6.6	11	NA	1.5 J	10	6.5	3.6 J
BARIUM	13	16	NA	82	39	100	1500
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	0.2 U	0.2 UL
CADMIUM	1100	170	NA	0.41 J	0.13 U	0.13 U	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	0.84 J	2.2 L
COBALT	51	35	NA	0.4 J	1.7	9.5	0.52 J
COPPER	9.6	9.5	NA	7.2	0.32 B	0.52 B	0.58 J
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	0.18 U	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.64 B	0.79 B	0.23 B
NICKEL	150	43	NA	1.9 J	1.8 J	34	1.3 J
SELENIUM	5	2 J	NA	0.57 U	0.57 U	0.57 U	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	0.14 U	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.88 B
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	1.3 J	2.2 B
ZINC	460	160	NA	10 J	2.3 U	12 B	2.4 J

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-25I	MSA-MW-25S	MSA-MW-26S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW25I-050812	MSA-MW25S-050812	MSA-MW26S-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120508	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	0.13 U	0.17 B
ARSENIC	6.3	16	NA	1.5 J	10	6.1	4.1 J
BARIUM	13	16	NA	81	38	99	1300
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	0.2 U	0.2 UL
CADMIUM	1000	180	NA	1.1	0.13 U	0.13 U	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.88 J	0.9 J	2.6 L
COBALT	49	33	NA	0.4 J	1.8	9.3	0.53 J
COPPER	11	16	NA	8.5	0.34 B	0.38 B	2.6 L
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.18 U	0.18 U	0.43 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.56 B	0.7 B	0.37 B
NICKEL	150	42	NA	1.7 J	1.6 J	32	2.1 J
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	0.57 U	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	0.14 U	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.85 B
VANADIUM	0.44 U	3.4 J	NA	1.5 J	0.66 J	1.4 J	2.6 J
ZINC	440	170	NA	9.5 B	2.3 U	11 B	6.2 J
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-25I	MSA-MW-25S	MSA-MW-26S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW25I-050812	MSA-MW25S-050812	MSA-MW26S-050112
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120508	20120501
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	14 NJ	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	1.2 NJ
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	1 U	0.24 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	0.52 NJ
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	3.6 R	NA	4.9 R
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	0.61 U	0.15 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	3.3 NJ
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-27D		MSA-MW-28I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW27D-050412	MSA-MW27D-050712	MSA-MW28I-050412	MSA-MW28I-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	NA	12 U	NA
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	NA	11 U	NA
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	NA	9 U	NA
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	NA	14 U	NA
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	NA	7.5 U	NA
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	NA	9.5 U	NA
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	NA	8.5 U	NA
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	NA	22 U	NA
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	NA	0.3 U	NA
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	NA	7.5 U	NA
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	6 U	NA
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	NA	34 U	NA
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	NA	12 U	NA
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	NA	11 U	NA
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	NA	9 U	NA
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	NA	7 U	NA
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	NA	8 U	NA
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	NA	29 U	NA
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	NA	50 U	NA
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	NA	5.5 U	NA
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	NA	21 U	NA
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	NA	9 U	NA
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	6 U	NA
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	NA	16 U	NA
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	NA	55 U	NA
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	NA	8 J	NA
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	NA	15 U	NA
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	NA	7.5 U	NA
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	NA	32 U	NA
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	NA	21 U	NA
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	NA	7.5 U	NA
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	NA	9 U	NA
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	NA	15 U	NA
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	NA	8 U	NA
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	NA	15 U	NA
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	NA	620	NA
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	NA	7 U	NA
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	NA	14 U	NA
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	NA	16 U	NA
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	NA	75 U	NA
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	NA	8.5 U	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-27D		MSA-MW-28I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW27D-050412	MSA-MW27D-050712	MSA-MW28I-050412	MSA-MW28I-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	NA	15 U	NA
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	NA	12 U	NA
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	NA	8.5 U	NA
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	NA	17 U	NA
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	NA	12 U	NA
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	NA	6 U	NA
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	NA	7 U	NA
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	NA	7 U	NA
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	NA	5.5 U	NA
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	NA	200 UR	NA
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	NA	15 U	NA
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	NA	6.5 U	NA
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	NA	14 U	NA
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	NA	9.5 U	NA
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	NA	9.5 U	NA
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	NA	1100	NA
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	NA	11 U	NA
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	NA	9.5 UR	NA
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	NA	68	NA
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	0.49 UL	NA	0.49 U	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	NA	0.016 J	NA	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	NA	0.082 U	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	NA	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	NA	0.13 U	NA
ARSENIC	6.6	11	NA	1.5 J	0.63 J	NA	30	NA
BARIUM	13	16	NA	82	15	NA	20	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	NA	0.49 J	NA
CADMIUM	1100	170	NA	0.41 J	0.13 U	NA	0.16 J	NA
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	NA	0.93 J	NA
COBALT	51	35	NA	0.4 J	3.3	NA	67	NA
COPPER	9.6	9.5	NA	7.2	3.3	NA	0.37 B	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	NA	0.18 U	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	NA	0.12 U	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	NA	0.14 B	NA
NICKEL	150	43	NA	1.9 J	7.6	NA	83	NA
SELENIUM	5	2 J	NA	0.57 U	0.57 U	NA	0.57 U	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	NA	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	NA	1.6 J	NA
ZINC	460	160	NA	10 J	25 B	NA	20 B	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-27D		MSA-MW-28I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW27D-050412	MSA-MW27D-050712	MSA-MW28I-050412	MSA-MW28I-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	NA	0.13 U	NA
ARSENIC	6.3	16	NA	1.5 J	0.52 J	NA	31	NA
BARIUM	13	16	NA	81	16	NA	20	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	NA	0.45 B	NA
CADMIUM	1000	180	NA	1.1	0.13 U	NA	0.13 U	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	NA	0.88 J	NA
COBALT	49	33	NA	0.4 J	3.9	NA	63	NA
COPPER	11	16	NA	8.5	4.2	NA	0.29 U	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.19 J	NA	0.18 U	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	NA	0.12 J	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.13 B	NA	0.093 U	NA
NICKEL	150	42	NA	1.7 J	9.1	NA	79	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	NA	0.57 U	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	NA	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	NA	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	NA	0.37 U	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	0.5 J	NA	1.2 J	NA
ZINC	440	170	NA	9.5 B	32 B	NA	21 B	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-27D		MSA-MW-28I	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW27D-050412	MSA-MW27D-050712	MSA-MW28I-050412	MSA-MW28I-050712
SAMPLE DATE	20120502	20120502	20120510	20120510	20120504	20120507	20120504	20120507
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	0.136 U	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	0.0687 U	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	NA	5.5 U	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	1.2 R	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	NA	3.4 U	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-29D	MSA-MW-30D	MSA-MW-30I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW29D-051612	MSA-MW30D-051512	MSA-MW30I-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	0.23 U	6.6 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	6.3 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	5.1 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	8 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	4.3 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	5.4 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	4.9 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	0.43 U	12 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.0059 U	0.17 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	4.3 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	3.4 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	0.67 U	19 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	6.9 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	6.3 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	5.1 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	4 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	4.6 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	0.57 U	16 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	0.99 U	28 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	3.1 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	12 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	5.1 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	3.4 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	0.32 U	9.1 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	1.1 U	31 U
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	0.13 U	3.7 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	8.3 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	4.3 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	0.64 U	18 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 UJ	0.41 UJ	12 UJ
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	0.15 U	4.3 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	5.1 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 UJ	0.29 UJ	8.3 UJ
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	4.6 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	8.6 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	0.17 U	4.9 U
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	4 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	8 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	0.31 U	8.9 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	1.5 U	43 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	4.9 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-29D	MSA-MW-30D	MSA-MW-30I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW29D-051612	MSA-MW30D-051512	MSA-MW30I-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	8.6 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	6.9 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	4.9 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	0.33 U	9.4 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	6.9 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	3.4 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	4 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	4 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	3.1 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	3.9 UR	110 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	8.3 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.13 U	3.7 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	8 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	0.19 U	5.4 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	5.4 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.47 J	0.17 U	840
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	0.21 U	6 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.19 UR	5.4 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	0.22 U	6.3 U
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	0.48 U	0.48 U	0.47 U
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.151	0.547	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.12 J	0.12 J	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	NA
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	0.13 U
ARSENIC	6.6	11	NA	1.5 J	0.4 U	0.4 U	0.73 J
BARIUM	13	16	NA	82	4 B	8.6	40
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	0.2 U	0.7 J
CADMIUM	1100	170	NA	0.41 J	0.13 U	0.14 B	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	0.84 J	2.9
COBALT	51	35	NA	0.4 J	1.1 B	1.2 B	35
COPPER	9.6	9.5	NA	7.2	2.1 B	1.2 B	0.29 U
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	0.18 U	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.14 B	0.093 U	0.093 U
NICKEL	150	43	NA	1.9 J	1.9 B	4.9	44
SELENIUM	5	2 J	NA	0.57 U	0.57 U	0.57 U	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 B	0.14 U	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	0.44 U	0.44 U	1.7 J
ZINC	460	160	NA	10 J	5.8 B	150	90

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-29D	MSA-MW-30D	MSA-MW-30I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW29D-051612	MSA-MW30D-051512	MSA-MW30I-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.19 B	0.16 B	0.13 U
ARSENIC	6.3	16	NA	1.5 J	0.4 U	0.43 B	1.3 J
BARIUM	13	16	NA	81	4.9 J	14	42
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	0.2 U	0.69 J
CADMIUM	1000	180	NA	1.1	0.13 U	0.22 B	0.21 J
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	3	5
COBALT	49	33	NA	0.4 J	1.3 B	6	36
COPPER	11	16	NA	8.5	3.1 B	2.6 B	3.2
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.18 U	1.5 B	0.71 J
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.17 B	0.16 B	0.19 B
NICKEL	150	42	NA	1.7 J	2.2 B	5.8	44
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	0.57 U	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.09 J	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.19 B	0.14 U	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	0.44 U	1.3 J	5 J
ZINC	440	170	NA	9.5 B	8.6 B	190	130
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-29D	MSA-MW-30D	MSA-MW-30I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW29D-051612	MSA-MW30D-051512	MSA-MW30I-051512
SAMPLE DATE	20120502	20120502	20120510	20120510	20120516	20120515	20120515
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	0.228 U	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	0.1 U	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	0.11 U	3.1 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	0.067 U	1.9 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-31D	MSA-MW-32I	MSA-MW-32S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW31D-051012	MSA-MW32I-050112	MSA-MW32S-050212	MSA-MW32S-050412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120501	20120502	20120504
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.46 U	0.23 U	NA	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.44 U	0.22 U	NA	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.36 U	0.18 U	NA	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.56 U	0.28 U	NA	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.3 U	0.15 U	NA	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.38 U	0.19 U	NA	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.34 U	0.17 U	NA	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.86 U	0.43 U	NA	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.012 U	0.0059 U	NA	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.3 U	0.15 U	NA	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.24 U	0.12 U	NA	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	1.3 U	0.67 U	NA	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.48 U	0.24 U	NA	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.44 U	0.22 U	NA	0.22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.36 U	0.18 U	NA	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.28 U	0.14 U	NA	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.32 U	0.16 U	NA	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	1.1 U	0.57 U	NA	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	2 UR	0.99 U	NA	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.22 U	0.11 U	NA	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.82 U	0.41 U	NA	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.36 U	0.18 U	NA	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.24 U	0.12 U	NA	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.64 U	0.32 U	NA	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	2.7 J	1.1 U	NA	1.6 J
BENZENE	13 U	16 J	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.58 U	0.29 U	NA	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.3 U	0.15 U	NA	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	1.3 U	0.64 U	NA	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.82 U	0.41 U	NA	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.57 J	0.18 J	NA	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.3 U	0.15 U	NA	0.15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.36 U	0.18 U	NA	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.58 U	0.29 U	NA	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.32 U	0.16 U	NA	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.6 U	0.3 U	NA	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.34 U	0.17 U	NA	0.17 U
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.28 U	0.14 U	NA	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.56 U	0.28 U	NA	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.62 U	0.31 U	NA	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	3 U	1.5 U	NA	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	0.22 U	NA	NA	NA
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.34 U	0.17 U	NA	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-31D	MSA-MW-32I	MSA-MW-32S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW31D-051012	MSA-MW32I-050112	MSA-MW32S-050212	MSA-MW32S-050412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120501	20120502	20120504
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.6 U	0.3 U	NA	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.48 U	0.24 U	NA	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.34 U	0.17 U	NA	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.66 U	0.33 U	NA	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.48 U	0.24 U	NA	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.24 U	0.12 U	NA	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.28 U	0.14 U	NA	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.28 U	0.14 U	NA	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.22 U	0.11 U	NA	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	0.13 U	NA	NA	NA
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.26 U	0.13 U	NA	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	7.8 UR	3.9 UR	NA	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.58 U	0.29 U	NA	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	0.98 J	0.13 U	NA	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.56 U	0.28 U	NA	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.38 U	0.19 U	NA	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.38 U	0.19 U	NA	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.34 U	0.17 U	NA	0.17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.42 U	0.21 U	NA	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.38 UR	0.19 UR	NA	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.44 U	0.22 U	NA	0.22 U
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	0.47 UL	0.48 U	0.48 U	NA
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	0.082 U	NA
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	NA	46 B	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	NA	230 U	NA
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.32 B	0.3 B	0.13 U	NA
ARSENIC	6.6	11	NA	1.5 J	2.4 B	3.7 J	6.6	NA
BARIUM	13	16	NA	82	17	54	28	NA
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.25 J	0.26 J	1	NA
CADMIUM	1100	170	NA	0.41 J	0.54 B	0.13 U	0.13 U	NA
CHROMIUM	86	9.9	NA	0.71 U	2.2	1.2 J	2.1	NA
COBALT	51	35	NA	0.4 J	1.2 B	68	130	NA
COPPER	9.6	9.5	NA	7.2	1 B	0.57 J	0.33 B	NA
LEAD	0.46 J	0.62 J	NA	0.82 J	0.61 B	0.18 U	0.18 U	NA
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U	NA
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	2.3 B	1.2 B	0.28 B	NA
NICKEL	150	43	NA	1.9 J	1.2 B	9.3	49	NA
SELENIUM	5	2 J	NA	0.57 U	0.73 B	1.1 J	4.3 J	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U	NA
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.69 B	0.3 B	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.98 B	0.37 U	0.37 U	NA
VANADIUM	0.44 U	0.44 U	NA	1.5 J	2.2 J	0.87 B	3.4 J	NA
ZINC	460	160	NA	10 J	6.6 B	5000	240	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-31D	MSA-MW-32I	MSA-MW-32S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW31D-051012	MSA-MW32I-050112	MSA-MW32S-050212	MSA-MW32S-050412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120501	20120502	20120504
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.77 J	0.6 B	0.13 U	NA
ARSENIC	6.3	16	NA	1.5 J	4.6 J	4.7 J	7	NA
BARIUM	13	16	NA	81	43	58	30	NA
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.44 J	0.53 J	0.92 J	NA
CADMIUM	1000	180	NA	1.1	2.2	0.31 J	0.19 J	NA
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	11	1.6 J	3.3	NA
COBALT	49	33	NA	0.4 J	10	71	120	NA
COPPER	11	16	NA	8.5	23	4.7	1.4 B	NA
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	14	1 K	0.97 J	NA
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.39	0.12 U	0.12 U	NA
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	2.6 J	1.6 B	0.41 B	NA
NICKEL	150	42	NA	1.7 J	7	10	45	NA
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	1.5 J	4.2 J	NA
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.47 J	0.08 U	0.08 U	NA
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	0.62 B	0.14 U	NA
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.44 B	0.71 B	0.37 U	NA
VANADIUM	0.44 U	3.4 J	NA	1.5 J	10 J	1.5 B	6.1 J	NA
ZINC	440	170	NA	9.5 B	3600	6800	380	NA
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-31D	MSA-MW-32I	MSA-MW-32S	
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW31D-051012	MSA-MW32I-050112	MSA-MW32S-050212	MSA-MW32S-050412
SAMPLE DATE	20120502	20120502	20120510	20120510	20120510	20120501	20120502	20120504
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	1.8 NJ
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	2.1 NJ
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	2.6 NJ
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	6 NJ
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	0.11 U	NA	0.11 U
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	3.2 R
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	0.067 U	NA	0.067 U
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-33I	MSA-MW-33S	MSA-MW-34I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW33I-050112	MSA-MW33S-050112	MSA-MW34I-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120501	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	1.2 U	0.33 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	1.1 U	0.31 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.9 U	0.26 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	1.4 U	0.4 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.75 U	0.21 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.95 U	0.27 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.85 U	0.24 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	2.2 U	0.61 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.03 U	0.0084 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.75 U	0.21 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.6 U	0.17 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	3.4 U	0.96 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	1.2 U	0.34 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	1.1 U	1.6
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.9 U	0.26 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.7 U	0.2 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.8 U	0.23 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	2.9 U	0.81 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	5 U	1.4 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.55 U	0.16 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	2.1 U	0.59 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.9 U	0.26 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.6 U	0.17 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	1.6 U	0.46 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	5.5 U	1.6 U
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	2.8 J	1.2 J
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	1.5 U	0.41 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.75 U	0.21 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	3.2 U	0.91 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	2.1 U	0.59 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	0.75 U	0.21 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.9 U	0.26 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	1.5 U	0.41 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	0.8 U	0.23 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	1.5 U	0.43 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	130	4.3
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.7 U	0.2 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	1.4 U	0.4 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	1.6 U	0.44 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	7.5 U	2.1 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	NA	0.16 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.85 U	0.24 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-33I	MSA-MW-33S	MSA-MW-34I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW33I-050112	MSA-MW33S-050112	MSA-MW34I-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120501	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	1.5 U	0.43 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	1.2 U	7.7
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.85 U	0.24 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	1.7 U	0.47 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	1.2 U	0.34 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.6 U	0.17 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.7 U	0.2 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.7 U	2.5
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.55 U	0.16 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	NA	0.096 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	20 UR	5.6 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	1.5 U	0.41 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.65 U	0.19 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	1.4 U	10
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	0.95 U	0.27 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.95 U	0.27 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	110	0.24 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	1.1 U	0.3 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.95 UR	0.27 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	16	31
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	0.48 U	0.48 U	0.47 U
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	NA	160	NA
TPH-DRO (C10-C32)	NA	NA	NA	380 B	NA	230 U	NA
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.4 B	0.3 B	0.13 U
ARSENIC	6.6	11	NA	1.5 J	3.6 J	7	1.1 J
BARIUM	13	16	NA	82	37	35	55
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	0.2 U	2.5
CADMIUM	1100	170	NA	0.41 J	0.13 U	0.13 U	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	1.1 J	0.71 U
COBALT	51	35	NA	0.4 J	0.5 J	12	210
COPPER	9.6	9.5	NA	7.2	3	2	2.5 B
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	0.19 J	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.82 B	0.44 B	0.093 U
NICKEL	150	43	NA	1.9 J	6.4	9	310
SELENIUM	5	2 J	NA	0.57 U	0.57 U	0.57 U	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.14 U	0.18 B	0.19 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	3.2 J	1.9 J	0.44 U
ZINC	460	160	NA	10 J	23	2600	450

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-33I	MSA-MW-33S	MSA-MW-34I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW33I-050112	MSA-MW33S-050112	MSA-MW34I-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120501	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.42 B	0.37 B	0.13 U
ARSENIC	6.3	16	NA	1.5 J	4.3 J	6.7	1.3 J
BARIUM	13	16	NA	81	47	36	56
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	0.2 U	2.5
CADMIUM	1000	180	NA	1.1	0.13 U	0.16 J	0.2 J
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	1.8 J	0.71 U
COBALT	49	33	NA	0.4 J	4.9	14	220
COPPER	11	16	NA	8.5	5.2	3.9	11
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.55 J	1.4 K	0.29 B
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 J	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.78 B	0.49 B	0.093 U
NICKEL	150	42	NA	1.7 J	9.8	10	310
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	0.6 J	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 U	0.29 B	0.2 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	4.5 J	2.9 J	0.83 J
ZINC	440	170	NA	9.5 B	650	2400	500
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-33I	MSA-MW-33S	MSA-MW-34I
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW33I-050112	MSA-MW33S-050112	MSA-MW34I-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120501	20120501	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	1.8 NJ	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	0.55 U	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	0.34 U	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	1.9 NJ
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-34S	MSA-MW-35S		MSA-MW36S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW34S-041912	MSA-MW35S-042012	MSA-MW35S-042312	MSA-MW36S-080212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423	20120802
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)								
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	0.23 U	NA	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	NA	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	NA	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.84 J	NA	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	NA	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	NA	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	0.43 U	NA	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.0059 U	NA	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	NA	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	NA	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	0.67 U	NA	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	NA	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.36 J	0.22 U	NA	0.22 U
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	0.57 U	NA	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	0.99 U	NA	0.99 UR
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	NA	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	NA	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	NA	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	0.32 U	NA	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	1.2 J	NA	2.5 B
BENZENE	13 U	16 J	NA	0.13 U	0.14 J	0.13 J	NA	0.13 U
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	NA	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	NA	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	0.64 U	NA	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	NA	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.17 J	NA	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	0.15 U	NA	0.15 U
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	NA	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	NA	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	NA	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	NA	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	2.2	6.4	NA	0.17 U
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	NA	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	0.31 U	NA	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	1.5 U	NA	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	NA	0.11 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	NA	0.17 U

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-34S	MSA-MW-35S		MSA-MW36S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW34S-041912	MSA-MW35S-042012	MSA-MW35S-042312	MSA-MW36S-080212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423	20120802
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	NA	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	NA	0.24 U
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.22 J	NA	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	0.33 U	NA	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	NA	0.24 U
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	NA	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	NA	0.14 U
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	NA	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	0.067 U	0.067 U	NA	0.067 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	3.9 UR	NA	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	NA	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.13 U	NA	0.13 U
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	NA	0.28 U
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	0.19 U	NA	0.19 U
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	NA	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	2.4	NA	0.17 U
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	0.21 U	NA	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.19 UR	NA	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	1.1	2	NA	0.22 U
SEMIVOLATILES (UG/L)								
1,4-DIOXANE	68	38	NA	1.9	0.48 U	3.2	NA	0.47 U
EXPLOSIVES (UG/L)								
RDX	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)								
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	NA	0.02 U	NA
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	NA	0.082 U
PETROLEUM HYDROCARBONS (UG/L)								
TPH-GRO (C06-C10)	NA	NA	NA	34 J	38 B	53 B	NA	43 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	230 U	780	NA	230 U
DISSOLVED METALS (UG/L)								
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	NA	0.13 U
ARSENIC	6.6	11	NA	1.5 J	1.7 J	1.6 J	NA	2.5 J
BARIUM	13	16	NA	82	65	67	NA	26
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.72 J	4.3	NA	0.53 J
CADMIUM	1100	170	NA	0.41 J	0.13 U	0.13 U	NA	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.73 J	1.2 J	NA	0.71 U
COBALT	51	35	NA	0.4 J	99	370	NA	120
COPPER	9.6	9.5	NA	7.2	0.6 B	0.51 B	NA	0.78 B
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	0.18 U	NA	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	NA	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.093 U	0.12 B	NA	0.093 U
NICKEL	150	43	NA	1.9 J	140	180	NA	160
SELENIUM	5	2 J	NA	0.57 U	0.57 U	0.88 J	NA	0.57 U
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	NA	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.18 B	0.56 B	NA	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	NA	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	7 J	0.54 J	NA	0.72 J
ZINC	460	160	NA	10 J	200	140	NA	210

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-34S	MSA-MW-35S		MSA-MW36S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW34S-041912	MSA-MW35S-042012	MSA-MW35S-042312	MSA-MW36S-080212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423	20120802
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)								
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	0.13 U	NA	0.13 U
ARSENIC	6.3	16	NA	1.5 J	2.5 J	1.4 J	NA	3.3 J
BARIUM	13	16	NA	81	63	64	NA	25
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.73 J	4	NA	0.5 J
CADMIUM	1000	180	NA	1.1	0.28 J	0.23 J	NA	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.98 J	1.5 J	NA	0.71 U
COBALT	49	33	NA	0.4 J	97	350	NA	110
COPPER	11	16	NA	8.5	8.4	6.1	NA	0.29 U
IRON	NA	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.23 B	0.51 B	NA	0.18 U
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	NA	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.12 B	0.099 B	NA	0.093 U
NICKEL	150	42	NA	1.7 J	140	170	NA	150
POTASSIUM	NA	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	0.8 J	NA	0.57 U
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	NA	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.25 B	0.29 B	NA	0.14 U
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	NA	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	23	1.4 J	NA	2.1 J
ZINC	440	170	NA	9.5 B	290	140	NA	190
MISCELLANEOUS ORGANICS (UG/L)								
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)								
ALKALINITY	NA	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)								
ETHANE	NA	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-34S	MSA-MW-35S		MSA-MW36S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW34S-041912	MSA-MW35S-042012	MSA-MW35S-042312	MSA-MW36S-080212
SAMPLE DATE	20120502	20120502	20120510	20120510	20120419	20120420	20120423	20120802
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)								
RADIUM-228	NA	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)								
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	1.1 NJ	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	3.6 NJ	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	NA	NA
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	NA	NA
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	NA	NA	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-37S	MSA-MW-38S	MSA-MW-39S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW37S-050812	MSA-MW38S-041812	MSA-MW39S-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120418	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
VOLATILES (UG/L)							
1,1,1,2-TETRACHLOROETHANE	23 U	18 U	NA	0.23 U	0.23 U	0.23 U	0.23 U
1,1,1-TRICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	0.22 U
1,1,2,2-TETRACHLOROETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
1,1,2-TRICHLOROTRIFLUOROETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
1,1-DICHLOROETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
1,1-DICHLOROETHENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	0.19 U
1,1-DICHLOROPROPENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
1,2,3-TRICHLOROBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U
1,2,3-TRICHLOROPROPANE	43 U	33 U	NA	0.43 U	0.43 U	0.43 U	0.43 U
1,2,3-TRIMETHYLBENZENE	0.59 U	0.45 U	NA	0.0059 U	0.0059 U	0.0059 U	0.0059 U
1,2,4-TRICHLOROBENZENE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
1,2,4-TRIMETHYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
1,2-DIBROMO-3-CHLOROPROPANE	67 U	52 U	NA	0.67 U	0.67 U	0.67 U	0.67 U
1,2-DIBROMOETHANE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.24 U
1,2-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.18 J
1,2-DICHLOROETHANE	22 U	17 U	NA	0.22 U	0.22 U	0.22 U	0.41 J
1,2-DICHLOROPROPANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
1,3-DICHLOROBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
1,3-DICHLOROPROPANE	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	0.16 U
1,4-DICHLOROBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
2,2-DICHLOROPROPANE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
2-BUTANONE	57 U	44 U	NA	0.57 U	0.57 U	0.57 U	0.57 U
2-CHLOROETHYL VINYL ETHER	99 U	76 U	NA	0.99 U	0.99 U	0.99 U	0.99 U
2-CHLOROTOLUENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	0.11 U
2-HEXANONE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	0.41 U
4-CHLOROTOLUENE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
4-ISOPROPYLTOLUENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
4-METHYL-2-PENTANONE	32 U	25 U	NA	0.32 U	0.32 U	0.32 U	0.32 U
ACETONE	110 U	85 U	NA	1.1 U	1.1 U	1.1 U	1.1 U
BENZENE	13 U	16 J	NA	0.13 U	0.13 U	0.13 U	1.7
BROMOBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
BROMOCHLOROMETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
BROMODICHLOROMETHANE	15 U	12 U	NA	0.15 U	0.15 U	0.15 U	0.15 U
BROMOFORM	64 U	49 U	NA	0.64 U	0.64 U	0.64 U	0.64 U
BROMOMETHANE	41 U	32 U	NA	0.41 U	0.41 U	0.41 U	0.41 U
CARBON DISULFIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
CARBON TETRACHLORIDE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
CHLOROBENZENE	15 U	12 U	NA	0.66 J	0.15 U	0.15 U	4.8
CHLORODIBROMOMETHANE	18 U	14 U	NA	0.18 U	0.18 U	0.18 U	0.18 U
CHLOROETHANE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
CHLOROFORM	16 U	12 U	NA	0.16 U	0.16 U	0.16 U	0.16 U
CHLOROMETHANE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	0.3 U
CIS-1,2-DICHLOROETHENE	3100	820	NA	0.84 J	0.17 U	0.17 U	4.4
CIS-1,3-DICHLOROPROPENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
DIBROMOMETHANE	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	0.28 U
DICHLORODIFLUOROMETHANE	31 U	24 U	NA	0.31 U	0.31 U	0.31 U	0.31 U
DIISOPROPYL ETHER	150 U	120 U	NA	1.5 U	1.5 U	1.5 U	1.5 U
ETHYL TERT-BUTYL ETHER	11 U	8.5 U	NA	0.11 U	NA	0.11 U	0.11 U
ETHYLBENZENE	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.21 J

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-37S	MSA-MW-38S	MSA-MW-39S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW37S-050812	MSA-MW38S-041812	MSA-MW39S-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120418	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
HEXACHLOROBUTADIENE	30 U	23 U	NA	0.3 U	0.3 U	0.3 U	0.3 U
ISOPROPYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
M+P-XYLENES	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	0.61 J
METHYL TERT-BUTYL ETHER	17 U	13 U	NA	0.17 U	0.17 U	0.17 U	0.17 U
METHYLENE CHLORIDE	49 J	25 U	NA	0.33 U	0.33 U	0.33 U	0.33 U
NAPHTHALENE	24 U	18 U	NA	0.24 U	0.24 U	0.24 U	2.1
N-BUTYLBENZENE	12 U	9.2 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
N-PROPYLBENZENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.14 U
O-XYLENE	14 U	11 U	NA	0.14 U	0.14 U	0.14 U	0.4 J
SEC-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
STYRENE	11 U	8.5 U	NA	0.11 U	0.11 U	0.11 U	0.11 U
TERT-AMYL METHYL ETHER	6.7 U	5.2 U	NA	0.067 U	NA	0.067 U	0.067 U
TERT-BUTYLBENZENE	13 U	10 U	NA	0.13 U	0.13 U	0.13 U	0.13 U
TERTIARY-BUTYL ALCOHOL	390 UR	300 UR	NA	3.9 UR	3.9 UR	3.9 UR	3.9 UR
TETRACHLOROETHENE	29 U	22 U	NA	0.29 U	0.29 U	0.29 U	0.29 U
TOLUENE	43 J	10 U	NA	0.13 U	0.13 U	0.13 U	0.24 J
TOTAL XYLENES	28 U	22 U	NA	0.28 U	0.28 U	0.28 U	1 J
TRANS-1,2-DICHLOROETHENE	23 J	15 U	NA	0.19 U	0.19 U	0.19 U	0.3 J
TRANS-1,3-DICHLOROPROPENE	19 U	15 U	NA	0.19 U	0.19 U	0.19 U	0.19 U
TRICHLOROETHENE	2300	110	NA	0.17 U	0.17 U	0.17 U	5
TRICHLOROFLUOROMETHANE	21 U	16 U	NA	0.21 U	0.21 U	0.21 U	0.21 U
VINYL ACETATE	19 UR	15 UR	NA	0.19 UR	0.19 UR	0.19 UR	0.19 UR
VINYL CHLORIDE	1300	2200	NA	0.33 J	0.22 U	0.22 U	3.8
SEMIVOLATILES (UG/L)							
1,4-DIOXANE	68	38	NA	1.9	0.48 U	0.47 U	12
EXPLOSIVES (UG/L)							
RDX	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (UG/L)							
HEXAVALENT CHROMIUM	0.027	0.02 U	0.013 J	NA	0.02 U	0.02 U	0.02 U
PERCHLORATE	0.082 U	0.082 U	NA	0.082 U	0.082 U	0.082 U	0.082 U
PETROLEUM HYDROCARBONS (UG/L)							
TPH-GRO (C06-C10)	NA	NA	NA	34 J	32 J	64 B	69 B
TPH-DRO (C10-C32)	NA	NA	NA	380 B	390 B	230 U	990
DISSOLVED METALS (UG/L)							
ANTIMONY	0.13 U	0.13 U	NA	1.8 J	0.13 U	0.13 U	0.14 B
ARSENIC	6.6	11	NA	1.5 J	0.55 J	13	31
BARIUM	13	16	NA	82	30	50	22
BERYLLIUM	0.46 J	0.2 U	NA	0.2 U	0.2 U	0.34 J	0.2 U
CADMIUM	1100	170	NA	0.41 J	0.13 U	0.13 U	0.13 U
CHROMIUM	86	9.9	NA	0.71 U	0.71 U	0.71 U	0.95 J
COBALT	51	35	NA	0.4 J	11	17	5.3
COPPER	9.6	9.5	NA	7.2	0.49 B	0.29 U	0.29 U
LEAD	0.46 J	0.62 J	NA	0.82 J	0.18 U	0.18 U	0.18 U
MERCURY	0.12 U	0.12 U	NA	0.12 U	0.12 U	0.12 U	0.12 U
MOLYBDENUM	0.2 B	0.15 B	NA	1.1 B	0.28 B	0.53 B	0.2 B
NICKEL	150	43	NA	1.9 J	1.9 J	11	3.8 K
SELENIUM	5	2 J	NA	0.57 U	0.57 U	0.57 U	0.64 J
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
THALLIUM	0.28 B	0.19 B	NA	0.14 U	0.25 B	0.26 B	0.24 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	0.44 U	NA	1.5 J	2 J	0.53 J	0.51 J
ZINC	460	160	NA	10 J	3.7 B	5.9 B	3.5 B

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-37S	MSA-MW-38S	MSA-MW-39S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-	MSA-DMW1S-051012	MSA-MW37S-050812	MSA-MW38S-041812	MSA-MW39S-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120418	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
METALS (UG/L)							
ANTIMONY	0.13 U	0.15 B	NA	1.8 J	0.13 U	0.13 U	0.13 U
ARSENIC	6.3	16	NA	1.5 J	0.61 J	16	41
BARIUM	13	16	NA	81	30	51	23
BERYLLIUM	0.48 J	0.2 U	NA	0.2 U	0.2 U	0.5 J	0.2 U
CADMIUM	1000	180	NA	1.1	0.13 U	0.13 U	0.13 U
CALCIUM	NA	NA	NA	NA	NA	NA	NA
CHROMIUM	130	29	NA	0.79 J	0.71 U	0.71 J	1.2 J
COBALT	49	33	NA	0.4 J	12	17	5.5
COPPER	11	16	NA	8.5	0.83 B	0.46 B	0.65 B
IRON	NA	NA	NA	NA	NA	NA	NA
LEAD	0.46 J	1.5 J	NA	2.4	0.18 U	0.18 U	0.24 B
MAGNESIUM	NA	NA	NA	NA	NA	NA	NA
MANGANESE	NA	NA	NA	NA	NA	NA	NA
MERCURY	0.2	0.87	NA	0.13 B	0.12 U	0.12 U	0.12 U
MOLYBDENUM	1.3 B	0.3 B	NA	1.1 B	0.11 B	0.58 B	0.27 B
NICKEL	150	42	NA	1.7 J	1.9 J	10	3.7 K
POTASSIUM	NA	NA	NA	NA	NA	NA	NA
SELENIUM	4.6 J	2.3 J	NA	0.57 U	0.57 U	0.57 U	0.8 J
SILICON DIOXIDE	NA	NA	NA	NA	NA	NA	NA
SILVER	0.08 U	0.08 U	NA	0.08 U	0.08 U	0.08 U	0.08 U
SODIUM	NA	NA	NA	NA	NA	NA	NA
THALLIUM	0.34 B	0.21 B	NA	0.14 U	0.14 B	0.23 B	0.34 B
TUNGSTEN	0.37 U	0.37 U	NA	0.37 U	0.37 U	0.37 U	0.37 U
VANADIUM	0.44 U	3.4 J	NA	1.5 J	3.2 J	4.5 J	1.9 J
ZINC	440	170	NA	9.5 B	3 B	13 B	4 B
MISCELLANEOUS ORGANICS (UG/L)							
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
MISCELLANEOUS PARAMETERS (MG/L)							
ALKALINITY	NA	NA	NA	NA	NA	NA	NA
AMMONIA-N	NA	NA	NA	NA	NA	NA	NA
CHLORIDE	NA	NA	NA	NA	NA	NA	NA
DISSOLVED ORGANIC CARBON	NA	NA	NA	NA	NA	NA	NA
NITRATE-N	NA	NA	NA	NA	NA	NA	NA
NITRITE-N	NA	NA	NA	NA	NA	NA	NA
ORTHOPHOSPHATE	NA	NA	NA	NA	NA	NA	NA
SULFATE	NA	NA	NA	NA	NA	NA	NA
TOTAL DISSOLVED SOLIDS	NA	NA	NA	NA	NA	NA	NA
VOLATILE GASES (UG/L)							
ETHANE	NA	NA	NA	NA	NA	NA	NA
ETHENE	NA	NA	NA	NA	NA	NA	NA
METHANE	NA	NA	NA	NA	NA	NA	NA

TABLE C-2

CHEMICAL RESULTS FOR GROUNDWATER SAMPLES, 2012
DUMP ROAD AREA
LOCKHEED MARTIN, MARTIN STATE AIRPORT, MIDDLE RIVER, MARYLAND

LOCATION	MSA-DMW-01A	MSA-DMW-01B	MSA-DMW-01S		MSA-MW-37S	MSA-MW-38S	MSA-MW-39S
SAMPLE ID	MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW-01S-20120510	MSA-DMW1S-051012	MSA-MW37S-050812	MSA-MW38S-041812	MSA-MW39S-041912
SAMPLE DATE	20120502	20120502	20120510	20120510	20120508	20120418	20120419
SAMPLE CODE	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL	NORMAL
MATRIX	GW	GW	GW	GW	GW	GW	GW
RADIONUCLIDES (PCI/L)							
RADIUM-228	NA	NA	NA	NA	NA	NA	NA
TOTAL RADIUM	NA	NA	NA	NA	NA	NA	NA
VOLATILES - TENTATIVELY IDENTIFIED COMPOUNDS (TICS) (UG/L)							
1,2-DICHLORO-1,1,2-TRIFLUOROETHANE	NA	NA	NA	NA	NA	NA	NA
1,3,5-TRIMETHYLBENZENE	NA	NA	NA	NA	NA	NA	NA
1,4-DIOXANE	NA	NA	NA	NA	NA	NA	NA
1-BUTANOL	NA	NA	NA	NA	NA	NA	NA
2,4-DIMETHYL-1-HEPTENE	NA	NA	NA	NA	NA	NA	NA
2-HEPTENE, 2,3-DIMETHYL-	NA	NA	NA	NA	NA	NA	NA
2-METHYLBUTANE	NA	NA	NA	NA	NA	NA	NA
2-OCTANONE	NA	NA	NA	NA	NA	NA	NA
3-BUTEN-1-OL	NA	NA	NA	NA	NA	NA	NA
BROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
BUTANE, 2,2,3,3-TETRAMETHYL-	NA	NA	NA	NA	NA	NA	NA
CHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
CIS-3-NONENE	NA	NA	NA	NA	NA	NA	NA
CYCLOHEXANE	NA	NA	NA	NA	NA	NA	0.38 NJ
CYCLOHEXANE, 1,2,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
DIBROMOACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA
DIETHYL ETHER	NA	NA	NA	NA	NA	NA	NA
DI-SEC-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
ETHYL ACETATE	NA	NA	NA	NA	NA	NA	NA
ETHYL TERT-BUTYL ETHER	NA	NA	NA	NA	0.11 U	NA	NA
FLUORODICHLOROMETHANE	NA	NA	NA	NA	NA	NA	NA
GAMMA-BHC (LINDANE)	NA	NA	NA	NA	NA	NA	2.9 NJ
ISOBUTANE	NA	NA	NA	NA	NA	NA	NA
METHYL CYCLOHEXANE	NA	10 J	NA	NA	NA	NA	0.28 NJ
N-BUTYL ETHER	NA	NA	NA	NA	NA	NA	NA
PENTANE, 2,3,3-TRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANE, FLUOROTRIMETHYL-	NA	NA	NA	NA	NA	NA	NA
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)	NA	NA	NA	NA	NA	NA	NA
SILANOL, TRIMETHYL-	NA	NA	NA	NA	1.1 R	NA	NA
TERT-AMYL METHYL ETHER	NA	NA	NA	NA	0.067 U	NA	NA
TERT-BUTYLDIMETHYLSILANOL	NA	NA	NA	NA	NA	NA	NA
TETRAHYDROFURAN	NA	NA	NA	NA	0.44 NJ	NA	NA
TRICHLOROACETIC ACID	NA	NA	NA	NA	NA	NA	NA

APPENDIX D—DATA VALIDATION REPORTS WITH CHAIN OF CUSTODY FORMS (ON CD)

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **MAY 18, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION-**
VOLATILE ORGANIC COMPOUNDS/SVOC SIM/GRO/DRO
MARTIN STATE AIRPORT GROUNDWATER SAMPLING – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-10350-1

SAMPLES: 5/Aqueous/VOC

MSA-MW15D-041812	MSA-MW15I-041812	MSA-MW15S-041812
MSA-MW38SS-041812	TB-041812	

4/Aqueous/SVOC SIM

MSA-MW15D-041812	MSA-MW15I-041812	MSA-MW15S-041812
MSA-MW38SS-041812		

2/Aqueous/GRO/DRO

MSA-MW15S-041812	MSA-MW38S-041812

Overview

The sample set for Martin State Airport Groundwater Sampling, SDG 240-10350-1 consists of four (4) aqueous environmental samples and one trip blank. All samples were analyzed for volatile organic compounds (VOCs). Four (4) aqueous environmental samples were analyzed for 1,4-dioxane in the semivolatile organic compound (SVOC) SIM fraction. Two (2) aqueous environmental samples; MSA-MW15S-041812 and MSA-MW38S-041812 were analyzed for gasoline range organics (GRO) and diesel range organics (DRO). GRO is listed on the form 1s and EDD as total petroleum hydrocarbons (TPH) (C6-C10) and DRO as TPH (C10-C32). There are no field duplicate pairs included in this SDG.

The samples were collected on April 18, 2012 and analyzed by Test America Laboratories, Inc. Volatile organic compound analyses were conducted in accordance to SW-846 Method 8260B. The analyses for 1,4-dioxane followed SW-846 Method 8270C in Selective Ion Monitoring SIM mode. GRO and DRO analyses followed SW-846 Method 8015B.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, matrix spike/matrix spike duplicate results, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- In the volatile initial calibration of instrument A3UX10 on April 9, 2012 and the continuing calibrations on April 27, 2012 @ 9:48, tert-butyl alcohol and vinyl acetate had relative retention factors (RRFs) less than the 0.05 quality control limit. The nondetected tert-butyl alcohol and vinyl acetate results were qualified

as rejected (UR) in the affected samples MSA-MW15I-041812, MSA-MW15S-041812, MSA-MW38SS-041812 and TB-041812.

- In the volatile initial calibration of instrument A3UX16 on April 29, 2012 and the continuing calibration on April 30, 2012 @ 11:50, tert-butyl alcohol had a RRF less than the 0.05 quality control limit. In addition, the continuing calibration on April 30, 2012 had a RF for vinyl acetate less than the 0.05 quality control limit. The nondetected vinyl acetate and tert-butyl alcohol results were qualified as rejected (UR) in the affected sample MSA-MW15D-041812.

- The matrix spike/ matrix spike duplicate (MS/MSD) percent recoveries (%Rs) of 2-chloroethyl vinyl ether was 0% in sample MSA-MW15D-041812. The nondetected 2-chloroethyl vinyl ether was qualified as rejected (UR).

Minor Problems

- GRO was detected in the laboratory method blank 240-41320/6 affecting all samples.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
GRO	26.5	132.5

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Positive results less than the action level were qualified (B) as a result of blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data.

- TICs were qualified as presumptively present (NJ) in sample MSA-MW15D-041812.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

The continuing calibration percent differences (%Ds) for several target analytes were greater than the 20% quality control limit but less than 50% on April 27, 2012 @ 9:48 on instrument A3UX10. The analytes were 1,1,2-trichlorotrifluoroethane, tert-butyl alcohol, 4-methyl-2-pentanone, 2-hexanone, bromoform, n-butylbenzene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene and 1,2,3-trichlorobenzene. No action was taken on the nondetected results of the aforementioned analytes in the affected samples MSA-MW15I-041812, MSA-MW15S-041812, MSA-MW38SS-041812 and TB-041812.

Contamination was detected in the VOC laboratory method blank associated with batch 240-42171/5 analyzed on April 30, 2012 @ 12:59 on instrument A3UX16.

Contaminant	Maximum Concentration (ug/L)
1,2,3-trichlorobenzene	0.288
Methylcyclohexane (TIC)	0.197

No action was taken on the nondetected 1,2,3-trichlorobenzene result in sample MSA-MW15D-041812.

The laboratory control sample (LCS) percent recovery (%R) of tert-butyl alcohol was less than the lower quality control limit in batch 240-41857/4. No action was taken on the nondetected tert-butyl alcohol results in the affected samples which were qualified as rejected due to a more severe noncompliance.

The relative percent difference (RPD) for tert-butyl ether was greater than the quality control limit in sample MSA-MW15D-041812. No action was taken because the MS/MSD %Rs were within quality control limits. In addition, the nondetected tert-butyl ether result was qualified as rejected due to a more severe noncompliance.

The (MS) %R of tert-butyl alcohol was less than the lower quality control limit in sample 240-10494-C-3. The matrix spike duplicate (MSD) %R and relative percent difference (RPD) were within quality control limits. No action was taken.

The following sample was diluted in the VOC fraction resulting in elevated reporting limits.

Sample	Dilution Factor
MSA-MW15I-041812	20X

Nondetected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Tert-butyl alcohol and vinyl acetate had RRFs less than quality control limits in the initial and continuing calibrations. GRO was detected in the laboratory method blank.

Other Factors Affecting Data Quality: TICs were detected in sample MSA-MW15D-041812.

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (9/94).The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-5			240-10350-4			240-10350-2			240-10350-3		
FRACTION: OV	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		4.6	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		4.4	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		3.6	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		5.6	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		3	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		3.8	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		2.6	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		3.4	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		8.6	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.12	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		3	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		2.4	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		13	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		4.8	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		2.6	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		4.4	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		3.6	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		2.8	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		3.2	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		2.6	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		2.6	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		11	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	UR	E	20	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		2.2	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		8.2	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		3.6	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		2.4	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		6.4	U		0.32	U		0.32	U	
ACETONE		1.1	U		22	U		1.1	U		1.1	U	
BENZENE		0.13	U		2.6	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		2.6	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		5.8	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		3	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		13	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		8.2	U		0.41	U		0.41	U	

PROJ_NO: 04021	NSAMPLE	TB-041812		
SDG: 240-10350-1	LAB_ID	240-10350-1		
FRACTION: OV	SAMP_DATE	4/18/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U	
1,1-DICHLOROETHANE		0.15	U	
1,1-DICHLOROETHENE		0.19	U	
1,1-DICHLOROPROPENE		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U	
1,2-DIBROMOETHANE		0.24	U	
1,2-DICHLOROBENZENE		0.13	U	
1,2-DICHLOROETHANE		0.22	U	
1,2-DICHLOROPROPANE		0.18	U	
1,3-DICHLOROBENZENE		0.14	U	
1,3-DICHLOROPROPANE		0.16	U	
1,4-DICHLOROBENZENE		0.13	U	
2,2-DICHLOROPROPANE		0.13	U	
2-BUTANONE		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U	
2-CHLOROTOLUENE		0.11	U	
2-HEXANONE		0.41	U	
4-CHLOROTOLUENE		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U	
4-METHYL-2-PENTANONE		0.32	U	
ACETONE		1.1	U	
BENZENE		0.13	U	
BROMOBENZENE		0.13	U	
BROMOCHLOROMETHANE		0.29	U	
BROMODICHLOROMETHANE		0.15	U	
BROMOFORM		0.64	U	
BROMOMETHANE		0.41	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-5			240-10350-4			240-10350-2			240-10350-3		
FRACTION: OV	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		2.6	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		2.6	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		3	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		3.6	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		5.8	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		3.2	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		6	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		150			10			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		2.8	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		5.6	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		6.2	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		30	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		2.2	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		3.4	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		6	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		2.6	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		4.8	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		3.4	U		0.17	U		0.17	U	
METHYLCYCLOHEXANE		0.21	NJ	Z1									
METHYLENE CHLORIDE		0.33	U		6.6	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		4.8	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		2.4	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		2.8	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		2.8	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		2.6	U		0.13	U		0.13	U	
STYRENE		0.11	U		2.2	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		1.3	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		2.6	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	78	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		5.8	U		0.29	U		0.29	U	
TOLUENE		0.13	U		2.6	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		5.6	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		3.8	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		3.8	U		0.19	U		0.19	U	
TRICHLOROETHENE		0.17	U		580			37			0.17	U	

PROJ_NO: 04021	NSAMPLE	TB-041812
SDG: 240-10350-1	LAB_ID	240-10350-1
FRACTION: OV	SAMP_DATE	4/18/2012
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON DISULFIDE	0.13	U	
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U	
DIISOPROPYL ETHER	1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	U	
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLCYCLOHEXANE			
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.24	U	
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	U	
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	
TRICHLOROETHENE	0.17	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-5			240-10350-4			240-10350-2			240-10350-3		
FRACTION: OV	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		4.2	U		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	3.8	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		12	J	P	0.5	J	P	0.22	U	

PROJ_NO: 04021	NSAMPLE	TB-041812		
SDG: 240-10350-1	LAB_ID	240-10350-1		
FRACTION: OV	SAMP_DATE	4/18/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U	
VINYL ACETATE		0.19	UR	C
VINYL CHLORIDE		0.22	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-5			240-10350-4			240-10350-2			240-10350-3		
FRACTION: OS	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.47	U		0.49	U		0.65	J	P	0.47	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-2			240-10350-3		
FRACTION: PET	SAMP_DATE	4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		62	B	A	64	B	A
TPH (C10-C32)		330	J	P	230	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15D-041812 | Lab Sample ID: 240-10350-5

Matrix: Water | Lab File ID: UXM5274.D

Analysis Method: 8260C | Date Collected: 04/18/2012 15:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 13:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15D-041812 Lab Sample ID: 240-10350-5

Matrix: Water Lab File ID: UXM5274.D

Analysis Method: 8260C Date Collected: 04/18/2012 15:35

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 13:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15D-041812 | Lab Sample ID: 240-10350-5

Matrix: Water | Lab File ID: UXM5274.D

Analysis Method: 8260C | Date Collected: 04/18/2012 15:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 13:34

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	80		63-129
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
2037-26-5	Toluene-d8 (Surr)	84		74-115
1868-53-7	Dibromofluoromethane (Surr)	83		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15D-041812 Lab Sample ID: 240-10350-5

Matrix: Water Lab File ID: UXM5274.D

Analysis Method: 8260C Date Collected: 04/18/2012 15:35

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 13:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 0.21

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.20	0.21	J B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15I-041812 | Lab Sample ID: 240-10350-4

Matrix: Water | Lab File ID: UXX4994.D

Analysis Method: 8260C | Date Collected: 04/18/2012 14:16

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:02

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	20	U	20	4.6
71-55-6	1,1,1-Trichloroethane	20	U	20	4.4
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	3.6
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	20	U	20	5.6
75-34-3	1,1-Dichloroethane	20	U	20	3.0
75-35-4	1,1-Dichloroethene	20	U	20	3.8
563-58-6	1,1-Dichloropropene	20	U	20	2.6
87-61-6	1,2,3-Trichlorobenzene	20	U	20	3.4
96-18-4	1,2,3-Trichloropropane	20	U	20	8.6
526-73-8	1,2,3-Trimethylbenzene	100	U	100	0.12
120-82-1	1,2,4-Trichlorobenzene	20	U	20	3.0
95-63-6	1,2,4-Trimethylbenzene	20	U	20	2.4
96-12-8	1,2-Dibromo-3-Chloropropane	40	U	40	13
95-50-1	1,2-Dichlorobenzene	20	U	20	2.6
107-06-2	1,2-Dichloroethane	20	U	20	4.4
78-87-5	1,2-Dichloropropane	20	U	20	3.6
541-73-1	1,3-Dichlorobenzene	20	U	20	2.8
142-28-9	1,3-Dichloropropane	20	U	20	3.2
106-46-7	1,4-Dichlorobenzene	20	U	20	2.6
594-20-7	2,2-Dichloropropane	20	U	20	2.6
110-75-8	2-Chloroethyl vinyl ether	200	U	200	20
95-49-8	2-Chlorotoluene	20	U	20	2.2
591-78-6	2-Hexanone	200	U	200	8.2
108-86-1	Bromobenzene	20	U	20	2.6
74-97-5	Bromochloromethane	20	U	20	5.8
106-43-4	4-Chlorotoluene	20	U	20	3.6
99-87-6	p-Isopropyltoluene	20	U	20	2.4
67-64-1	Acetone	200	U	200	22
71-43-2	Benzene	20	U	20	2.6
75-25-2	Bromoform	20	U	20	13
74-83-9	Bromomethane	20	U	20	8.2
75-15-0	Carbon disulfide	20	U	20	2.6
56-23-5	Carbon tetrachloride	20	U	20	2.6
108-90-7	Chlorobenzene	20	U	20	3.0
75-00-3	Chloroethane	20	U	20	5.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15I-041812 | Lab Sample ID: 240-10350-4

Matrix: Water | Lab File ID: UXX4994.D

Analysis Method: 8260C | Date Collected: 04/18/2012 14:16

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:02

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	20	U	20	3.2
74-87-3	Chloromethane	20	U	20	6.0
156-59-2	cis-1,2-Dichloroethene	150		20	3.4
10061-01-5	cis-1,3-Dichloropropene	20	U	20	2.8
87-68-3	Hexachlorobutadiene	20	U	20	6.0
74-95-3	Dibromomethane	20	U	20	5.6
75-27-4	Bromodichloromethane	20	U	20	3.0
75-71-8	Dichlorodifluoromethane	20	U	20	6.2
100-41-4	Ethylbenzene	20	U	20	3.4
106-93-4	1,2-Dibromoethane	20	U	20	4.8
108-20-3	Diisopropyl ether	200	U	200	30
91-20-3	Naphthalene	20	U	20	4.8
179601-23-1	m-Xylene & p-Xylene	40	U	40	4.8
104-51-8	n-Butylbenzene	20	U	20	2.4
98-82-8	Isopropylbenzene	20	U	20	2.6
103-65-1	n-Propylbenzene	20	U	20	2.8
78-93-3	2-Butanone	200	U	200	11
108-10-1	4-Methyl-2-pentanone	200	U	200	6.4
135-98-8	sec-Butylbenzene	20	U	20	2.6
1634-04-4	Methyl tert-butyl ether	100	U	100	3.4
994-05-8	Tert-amyl-methyl ether (TAME)	100	U	100	1.3
75-09-2	Methylene Chloride	20	U	20	6.6
95-47-6	o-Xylene	20	U	20	2.8
100-42-5	Styrene	20	U	20	2.2
637-92-3	Ethyl-t-butyl ether (ETBE)	100	U	100	2.2
98-06-6	tert-Butylbenzene	20	U	20	2.6
127-18-4	Tetrachloroethene	20	U	20	5.8
108-88-3	Toluene	20	U	20	2.6
156-60-5	trans-1,2-Dichloroethene	20	U	20	3.8
10061-02-6	trans-1,3-Dichloropropene	20	U	20	3.8
79-01-6	Trichloroethene	580		20	3.4
75-69-4	Trichlorofluoromethane	20	U	20	4.2
108-05-4	Vinyl acetate	40	U	40	3.8
75-01-4	Vinyl chloride	12	J	20	4.4
75-65-0	tert-Butyl alcohol	1000	U *	1000	78

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15I-041812 Lab Sample ID: 240-10350-4

Matrix: Water Lab File ID: UXX4994.D

Analysis Method: 8260C Date Collected: 04/18/2012 14:16

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 13:02

Soil Aliquot Vol: Dilution Factor: 20

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	40	U	40	5.6
124-48-1	Dibromochloromethane	20	U	20	3.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	105		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15I-041812 Lab Sample ID: 240-10350-4

Matrix: Water Lab File ID: UXX4994.D

Analysis Method: 8260C Date Collected: 04/18/2012 14:16

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 13:02

Soil Aliquot Vol: Dilution Factor: 20

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Matrix: Water Lab File ID: UXX4998.D

Analysis Method: 8260C Date Collected: 04/18/2012 11:40

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 14:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Matrix: Water Lab File ID: UXX4998.D

Analysis Method: 8260C Date Collected: 04/18/2012 11:40

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 14:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	10		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	37		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	0.50	J	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Matrix: Water Lab File ID: UXX4998.D

Analysis Method: 8260C Date Collected: 04/18/2012 11:40

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 14:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		63-129
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	107		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Matrix: Water Lab File ID: UXX4998.D

Analysis Method: 8260C Date Collected: 04/18/2012 11:40

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 14:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW38S-041812 | Lab Sample ID: 240-10350-3

Matrix: Water | Lab File ID: UXX4999.D

Analysis Method: 8260C | Date Collected: 04/18/2012 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 14:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW38S-041812 | Lab Sample ID: 240-10350-3

Matrix: Water | Lab File ID: UXX4999.D

Analysis Method: 8260C | Date Collected: 04/18/2012 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 14:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW38S-041812 | Lab Sample ID: 240-10350-3

Matrix: Water | Lab File ID: UXX4999.D

Analysis Method: 8260C | Date Collected: 04/18/2012 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 14:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		63-129
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	105		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW38S-041812 | Lab Sample ID: 240-10350-3

Matrix: Water | Lab File ID: UXX4999.D

Analysis Method: 8260C | Date Collected: 04/18/2012 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 14:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: TB-041812 Lab Sample ID: 240-10350-1

Matrix: Water Lab File ID: UXX5008.D

Analysis Method: 8260C Date Collected: 04/18/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: TB-041812 Lab Sample ID: 240-10350-1

Matrix: Water Lab File ID: UXX5008.D

Analysis Method: 8260C Date Collected: 04/18/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: TB-041812 Lab Sample ID: 240-10350-1

Matrix: Water Lab File ID: UXX5008.D

Analysis Method: 8260C Date Collected: 04/18/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		63-129
460-00-4	4-Bromofluorobenzene (Surr)	78		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	107		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: TB-041812 Lab Sample ID: 240-10350-1

Matrix: Water Lab File ID: UXX5008.D

Analysis Method: 8260C Date Collected: 04/18/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 18:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15D-041812 | Lab Sample ID: 240-10350-5

Matrix: Water | Lab File ID: 20423020.D

Analysis Method: 8270C | Date Collected: 04/18/2012 15:35

Extract. Method: 3520C | Date Extracted: 04/20/2012 08:28

Sample wt/vol: 1050(mL) | Date Analyzed: 04/23/2012 16:45

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41177 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	55		28-110
367-12-4	2-Fluorophenol (Surr)	62		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	57		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	56		27-111
4165-62-2	Phenol-d5 (Surr)	61		10-110
1718-51-0	Terphenyl-d14 (Surr)	67		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15I-041812 | Lab Sample ID: 240-10350-4

Matrix: Water | Lab File ID: 20423019.D

Analysis Method: 8270C | Date Collected: 04/18/2012 14:16

Extract. Method: 3520C | Date Extracted: 04/20/2012 08:28

Sample wt/vol: 1010(mL) | Date Analyzed: 04/23/2012 16:26

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41177 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	57		28-110
367-12-4	2-Fluorophenol (Surr)	59		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	54		27-111
4165-62-2	Phenol-d5 (Surr)	61		10-110
1718-51-0	Terphenyl-d14 (Surr)	63		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 | Lab Sample ID: 240-10350-2

Matrix: Water | Lab File ID: 20423017.D

Analysis Method: 8270C | Date Collected: 04/18/2012 11:40

Extract. Method: 3520C | Date Extracted: 04/20/2012 08:28

Sample wt/vol: 1050(mL) | Date Analyzed: 04/23/2012 15:49

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41177 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.65	J	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	46		28-110
367-12-4	2-Fluorophenol (Surr)	45		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	59		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	41		27-111
4165-62-2	Phenol-d5 (Surr)	49		10-110
1718-51-0	Terphenyl-d14 (Surr)	56		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW38S-041812 | Lab Sample ID: 240-10350-3

Matrix: Water | Lab File ID: 20423018.D

Analysis Method: 8270C | Date Collected: 04/18/2012 11:55

Extract. Method: 3520C | Date Extracted: 04/20/2012 08:28

Sample wt/vol: 1050(mL) | Date Analyzed: 04/23/2012 16:08

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41177 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	56		28-110
367-12-4	2-Fluorophenol (Surr)	60		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	66		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	55		27-111
4165-62-2	Phenol-d5 (Surr)	60		10-110
1718-51-0	Terphenyl-d14 (Surr)	63		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Matrix: Water Lab File ID: YF042410.D

Analysis Method: 8015B Date Collected: 04/18/2012 11:40

Sample wt/vol: 5(mL) Date Analyzed: 04/24/2012 15:50

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41320 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	62	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	62		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 | Lab Sample ID: 240-10350-2

Matrix: Water | Lab File ID: P5F04269.D

Analysis Method: 8015B | Date Collected: 04/18/2012 11:40

Extraction Method: 3520C | Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1030(mL) | Date Analyzed: 04/26/2012 16:36

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	330	J	490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	61		10-110

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW38S-041812 | Lab Sample ID: 240-10350-3

Matrix: Water | Lab File ID: YF042413.D

Analysis Method: 8015B | Date Collected: 04/18/2012 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2012 17:46

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41320 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	64	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	64		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW38S-041812 Lab Sample ID: 240-10350-3

Matrix: Water Lab File ID: P5F04270.D

Analysis Method: 8015B Date Collected: 04/18/2012 11:55

Extraction Method: 3520C Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1050(mL) Date Analyzed: 04/26/2012 17:06

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	480	U	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	66		10-110

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10350-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/19/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4 and 2.6 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-041812 (240-10350-1), MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/27/2012 and 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample (LCS) for batch 41857 exceeded control limits for tert-Butyl alcohol. This has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample MSA-MW15D-041812 (240-10350-5) in batch 240-42171. tert-Butyl alcohol exceeded the rpd limit.

Sample MSA-MW15I-041812 (240-10350-4)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 41857 exceeded control criteria for several compounds. The samples associated with this CCV were not detected for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is is reportable per the facility Standard operating Procedure (SOP).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and

MSA-MW15D-041812 (240-10350-5) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/20/2012 and analyzed on 04/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 40937, 8270.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MSA-MW15S-041812 (240-10350-2) and MSA-MW38S-041812 (240-10350-3) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/24/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-41320/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MSA-MW15S-041812 (240-10350-2) and MSA-MW38S-041812 (240-10350-3) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/25/2012 and analyzed on 04/26/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batches 41067 and 41524, 8015.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/23/2012 and analyzed on 04/24/2012.

Several analytes were detected in method blank MB 240-41173/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/23/2012 and 04/24/2012 and analyzed on 04/24/2012 and 04/25/2012.

Several analytes were detected in method blank MB 240-41295/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10350-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10350-1TB	TB-041812	Water	04/18/2012 0000	04/19/2012 0915
240-10350-2	MSA-MW15S-041812	Water	04/18/2012 1140	04/19/2012 0915
240-10350-3	MSA-MW38S-041812	Water	04/18/2012 1155	04/19/2012 0915
240-10350-4	MSA-MW15I-041812	Water	04/18/2012 1416	04/19/2012 0915
240-10350-5	MSA-MW15D-041812	Water	04/18/2012 1535	04/19/2012 0915

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech INC.	Client Project Manager: Tony Apuzzage	Site Contact: Walt Pryor	Lab Contact: Pat Omeara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-5914	Telephone: 330 497-9396	1 of ___ COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client: ☐ Lab pickup: ☐ Lab sampling: ☐ Job/SDG No.:
Project Name: MSA Ground water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04021-02	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs	Total PPM	Diss PPM	1,4 Dioxane Pacblvoct	Gas + DAO	Sample Specific Notes / Special Instructions:
TB-041812	4-18-12	—		X						2					N	G	X					
MSA-MW15s-041812		1140		X					2	5			5				X	X	X	X	X	X	
MSA-MW38s-041812		1155		X					2	5			5				X	X	X	X	X	X	
MSA-MW15I-041812		1416		X					2	3			3				X	X	X	X	X		
MSA-MW15D-041812		1535		X					2	3			3				X	X	X	X	X		

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pe	TT Inc	4-18-12 1620	Paul Sanford	TestAmerica	4/18/12 1629
Relinquished by: Paul Sanford	Company: TestAmerica	Date/Time: 4/18/12 1700	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL	Date/Time: 4-19-12 915

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TAL-0018 (1008)

05/10/2012

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10350

Client Tetra tech Site Name MSA By: _____

Cooler Received on 4.19.12 Opened on 4-19-12 (Signature)

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # BAeU Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	X Multiple on Back
IR GUN# 5G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s)_____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
15S	<2 <2	4.18.12	[illegible]
38S	<2 <2		
15I	<2 <2		
15D	<2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client	3.6	2.6	4G	[illegible]
Client	2.4	7.4		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10350-1

Login Number: 10350

List Source: TestAmerica Canton

List Number: 1

Creator: Sutek, Nick

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-10350-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW15S-041812	240-10391-1	NM	4/18/2012	4/25/2012	4/27/2012	7	2	9
HG	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HG	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
M	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
M	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HGF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HGF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HGF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
MF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
PCL	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
OS	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/30/2012	5	5	10
OS	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
OS	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OV	UG/L	TB-042012	240-10494-1	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	TB-042012	240-10494-1	TB	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/30/2012	4/30/2012	11	0	11
OV	UG/L	TB-041812	240-10350-1	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	TB-041812	240-10350-1	TB	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	TB-041912	240-10391-2	TB	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	TB-041912	240-10391-2	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/30/2012	4/30/2012	12	0	12
OV	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/30/2012	4/30/2012	10	0	10
OV	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
TPH	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/24/2012	6	0	6
TPH	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/25/2012	4/26/2012	6	1	7
TPH	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/25/2012	4/26/2012	7	1	8
TPH	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/24/2012	6	0	6
TPH	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6
TPH	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
TPH	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/24/2012	5	0	5
TPH	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/24/2012	5	0	5
TPH	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
TPH	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6
TPH	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/25/2012	4/26/2012	7	1	8
TPH	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/25/2012	4/26/2012	6	1	7
TPH	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: BFB3643.D BFB Injection Date: 04/09/2012

Instrument ID: A3UX10 BFB Injection Time: 10:15

Analysis Batch No.: 39613

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	48.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.4	
175	5.0 - 9.0 % of mass 174	5.3	(7.1)1
176	95.0 - 101.0 % of mass 174	71.7	(96.3)1
177	5.0 - 9.0 % of mass 176	5.0	(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-39613/2	UXX0990.D	04/09/2012	10:43
	STD8260 240-39613/3	UXX0991.D	04/09/2012	11:04
	STD8260 240-39613/4	UXX0992.D	04/09/2012	11:26
	STD8260 240-39613/5	UXX0993.D	04/09/2012	11:47
	STD8260 240-39613/6	UXX0994.D	04/09/2012	12:09
	STD8260 240-39613/7	UXX0995.D	04/09/2012	12:30
	STDA9 240-39613/8	UXX0996.D	04/09/2012	12:51
	STDA9 240-39613/9	UXX0997.D	04/09/2012	13:13
	STDA9 240-39613/10	UXX0998.D	04/09/2012	13:35
	STDA9 240-39613/11	UXX0999.D	04/09/2012	13:56
	STDA9 240-39613/12	UXX1000.D	04/09/2012	14:18
	STDA9 240-39613/13	UXX1001.D	04/09/2012	14:40
	ICV 240-39613/14	UXX1002.D	04/09/2012	15:01

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-39613/7	UXX0995.D
Level 2	STD8260 240-39613/6	UXX0994.D
Level 3	STD8260 240-39613/5	UXX0993.D
Level 4	STD8260 240-39613/4	UXX0992.D
Level 5	STD8260 240-39613/3	UXX0991.D
Level 6	STD8260 240-39613/2	UXX0990.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1922 0.1920	0.1832	0.1942	0.1712	0.1791	Ave		0.1853			0.1000	4.9		15.0			
Chloromethane	0.2986 0.2893	0.3127	0.2900	0.2885	0.3062	Ave		0.2976			0.1000	3.4		15.0			
Vinyl chloride	0.2876 0.2937	0.2940	0.2946	0.2867	0.3020	Ave		0.2931			0.1000	1.9		15.0			
Bromomethane	0.1058 0.0872	0.1244	0.0954	0.1061	0.1061	Ave		0.1041			0.0500	12.0		15.0			
Chloroethane	0.1423 0.1435	0.1560	0.1496	0.1525	0.1578	Ave		0.1503				4.2		15.0			
Trichlorofluoromethane	0.2195 0.2316	0.2381	0.2442	0.2249	0.2394	Ave		0.2330			0.1000	4.0		15.0			
Acrolein	0.0270 0.0353	0.0353	0.0335	0.0353	0.0387	Ave		0.0342	NT			11.0		15.0			
1,1-Dichloroethene	0.2065 0.2066	0.2039	0.1970	0.1975	0.2117	Ave		0.2039			0.1000	2.8		15.0			
Acetone	0.0847 0.0537	0.0729	0.0526	0.0546	0.0602	Lin1	0.0298	0.0547			0.0500				0.9960		0.9950
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1545 0.1565	0.1488	0.1580	0.1391	0.1516	Ave		0.1514			0.0500	4.6		15.0			
Iodomethane	0.2922 0.3012	0.3044	0.2997	0.3038	0.3300	Ave		0.3052				4.2		15.0			
Carbon disulfide	0.7012 0.7556	0.6734	0.6914	0.7088	0.7810	Ave		0.7186			0.1000	5.7		15.0			
Acetonitrile	0.0197 0.0153	0.0213	0.0162	0.0166	0.0168	Ave		0.0176	NT			13.0		15.0			
Methyl acetate	0.1785 0.1672	0.1799	0.1553	0.1657	0.1792	Ave		0.1710			0.1000	5.8		15.0			
Methylene Chloride	0.4964 0.2337	0.3611	0.2578	0.2506	0.2588	Lin1	0.1287	0.2373			0.1000				0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0139 0.0113	0.0159	0.0121	0.0128	0.0132	Ave		0.0132				12.0		15.0			
Acrylonitrile	0.0815 0.0870	0.0882	0.0840	0.0861	0.0926	Ave		0.0866				4.4		15.0			
Methyl tert-butyl ether	0.6298 0.6761	0.6642	0.6410	0.6715	0.7312	Ave		0.6690			0.1000	5.3		15.0			
trans-1,2-Dichloroethene	0.2368 0.2297	0.2291	0.2268	0.2326	0.2486	Ave		0.2339			0.1000	3.4		15.0			
Hexane	0.0580 0.0648	0.0554	0.0620	0.0574	0.0625	Ave		0.0600				6.1		15.0			
1,1-Dichloroethane	0.4254 0.4303	0.4217	0.4250	0.4379	0.4668	Ave		0.4345			0.1000	3.9		15.0			
Vinyl acetate	0.0316 0.0484	0.0385	0.0396	0.0459	0.0502	Lin1	-0.011	0.0486							0.9980		0.9950
2-Butanone	0.1052 0.0887	0.0917	0.0897	0.0852	0.0938	Ave		0.0924			0.0500	7.5		15.0			
cis-1,2-Dichloroethene	0.2508 0.2495	0.2545	0.2464	0.2543	0.2736	Ave		0.2548			0.1000	3.8		15.0			
2,2-Dichloropropane	0.2781 0.2817	0.2747	0.2768	0.2805	0.3092	Ave		0.2835				4.5		15.0			
Bromochloromethane	0.1023 0.1073	0.1074	0.1037	0.1113	0.1197	Ave		0.1086				5.8		15.0			
Tetrahydrofuran	0.0749 0.0640	0.0739	0.0637	0.0641	0.0668	Ave		0.0679				7.6		15.0			
Chloroform	0.3657 0.3760	0.3800	0.3621	0.3800	0.4090	Ave		0.3788				4.4		15.0			
1,1,1-Trichloroethane	0.2761 0.3005	0.2886	0.2958	0.3014	0.3241	Ave		0.2977			0.1000	5.4		15.0			
Cyclohexane	0.4772 0.4869	0.4382	0.4655	0.4350	0.4781	Ave		0.4635			0.1000	4.7		15.0			
1,1-Dichloropropene	0.3213 0.3320	0.3151	0.3070	0.3141	0.3435	Ave		0.3222				4.2		15.0			
Carbon tetrachloride	0.2206 0.2597	0.2225	0.2352	0.2404	0.2675	Ave		0.2410			0.1000	8.0		15.0			
1,2-Dichloroethane	0.2598 0.2874	0.2825	0.2743	0.2849	0.3058	Ave		0.2825			0.1000	5.4		15.0			
Benzene	0.9882 0.9961	0.9621	0.9148	0.9557	1.0428	Ave		0.9766			0.5000	4.4		15.0			
Trichloroethene	0.2155 0.2336	0.2156	0.2171	0.2257	0.2465	Ave		0.2257			0.2000	5.5		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichloropropane	0.2031 0.2332	0.2084	0.2116	0.2223	0.2432	Ave		0.2203			0.1000	7.1		15.0			
Methylcyclohexane	0.4272 0.4463	0.3866	0.4134	0.3942	0.4352	Ave		0.4171			0.1000	5.6		15.0			
Dibromomethane	0.1001 0.1127	0.1089	0.1070	0.1126	0.1211	Ave		0.1104				6.3		15.0			
1,4-Dioxane	0.0013 0.0009	0.0018	0.0014	0.0014	0.0014	Qua	-0.027	0.0018 NT	0						0.9970		0.9900
Bromodichloromethane	0.2071 0.2625	0.2125	0.2276	0.2426	0.2687	Ave		0.2368			0.1000	11.0		15.0			
2-Chloroethyl vinyl ether	0.0953 0.1154	0.1026	0.0991	0.1078	0.1132	Ave		0.1056				7.5		15.0			
cis-1,3-Dichloropropene	0.2382 0.3446	0.2773	0.2815	0.3117	0.3437	Ave		0.2995			0.1500	14.0		15.0			
4-Methyl-2-pentanone	0.1971 0.1880	0.2052	0.1814	0.1816	0.1961	Ave		0.1916			0.0500	5.0		15.0			
Toluene	1.2786 1.5136	1.3700	1.3458	1.4118	1.5315	Ave		1.4085			0.4000	7.0		15.0			
trans-1,3-Dichloropropene	0.3267 0.4617	0.3736	0.4006	0.4275	0.4637	Ave		0.4089			0.1000	13.0		15.0			
Ethyl methacrylate	0.3361 0.4221	0.3883	0.3882	0.4025	0.4314	Ave		0.3948				8.5		15.0			
1,1,2-Trichloroethane	0.2085 0.2507	0.2511	0.2385	0.2498	0.2616	Ave		0.2434			0.1000	7.6		15.0			
1,3-Dichloropropane	0.4259 0.4866	0.4555	0.4568	0.4677	0.4983	Ave		0.4651				5.5		15.0			
Tetrachloroethene	0.2410 0.2722	0.2563	0.2573	0.2544	0.2751	Ave		0.2594			0.2000	4.8		15.0			
2-Hexanone	0.2221 0.1891	0.2255	0.1950	0.1947	0.2012	Ave		0.2046			0.0500	7.5		15.0			
Dibromochloromethane	0.1763 0.2674	0.1884	0.2182	0.2426	0.2727	Lin1	-0.068	0.2661							0.9970		0.9950
1,2-Dibromoethane	0.2133 0.2476	0.2244	0.2361	0.2432	0.2575	Ave		0.2370				6.8		15.0			
Chlorobenzene	0.8320 0.8941	0.8752	0.8283	0.8641	0.9261	Ave		0.8700			0.3000	4.3		15.0			
1,1,1,2-Tetrachloroethane	0.2333 0.3032	0.2624	0.2751	0.2957	0.3260	Ave		0.2826				12.0		15.0			
Ethylbenzene	0.4292 0.5024	0.4724	0.4654	0.4836	0.5280	Ave		0.4802				7.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.5577 0.6499	0.5701	0.5874	0.6183	0.6694	Ave		0.6088				7.4		15.0			
o-Xylene	0.5549 0.6240	0.6077	0.5963	0.6172	0.6639	Ave		0.6107				5.8		15.0			
Styrene	0.8287 1.0696	0.9177	0.9680	1.0250	1.1140	Ave		0.9872			0.3000	11.0		15.0			
Bromoform	0.0939 0.1719	0.1147	0.1361	0.1517	0.1745	Lin1	-0.053	0.1705			0.1000				0.9970		0.9950
Isopropylbenzene	1.3747 1.6409	1.4124	1.4899	1.5573	1.7130	Ave		1.5314			0.1000	8.6		15.0			
1,1,2,2-Tetrachloroethane	0.5732 0.6230	0.6197	0.5912	0.6095	0.6386	Ave		0.6092			0.3000	3.9		15.0			
Bromobenzene	0.6522 0.6987	0.6857	0.6341	0.6725	0.7188	Ave		0.6770				4.6		15.0			
1,2,3-Trichloropropane	0.1810 0.1956	0.2088	0.1929	0.2013	0.2011	Ave		0.1968				4.8		15.0			
trans-1,4-Dichloro-2-butene	0.1360 0.2023	0.1580	0.1647	0.1760	0.2002	Ave		0.1729				15.0		15.0			
n-Propylbenzene	0.7694 0.8091	0.7558	0.7378	0.7624	0.8209	Ave		0.7759				4.2		15.0			
2-Chlorotoluene	0.6505 0.6734	0.6398	0.6312	0.6578	0.7023	Ave		0.6592				3.9		15.0			
1,3,5-Trimethylbenzene	2.0379 2.4370	2.1698	2.2099	2.3280	2.4921	Ave		2.2791				7.5		15.0			
4-Chlorotoluene	0.6323 0.7151	0.6892	0.6608	0.6847	0.7321	Ave		0.6857				5.3		15.0			
tert-Butylbenzene	1.9422 2.3279	2.0355	1.8591	2.0505	2.2285	Ave		2.0739				8.5		15.0			
1,2,4-Trimethylbenzene	2.1858 2.4421	2.2876	2.2306	2.3565	2.5508	Ave		2.3422				5.8		15.0			
sec-Butylbenzene	2.6755 2.9768	2.7608	2.6887	2.8219	3.0539	Ave		2.8296				5.5		15.0			
1,3-Dichlorobenzene	1.3196 1.3143	1.3142	1.2097	1.2670	1.3816	Ave		1.3010			0.6000	4.4		15.0			
p-Isopropyltoluene	2.1167 2.4358	2.2268	2.2779	2.3536	2.5285	Ave		2.3232				6.4		15.0			
1,4-Dichlorobenzene	1.4040 1.3764	1.4143	1.2899	1.3378	1.4396	Ave		1.3770			0.5000	4.0		15.0			
n-Butylbenzene	1.9086 2.1618	2.0204	1.9681	2.0761	2.2496	Ave		2.0641				6.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.1398 1.1675	1.1499	1.1302	1.1865	1.2579	Ave		1.1720			0.4000	4.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0615 0.0778	0.0863	0.0847	0.0841	0.0875	Ave		0.0803			0.0500	12.0		15.0			
1,3,5-Trichlorobenzene	0.7364 0.6391	0.8036	0.7375	0.7812	0.7751	Ave		0.7455				7.8		15.0			
1,2,4-Trichlorobenzene	0.6466 0.4706	0.6576	0.5934	0.6231	0.6022	Ave		0.5989			0.2000	11.0		15.0			
Hexachlorobutadiene	0.3137 0.2066	0.2926	0.2723	0.2702	0.2679	Ave		0.2705				13.0		15.0			
Naphthalene	1.4992 1.0051	1.5650	1.4010	1.4042	1.3227	Ave		1.3662				14.0		15.0			
1,2,3-Trichlorobenzene	0.4997 +++++	0.5300	0.4779	0.4705	0.4172	Ave		0.4791				8.7		15.0			
Dibromofluoromethane (Surr)	0.1864 0.1774	0.1644	0.1790	0.1914	0.1964	Ave		0.1825				6.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2221 0.2179	0.2119	0.2324	0.2502	0.2570	Ave		0.2319				7.8		15.0			
Toluene-d8 (Surr)	1.1066 1.1734	1.0100	1.1068	1.1923	1.2234	Ave		1.1354				6.8		15.0			
4-Bromofluorobenzene (Surr)	0.4485 0.4158	0.4010	0.4244	0.4564	0.4511	Ave		0.4329				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 12:51 Calibration End Date: 04/09/2012 14:40 Calibration ID: 7932

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-39613/13	UXX1001.D
Level 2	STDA9 240-39613/12	UXX1000.D
Level 3	STDA9 240-39613/11	UXX0999.D
Level 4	STDA9 240-39613/10	UXX0998.D
Level 5	STDA9 240-39613/9	UXX0997.D
Level 6	STDA9 240-39613/8	UXX0996.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.3643 0.3617	0.3526	0.3600	0.3550	0.3495	Ave		0.3572				1.6		15.0			
Ethyl ether	0.2107 0.2179	0.2024	0.2090	0.2155	0.2126	Ave		0.2114				2.6		15.0			
3-Chloro-1-propene	0.1084 0.1417	0.1204	0.1266	0.1330	0.1330	Ave		0.1272				9.2		15.0			
Diisopropyl ether	0.1932 0.2263	0.1983	0.2038	0.2131	0.2167	Ave		0.2086				5.9		15.0			
2-Chloro-1,3-butadiene	0.3480 0.4108	0.3615	0.3814	0.3852	0.3949	Ave		0.3803				6.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.7025 0.7601	0.7010	0.7140	0.7327	0.7418	Ave		0.7254				3.3		15.0			
Propionitrile	0.0228 0.0268	0.0240	0.0258	0.0264	0.0268	Ave		0.0254	NT			6.5		15.0			
Ethyl acetate	0.1895 0.1788	0.1648	0.1556	0.1742	0.1716	Ave		0.1724				6.8		15.0			
Methacrylonitrile	0.1260 0.1318	0.1402	0.1198	0.1290	0.1314	Ave		0.1297				5.2		15.0			
Isobutyl alcohol	0.0085 0.0080	0.0116	0.0080	0.0082	0.0088	Lin1	0.0237	0.0082	NT						0.9960		0.9950
Tert-amyl-methyl ether (TAME)	0.5913 0.6785	0.6204	0.6192	0.6508	0.6555	Ave		0.6360				4.9		15.0			
n-Heptane	0.0548 0.0616	0.0580	0.0581	0.0600	0.0595	Ave		0.0587				4.0		15.0			
n-Butanol	0.0066 0.0074	0.0082	0.0087	0.0085	0.0091	Ave		0.0081	NT			12.0		15.0			
2-Nitropropane	0.0284 0.0370	0.0273	0.0305	0.0325	0.0354	Ave		0.0318	NT			12.0		15.0			
Cyclohexanone	0.0483 0.0436	0.0577	0.0472	0.0494	0.0533	Ave		0.0499				9.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 12:51 Calibration End Date: 04/09/2012 14:40 Calibration ID: 7932

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.1321 2.3697	2.1272	2.1034	2.2882	2.3575	Ave		2.2297				5.5		15.0			
2-Methylnaphthalene	0.4611 0.4017	0.4993	0.3907	0.4014	0.4716	Ave		0.4376				10.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1853	0.2035	0.1000	11.0	10.0	9.8	20.0
Chloromethane	Ave	0.2976	0.3144	0.1000	10.6	10.0	5.7	20.0
Vinyl chloride	Ave	0.2931	0.2808	0.1000	9.58	10.0	-4.2	20.0
Bromomethane	Ave	0.1041	0.1074	0.0500	10.3	10.0	3.1	20.0
Chloroethane	Ave	0.1503	0.1536	0.0500	10.2	10.0	2.2	20.0
Trichlorofluoromethane	Ave	0.2330	0.2481	0.1000	10.7	10.0	6.5	20.0
1,1-Dichloroethene	Ave	0.2039	0.2103	0.1000	10.3	10.0	3.1	20.0
Acetone	Lin1		0.0534	0.0500	19.0	20.0	-5.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1514	0.1693	0.0500	11.2	10.0	11.8	20.0
Iodomethane	Ave	0.3052	0.3042		9.97	10.0	-0.3	20.0
Carbon disulfide	Ave	0.7186	0.7032	0.1000	9.79	10.0	-2.1	20.0
Methyl acetate	Ave	0.1710	0.1780	0.1000	10.4	10.0	4.1	20.0
Methylene Chloride	Lin1		0.2327	0.1000	9.26	10.0	-7.4	20.0
tert-Butyl alcohol	Ave	0.0132	0.0116		176	200	-12.2	20.0
Methyl tert-butyl ether	Ave	0.6690	0.6335	0.1000	9.47	10.0	-5.3	20.0
trans-1,2-Dichloroethene	Ave	0.2339	0.2317	0.1000	9.91	10.0	-0.9	20.0
Hexane	Ave	0.0600	0.0692		11.5	10.0	15.3	20.0
1,1-Dichloroethane	Ave	0.4345	0.4342	0.1000	10.0	10.0	-0.0	20.0
Vinyl acetate	Lin1		0.0412		8.71	10.0	-12.9	20.0
2-Butanone	Ave	0.0924	0.0812	0.0500	17.6	20.0	-12.1	20.0
cis-1,2-Dichloroethene	Ave	0.2548	0.2462	0.1000	9.66	10.0	-3.4	20.0
2,2-Dichloropropane	Ave	0.2835	0.2698		9.52	10.0	-4.8	20.0
Bromochloromethane	Ave	0.1086	0.1042		9.60	10.0	-4.0	20.0
Tetrahydrofuran	Ave	0.0679	0.0621		9.15	10.0	-8.5	20.0
Chloroform	Ave	0.3788	0.3616	0.2000	9.55	10.0	-4.5	20.0
1,1,1-Trichloroethane	Ave	0.2977	0.2884	0.1000	9.69	10.0	-3.1	20.0
Cyclohexane	Ave	0.4635	0.4585	0.1000	9.89	10.0	-1.1	20.0
1,1-Dichloropropene	Ave	0.3222	0.3187		9.89	10.0	-1.1	20.0
Carbon tetrachloride	Ave	0.2410	0.2360	0.1000	9.79	10.0	-2.1	20.0
1,2-Dichloroethane	Ave	0.2825	0.2719	0.1000	9.63	10.0	-3.7	20.0
Benzene	Ave	0.9766	0.9299	0.5000	9.52	10.0	-4.8	20.0
Trichloroethene	Ave	0.2257	0.2189	0.2000	9.70	10.0	-3.0	20.0
1,2-Dichloropropane	Ave	0.2203	0.2134	0.1000	9.69	10.0	-3.1	20.0
Methylcyclohexane	Ave	0.4171	0.4233	0.1000	10.1	10.0	1.5	20.0
Dibromomethane	Ave	0.1104	0.1097		9.94	10.0	-0.6	20.0
Bromodichloromethane	Ave	0.2368	0.2294	0.1000	9.68	10.0	-3.2	20.0
2-Chloroethyl vinyl ether	Ave	0.1056	0.1019		9.65	10.0	-3.5	20.0
cis-1,3-Dichloropropene	Ave	0.2995	0.2767	0.1500	9.24	10.0	-7.6	20.0
4-Methyl-2-pentanone	Ave	0.1916	0.1755	0.0500	18.3	20.0	-8.4	20.0
Toluene	Ave	1.409	1.331	0.4000	9.45	10.0	-5.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Ave	0.4089	0.3861	0.1000	9.44	10.0	-5.6	20.0
1,1,2-Trichloroethane	Ave	0.2434	0.2412	0.1000	9.91	10.0	-0.9	20.0
1,3-Dichloropropane	Ave	0.4651	0.4482		9.64	10.0	-3.6	20.0
Tetrachloroethene	Ave	0.2594	0.2571	0.2000	9.91	10.0	-0.9	20.0
2-Hexanone	Ave	0.2046	0.1889	0.0500	18.5	20.0	-7.7	20.0
Dibromochloromethane	Lin1		0.2162		8.38	10.0	-16.2	20.0
1,2-Dibromoethane	Ave	0.2370	0.2321		9.79	10.0	-2.1	20.0
Chlorobenzene	Ave	0.8700	0.8349	0.3000	9.60	10.0	-4.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.2826	0.2649		9.37	10.0	-6.3	20.0
Ethylbenzene	Ave	0.4802	0.4607		9.60	10.0	-4.0	20.0
m-Xylene & p-Xylene	Ave	0.6088	0.5860		19.3	20.0	-3.7	20.0
o-Xylene	Ave	0.6107	0.5798		9.49	10.0	-5.1	20.0
Styrene	Ave	0.9872	0.9621	0.3000	9.75	10.0	-2.5	20.0
Bromoform	Lin1		0.1315	0.1000	8.02	10.0	-19.8	20.0
Isopropylbenzene	Ave	1.531	1.464	0.1000	9.56	10.0	-4.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6092	0.5847	0.3000	9.60	10.0	-4.0	20.0
Bromobenzene	Ave	0.6770	0.6581		9.72	10.0	-2.8	20.0
1,2,3-Trichloropropane	Ave	0.1968	0.1912		9.72	10.0	-2.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1624		18.8	20.0	-6.1	20.0
n-Propylbenzene	Ave	0.7759	0.7610		9.81	10.0	-1.9	20.0
2-Chlorotoluene	Ave	0.6592	0.6226		9.45	10.0	-5.5	20.0
1,3,5-Trimethylbenzene	Ave	2.279	2.210		9.70	10.0	-3.0	20.0
4-Chlorotoluene	Ave	0.6857	0.6680		9.74	10.0	-2.6	20.0
tert-Butylbenzene	Ave	2.074	1.908		9.20	10.0	-8.0	20.0
1,2,4-Trimethylbenzene	Ave	2.342	2.228		9.51	10.0	-4.9	20.0
sec-Butylbenzene	Ave	2.830	2.735		9.66	10.0	-3.4	20.0
1,3-Dichlorobenzene	Ave	1.301	1.223	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.323	2.318		9.98	10.0	-0.2	20.0
1,4-Dichlorobenzene	Ave	1.377	1.253	0.5000	9.10	10.0	-9.0	20.0
n-Butylbenzene	Ave	2.064	1.947		9.43	10.0	-5.7	20.0
1,2-Dichlorobenzene	Ave	1.172	1.093	0.4000	9.33	10.0	-6.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0803	0.0756	0.0500	9.40	10.0	-6.0	20.0
1,2,4-Trichlorobenzene	Ave	0.5989	0.4928	0.2000	8.23	10.0	-17.7	20.0
Hexachlorobutadiene	Ave	0.2705	0.2355		8.70	10.0	-13.0	20.0
Naphthalene	Ave	1.366	1.126		8.25	10.0	-17.5	20.0
1,2,3-Trichlorobenzene	Ave	0.4791	0.3787		7.90	10.0	-21.0*	20.0
Dibromofluoromethane (Surr)	Ave	0.1825	0.1722		9.43	10.0	-5.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2274		9.81	10.0	-1.9	20.0
Toluene-d8 (Surr)	Ave	1.135	1.083		9.54	10.0	-4.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3943		9.11	10.0	-8.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 12:51

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 14:40

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2114	0.2095		9.91	10.0	-0.9	20.0
Diisopropyl ether	Ave	0.2086	0.2011		9.64	10.0	-3.6	20.0
Isobutyl alcohol	Lin1		0.0085		514	500	2.8	20.0
Cyclohexanone	Ave	0.0499	0.0116		46.5	200	-76.7*	20.0
1,2,3-Trimethylbenzene	Ave	2.230	2.149		9.64	10.0	-3.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: BFB4683.D BFB Injection Date: 04/27/2012

Instrument ID: A3UX10 BFB Injection Time: 09:20

Analysis Batch No.: 41857

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.7	
75	30.0 - 60.0 % of mass 95	50.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.3	(0.3)1
174	50.0 - 120.00 % of mass 95	90.5	
175	5.0 - 9.0 % of mass 174	6.6	(7.3)1
176	95.0 - 101.0 % of mass 174	89.3	(98.7)1
177	5.0 - 9.0 % of mass 176	6.0	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-41857/2	UXX4986.D	04/27/2012	09:48
	CCV 240-41857/3	UXX4987.D	04/27/2012	10:10
	LCS 240-41857/4	UXX4988.D	04/27/2012	10:31
	MRL 240-41857/5	UXX4989.D	04/27/2012	10:53
	MB 240-41857/6	UXX4990.D	04/27/2012	11:14
MSA-MW15I-041812	240-10350-4	UXX4994.D	04/27/2012	13:02
MSA-MW15S-041812	240-10350-2	UXX4998.D	04/27/2012	14:28
MSA-MW38S-041812	240-10350-3	UXX4999.D	04/27/2012	14:50
TB-041812	240-10350-1	UXX5008.D	04/27/2012	18:03
	240-10494-C-3 MS	UXX5009.D	04/27/2012	18:24
	240-10494-C-3 MSD	UXX5010.D	04/27/2012	18:46

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1853	0.1735	0.1000	9.36	10.0	-6.4	20.0
Chloromethane	Ave	0.2976	0.2414	0.1000	8.11	10.0	-18.9	20.0
Vinyl chloride	Ave	0.2931	0.2470	0.1000	8.43	10.0	-15.7	20.0
Bromomethane	Ave	0.1041	0.1078	0.0500	10.4	10.0	3.5	20.0
Chloroethane	Ave	0.1503	0.1320	0.0500	8.78	10.0	-12.2	20.0
Trichlorofluoromethane	Ave	0.2330	0.2761	0.1000	11.9	10.0	18.5	20.0
Acrolein	Ave	0.0342	0.0183 NT		53.6	100	-46.4 NT	20.0
1,1-Dichloroethene	Ave	0.2039	0.2090	0.1000	10.2	10.0	2.5	20.0
Acetone	Lin1		0.0513	0.0500	18.2	20.0	-9.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1514	0.1970	0.0500	13.0	10.0	30.1*	20.0
Iodomethane	Ave	0.3052	0.3404		11.2	10.0	11.5	20.0
Carbon disulfide	Ave	0.7186	0.6677	0.1000	9.29	10.0	-7.1	20.0
Acetonitrile	Ave	0.0176	0.0128 NT		72.6	100	-27.4* NT	20.0
Methyl acetate	Ave	0.1710	0.1380	0.1000	16.1	20.0	-19.3	20.0
Methylene Chloride	Lin1		0.2394	0.1000	9.54	10.0	-4.6	20.0
tert-Butyl alcohol	Ave	0.0132	0.0078		119	200	-40.8*	20.0
Acrylonitrile	Ave	0.0866	0.0722		16.7	20.0	-16.7	20.0
Methyl tert-butyl ether	Ave	0.6690	0.5934	0.1000	8.87	10.0	-11.3	20.0
trans-1,2-Dichloroethene	Ave	0.2339	0.2288	0.1000	9.78	10.0	-2.2	20.0
Hexane	Ave	0.0600	0.0608		10.1	10.0	1.4	20.0
1,1-Dichloroethane	Ave	0.4345	0.3886	0.1000	8.94	10.0	-10.6	20.0
Vinyl acetate	Lin1		0.0384		8.14	10.0	-18.6	20.0
2-Butanone	Ave	0.0924	0.0789	0.0500	17.1	20.0	-14.6	20.0
2,2-Dichloropropane	Ave	0.2835	0.2692		9.50	10.0	-5.0	20.0
cis-1,2-Dichloroethene	Ave	0.2548	0.2379	0.1000	9.34	10.0	-6.6	20.0
Bromochloromethane	Ave	0.1086	0.1136		10.5	10.0	4.6	20.0
Tetrahydrofuran	Ave	0.0679	0.0462 NT		6.80	10.0	-32.0* NT	20.0
Chloroform	Ave	0.3788	0.3845	0.2000	10.2	10.0	1.5	20.0
1,1,1-Trichloroethane	Ave	0.2977	0.3065	0.1000	10.3	10.0	2.9	20.0
Cyclohexane	Ave	0.4635	0.4127	0.1000	8.90	10.0	-11.0	20.0
1,1-Dichloropropene	Ave	0.3222	0.3003		9.32	10.0	-6.8	20.0
Carbon tetrachloride	Ave	0.2410	0.2478	0.1000	10.3	10.0	2.9	20.0
1,2-Dichloroethane	Ave	0.2825	0.2986	0.1000	10.6	10.0	5.7	20.0
Benzene	Ave	0.9766	0.9005	0.5000	9.22	10.0	-7.8	20.0
Trichloroethene	Ave	0.2257	0.2313	0.2000	10.3	10.0	2.5	20.0
1,2-Dichloropropane	Ave	0.2203	0.2051	0.1000	9.31	10.0	-6.9	20.0
Methylcyclohexane	Ave	0.4171	0.4154	0.1000	9.96	10.0	-0.4	20.0
Dibromomethane	Ave	0.1104	0.1197		10.8	10.0	8.4	20.0
1,4-Dioxane	Qua		0.0009 NT		280	500	-44.0* NT	20.0
Bromodichloromethane	Ave	0.2368	0.2354	0.1000	9.94	10.0	-0.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1056	0.0986		18.7	20.0	-6.6	20.0
cis-1,3-Dichloropropene	Ave	0.2995	0.2825	0.1500	9.43	10.0	-5.7	20.0
4-Methyl-2-pentanone	Ave	0.1916	0.1529	0.0500	16.0	20.0	-20.2*	20.0
Toluene	Ave	1.409	1.313	0.4000	9.32	10.0	-6.8	20.0
trans-1,3-Dichloropropene	Ave	0.4089	0.3430	0.1000	8.39	10.0	-16.1	20.0
Ethyl methacrylate	Ave	0.3948	0.3154		7.99	10.0	-20.1* NT	20.0
1,1,2-Trichloroethane	Ave	0.2434	0.2426	0.1000	9.97	10.0	-0.3	20.0
1,3-Dichloropropane	Ave	0.4651	0.4300		9.24	10.0	-7.6	20.0
Tetrachloroethene	Ave	0.2594	0.2834	0.2000	10.9	10.0	9.2	20.0
2-Hexanone	Ave	0.2046	0.1436	0.0500	14.0	20.0	-29.8*	20.0
Dibromochloromethane	Lin1		0.2164		8.39	10.0	-16.1	20.0
1,2-Dibromoethane	Ave	0.2370	0.2320		9.79	10.0	-2.1	20.0
Chlorobenzene	Ave	0.8700	0.8244	0.3000	9.48	10.0	-5.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.2826	0.2624		9.28	10.0	-7.2	20.0
Ethylbenzene	Ave	0.4802	0.4457		9.28	10.0	-7.2	20.0
m-Xylene & p-Xylene	Ave	0.6088	0.5678		18.7	20.0	-6.7	20.0
o-Xylene	Ave	0.6107	0.5515		9.03	10.0	-9.7	20.0
Styrene	Ave	0.9872	0.8859	0.3000	8.97	10.0	-10.3	20.0
Bromoform	Lin1		0.1193	0.1000	7.31	10.0	-26.9*	20.0
Isopropylbenzene	Ave	1.531	1.368	0.1000	8.93	10.0	-10.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6092	0.5343	0.3000	8.77	10.0	-12.3	20.0
Bromobenzene	Ave	0.6770	0.6480		9.57	10.0	-4.3	20.0
1,2,3-Trichloropropane	Ave	0.1968	0.1836		9.33	10.0	-6.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1082		6.26	10.0	-37.4* NT	20.0
n-Propylbenzene	Ave	0.7759	0.6680		8.61	10.0	-13.9	20.0
2-Chlorotoluene	Ave	0.6592	0.5906		8.96	10.0	-10.4	20.0
1,3,5-Trimethylbenzene	Ave	2.279	1.972		8.65	10.0	-13.5	20.0
4-Chlorotoluene	Ave	0.6857	0.6286		9.17	10.0	-8.3	20.0
tert-Butylbenzene	Ave	2.074	1.723		8.31	10.0	-16.9	20.0
1,2,4-Trimethylbenzene	Ave	2.342	1.981		8.46	10.0	-15.4	20.0
sec-Butylbenzene	Ave	2.830	2.292		8.10	10.0	-19.0	20.0
1,3-Dichlorobenzene	Ave	1.301	1.145	0.6000	8.80	10.0	-12.0	20.0
p-Isopropyltoluene	Ave	2.323	1.898		8.17	10.0	-18.3	20.0
1,4-Dichlorobenzene	Ave	1.377	1.217	0.5000	8.84	10.0	-11.6	20.0
n-Butylbenzene	Ave	2.064	1.467		7.11	10.0	-28.9*	20.0
1,2-Dichlorobenzene	Ave	1.172	1.046	0.4000	8.92	10.0	-10.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0803	0.0607	0.0500	7.56	10.0	-24.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.7455	0.5821		7.81	10.0	-21.9* NT	20.0
1,2,4-Trichlorobenzene	Ave	0.5989	0.4408	0.2000	7.36	10.0	-26.4*	20.0
Hexachlorobutadiene	Ave	0.2705	0.1667		6.16	10.0	-38.4*	20.0
Naphthalene	Ave	1.366	0.9579		7.01	10.0	-29.9*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.4791	0.3776		7.77	10.0	-21.2*	20.0
Dibromofluoromethane (Surr)	Ave	0.1825	0.1945		12.8	12.0	6.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2571		13.3	12.0	10.8	20.0
Toluene-d8 (Surr)	Ave	1.135	1.122		11.9	12.0	-1.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3853		10.7	12.0	-11.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-41857/3 Calibration Date: 04/27/2012 10:10

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4987.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.1825	0.1890		12.5	12.0	3.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2351		12.2	12.0	1.4	20.0
Toluene-d8 (Surr)	Ave	1.135	1.094		11.6	12.0	-3.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3693		10.3	12.0	-14.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-41857/3 Calibration Date: 04/27/2012 10:10

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 12:51

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 14:40

Lab File ID: UXX4987.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.3572	0.4349		12.2	10.0	21.8 NT	20.0
Ethyl ether	Ave	0.2114	0.2219		10.5	10.0	5.0	20.0
3-Chloro-1-propene	Ave	0.1272	0.1239		9.74	10.0	-2.6	20.0
Diisopropyl ether	Ave	0.2086	0.2243		53.8	50.0	7.5	20.0
2-Chloro-1,3-butadiene	Ave	0.3803	0.3858		10.1	10.0	1.4	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.7254	0.6882		9.49	10.0	-5.1	20.0
Ethyl acetate	Ave	0.1724	0.1690		19.6	20.0	-2.0	20.0
Propionitrile	Ave	0.0254	0.0216 NT		17.0	20.0	-15.0	20.0
Methacrylonitrile	Ave	0.1297	0.1154		8.89	10.0	-11.1	20.0
Isobutyl alcohol	Lin1		0.0057 NT		138	200	-31.2 NT	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.6360	0.6204		9.75	10.0	-2.5	20.0
n-Heptane	Ave	0.0587	0.0500		8.52	10.0	-14.8	20.0
n-Butanol	Ave	0.0081	0.0047		115	200	-42.3 NT	20.0
2-Nitropropane	Ave	0.0318	0.0193 NT		12.1	20.0	-39.6 NT	20.0
Cyclohexanone	Ave	0.0499	0.0311		62.4	100	-37.6 NT	20.0
1,2,3-Trimethylbenzene	Ave	2.230	2.273		10.2	10.0	1.9	20.0
2-Methylnaphthalene	Ave	0.4376	0.4035		18.4	20.0	-7.8	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: UXX4990.D Lab Sample ID: MB 240-41857/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX10 Date Analyzed: 04/27/2012 11:14

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-41857/4	UXX4988.D	04/27/2012 10:31
MSA-MW15I-041812	240-10350-4	UXX4994.D	04/27/2012 13:02
MSA-MW15S-041812	240-10350-2	UXX4998.D	04/27/2012 14:28
MSA-MW38S-041812	240-10350-3	UXX4999.D	04/27/2012 14:50
TB-041812	240-10350-1	UXX5008.D	04/27/2012 18:03
	240-10494-C-3 MS	UXX5009.D	04/27/2012 18:24
	240-10494-C-3 MSD	UXX5010.D	04/27/2012 18:46

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		63-129
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	100		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42092/2	UXM5239.D	04/29/2012	15:41
	STD8260 240-42092/3	UXM5240.D	04/29/2012	16:03
	STD8260 240-42092/4	UXM5241.D	04/29/2012	16:26
	STD8260 240-42092/5	UXM5242.D	04/29/2012	16:49
	STD8260 240-42092/6	UXM5243.D	04/29/2012	17:12
	STD8260 240-42092/7	UXM5244.D	04/29/2012	17:34
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50
	ICV 240-42092/14	UXM5251.D	04/29/2012	20:13

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.3038	0.2649	0.2905	0.2889	0.3016	Ave		0.2829			0.1000	7.8		15.0			
Chloromethane	0.4695 0.4320	0.4893	0.4830	0.4487	0.4452	Ave		0.4613			0.1000	4.9		15.0			
Vinyl chloride	0.4202 0.4041	0.4409	0.4365	0.4256	0.4202	Ave		0.4246			0.1000	3.1		15.0			
Bromomethane	0.1730 0.1493	0.1760	0.1733	0.1676	0.1710	Ave		0.1684			0.0500	5.8		15.0			
Chloroethane	0.2470 0.2229	0.2473	0.2344	0.2374	0.2336	Ave		0.2371				3.9		15.0			
Trichlorofluoromethane	0.2704 0.3132	0.3068	0.3031	0.3070	0.3204	Ave		0.3035			0.1000	5.7		15.0			
Acrolein	0.0469 0.0473	0.0483	0.0502	0.0508	0.0498	Ave		0.0489	NT			3.3		15.0			
1,1-Dichloroethene	0.2340 0.2501	0.2402	0.2424	0.2499	0.2511	Ave		0.2446			0.1000	2.8		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1512 0.1622	0.1553	0.1500	0.1479	0.1608	Ave		0.1546			0.0500	3.8		15.0			
Acetone	0.2162 0.0864	0.1595	0.1181	0.1099	0.0970	Lin1	0.2842	0.0868			0.0500				0.9960		0.9950
Iodomethane	0.3345 0.3288	0.3415	0.3505	0.3469	0.3574	Ave		0.3433				3.1		15.0			
Carbon disulfide	0.6238 0.8183	0.6509	0.6976	0.7556	0.8104	Ave		0.7261			0.1000	11.0		15.0			
Acetonitrile	0.0391 0.0299	0.0368	0.0353	0.0335	0.0333	Ave		0.0346	NT			9.2		15.0			
Methyl acetate	0.2451 0.2094	0.2377	0.2404	0.2374	0.2264	Ave		0.2327			0.1000	5.6		15.0			
Methylene Chloride	0.4532 0.2926	0.3791	0.3449	0.3188	0.3120	Lin1	0.1763	0.2950			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0187 0.0171	0.0206	0.0189	0.0189	0.0192	Ave		0.0189				6.0		15.0			
Acrylonitrile	0.1145 0.1022	0.1105	0.1139	0.1170	0.1105	Ave		0.1114				4.6		15.0			
trans-1,2-Dichloroethene	0.2839 0.2770	0.2945	0.2944	0.2851	0.2889	Ave		0.2873			0.1000	2.4		15.0			
Methyl tert-butyl ether	0.8507 0.8216	0.8205	0.8460	0.8461	0.8566	Ave		0.8402			0.1000	1.8		15.0			
Hexane	0.0529 0.0560	0.0521	0.0488	0.0501	0.0574	Ave		0.0529				6.3		15.0			
1,1-Dichloroethane	0.5478 0.5504	0.5906	0.5789	0.5698	0.5773	Ave		0.5691			0.1000	3.0		15.0			
Vinyl acetate	0.0438 0.0547	0.0420	0.0492	0.0562	0.0568	Ave		0.0505				13.0		15.0			
2-Butanone	0.1431 0.1214	0.1392	0.1413	0.1375	0.1314	Ave		0.1356			0.0500	5.9		15.0			
cis-1,2-Dichloroethene	0.3153 0.3006	0.3006	0.3107	0.3096	0.3157	Ave		0.3087			0.1000	2.2		15.0			
2,2-Dichloropropane	0.2459 0.3076	0.2799	0.2938	0.3057	0.3261	Ave		0.2932				9.5		15.0			
Bromochloromethane	0.1255 0.1262	0.1225	0.1298	0.1329	0.1330	Ave		0.1283				3.3		15.0			
Tetrahydrofuran	0.0875 0.0744	0.0826	0.0830	0.0854	0.0842	Ave		0.0828				5.4		15.0			
Chloroform	0.5169 0.5153	0.5299	0.5388	0.5290	0.5477	Ave		0.5296				2.4		15.0			
1,1,1-Trichloroethane	0.3234 0.3831	0.3500	0.3674	0.3840	0.3986	Ave		0.3678			0.1000	7.4		15.0			
Cyclohexane	0.4217 0.4832	0.4863	0.4431	0.4476	0.4809	Ave		0.4605			0.1000	5.8		15.0			
1,1-Dichloropropene	0.4359 0.4194	0.4199	0.4223	0.4252	0.4356	Ave		0.4264				1.8		15.0			
Carbon tetrachloride	0.2456 0.3072	0.2543	0.2617	0.2867	0.3066	Ave		0.2770			0.1000	9.7		15.0			
1,2-Dichloroethane	0.4838 0.4518	0.4761	0.4673	0.4667	0.4711	Ave		0.4694			0.1000	2.3		15.0			
Benzene	1.2256 1.2453	1.2535	1.2750	1.2420	1.2666	Ave		1.2513			0.5000	1.4		15.0			
Trichloroethene	0.2714 0.2655	0.2671	0.2733	0.2695	0.2719	Ave		0.2698			0.2000	1.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3056 0.3781	0.3553	0.3486	0.3331	0.3656	Ave		0.3477			0.1000	7.4		15.0			
1,2-Dichloropropane	0.2994 0.3048	0.3058	0.3148	0.3132	0.3116	Ave		0.3083			0.1000	1.9		15.0			
Dibromomethane	0.1675 0.1555	0.1521	0.1644	0.1597	0.1644	Ave		0.1606				3.7		15.0			
1,4-Dioxane	0.0023 0.0020	0.0024	0.0025	0.0025	0.0025	Ave		0.0024	NI			8.2		15.0			
Bromodichloromethane	0.2586 0.3533	0.2732	0.3036	0.3210	0.3455	Ave		0.3092			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1532 0.1582	0.1459	0.1670	0.1699	0.1653	Ave		0.1599				5.8		15.0			
cis-1,3-Dichloropropene	0.3061 0.4576	0.3249	0.3845	0.4238	0.4469	Lin1	-0.212	0.4568			0.1500				0.9990		0.9950
4-Methyl-2-pentanone	0.2451 0.2575	0.2540	0.2759	0.2780	0.2752	Ave		0.2643			0.0500	5.3		15.0			
Toluene	1.7728 1.9294	1.8880	1.8619	1.8474	1.9604	Ave		1.8766			0.4000	3.5		15.0			
trans-1,3-Dichloropropene	0.3835 0.6056	0.4211	0.4964	0.5287	0.6010	Lin1	-0.314	0.6041			0.1000				0.9980		0.9950
Ethyl methacrylate	0.4455 0.5778	0.5229	0.5765	0.5788	0.6242	Ave		0.5543				11.0		15.0			
1,1,2-Trichloroethane	0.3279 0.3212	0.3141	0.3421	0.3341	0.3447	Ave		0.3307			0.1000	3.6		15.0			
1,3-Dichloropropane	0.6891 0.6635	0.6944	0.7152	0.6928	0.7223	Ave		0.6962				3.0		15.0			
Tetrachloroethene	0.2452 0.2600	0.2630	0.2668	0.2612	0.2738	Ave		0.2617			0.2000	3.6		15.0			
2-Hexanone	0.2323 0.2576	0.2818	0.2796	0.2822	0.2852	Ave		0.2698			0.0500	7.8		15.0			
Dibromochloromethane	0.1872 0.3114	0.2160	0.2464	0.2709	0.3057	Lin1	-0.171	0.3097							0.9980		0.9950
1,2-Dibromoethane	0.2962 0.3220	0.3089	0.3344	0.3261	0.3462	Ave		0.3223				5.5		15.0			
Chlorobenzene	1.0759 1.0855	1.1279	1.1114	1.0941	1.1299	Ave		1.1041			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	0.2665 0.3469	0.2706	0.3066	0.3249	0.3538	Ave		0.3116				12.0		15.0			
Ethylbenzene	0.5227 0.5869	0.5825	0.6026	0.5858	0.6163	Ave		0.5828				5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6757 0.7551	0.7220	0.7191	0.7176	0.7638	Ave		0.7256				4.3		15.0			
o-Xylene	0.6806 0.7276	0.7176	0.7304	0.7130	0.7551	Ave		0.7207				3.4		15.0			
Styrene	1.0565 1.2902	1.1310	1.1966	1.1904	1.2870	Ave		1.1920			0.3000	7.6		15.0			
Bromoform	0.0815 0.1487	0.0938	0.1133	0.1171	0.1413	Lin1	-0.094	0.1455			0.1000				0.9950		0.9950
Isopropylbenzene	1.5492 1.8304	1.6861	1.6648	1.6944	1.8507	Ave		1.7126			0.1000	6.6		15.0			
1,1,2,2-Tetrachloroethane	0.8553 0.8338	0.9184	0.9469	0.9293	0.9310	Ave		0.9025			0.3000	5.1		15.0			
Bromobenzene	0.8074 0.7779	0.8287	0.8325	0.8084	0.8409	Ave		0.8159				2.8		15.0			
1,2,3-Trichloropropane	0.2880 0.2558	0.2803	0.2925	0.2919	0.2938	Ave		0.2837				5.1		15.0			
trans-1,4-Dichloro-2-butene	0.2181 0.2689	0.2471	0.2346	0.2535	0.2845	Ave		0.2511				9.5		15.0			
n-Propylbenzene	0.7292 0.8665	0.8823	0.8741	0.8947	0.9118	Ave		0.8598				7.7		15.0			
2-Chlorotoluene	0.8583 0.7918	0.8579	0.8258	0.8361	0.8474	Ave		0.8362				3.0		15.0			
1,3,5-Trimethylbenzene	2.5787 2.8481	2.7830	2.7962	2.7951	2.9477	Ave		2.7914				4.3		15.0			
4-Chlorotoluene	0.8421 0.8602	0.8907	0.8940	0.8564	0.9136	Ave		0.8762				3.1		15.0			
tert-Butylbenzene	2.2870 2.5025	2.5077	2.4568	2.4969	2.5752	Ave		2.4710				4.0		15.0			
1,2,4-Trimethylbenzene	2.7586 2.9544	2.8331	2.8754	2.9504	3.0668	Ave		2.9065				3.7		15.0			
sec-Butylbenzene	2.8024 3.1977	3.0238	2.9596	3.0216	3.2137	Ave		3.0365				5.1		15.0			
1,3-Dichlorobenzene	1.5037 1.4698	1.4901	1.5135	1.5069	1.5495	Ave		1.5056			0.6000	1.8		15.0			
p-Isopropyltoluene	2.2069 2.6255	2.4647	2.4703	2.4761	2.6715	Ave		2.4858				6.6		15.0			
1,4-Dichlorobenzene	1.6073 1.5308	1.6512	1.5577	1.5557	1.6211	Ave		1.5873			0.5000	2.9		15.0			
n-Butylbenzene	2.0896 2.4436	2.2004	2.2368	2.2659	2.4792	Ave		2.2859				6.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4966 1.3945	1.5126	1.5119	1.4682	1.5239	Ave		1.4846			0.4000	3.2		15.0			
1,2-Dibromo-3-Chloropropane	0.0886 0.0950	0.0916	0.0904	0.0972	0.1086	Ave		0.0952			0.0500	7.6		15.0			
1,3,5-Trichlorobenzene	0.7904 0.7093	0.7633	0.7631	0.7837	0.8038	Ave		0.7690				4.3		15.0			
1,2,4-Trichlorobenzene	0.6476 0.5852	0.7228	0.7185	0.6951	0.7215	Ave		0.6818			0.2000	8.1		15.0			
Hexachlorobutadiene	0.2814 0.2092	0.2884	0.2495	0.2645	0.2531	Ave		0.2577				11.0		15.0			
Naphthalene	1.9527 1.6802	2.0647	2.2163	2.2497	2.2115	Ave		2.0625				11.0		15.0			
1,2,3-Trichlorobenzene	0.6221 0.4278	0.6296	0.6285	0.6505	0.5938	Ave		0.5920				14.0		15.0			
Dibromofluoromethane (Surr)	0.2331 0.2366	0.2278	0.2460	0.2403	0.2499	Ave		0.2389				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4238 0.3659	0.3675	0.3946	0.3884	0.3801	Ave		0.3867				5.5		15.0			
Toluene-d8 (Surr)	1.5539 1.5702	1.4814	1.5599	1.5466	1.5977	Ave		1.5516				2.5		15.0			
4-Bromofluorobenzene (Surr)	0.5499 0.5492	0.5504	0.5556	0.5412	0.5764	Ave		0.5538				2.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2340	0.1000	8.27	10.0	-17.3	20.0
Chloromethane	Ave	0.4613	0.4720	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.4246	0.4443	0.1000	10.5	10.0	4.6	20.0
Bromomethane	Ave	0.1684	0.1539	0.0500	9.14	10.0	-8.6	20.0
Chloroethane	Ave	0.2371	0.2329	0.0500	9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.3035	0.3240	0.1000	10.7	10.0	6.8	20.0
Acrolein	Ave	0.0489	0.0264		16.2	30.0	-46.0 NT	20.0
1,1-Dichloroethene	Ave	0.2446	0.2652	0.1000	10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1709	0.0500	11.1	10.0	10.6	20.0
Acetone	Lin1		0.1057	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.3433	0.3416		9.95	10.0	-0.5	20.0
Carbon disulfide	Ave	0.7261	0.7042	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0346	0.0393		34.0	30.0	13.4	20.0
Methyl acetate	Ave	0.2327	0.2751	0.1000	11.8	10.0	18.2	20.0
Methylene Chloride	Lin1		0.3299	0.1000	10.6	10.0	6.0	20.0
tert-Butyl alcohol	Ave	0.0189	0.0195		207	200	3.2	20.0
Acrylonitrile	Ave	0.1114	0.1186		31.9	30.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.8405	0.1000	10.0	10.0	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2952	0.1000	10.3	10.0	2.7	20.0
Hexane	Ave	0.0529	0.0579		10.9	10.0	9.4	20.0
1,1-Dichloroethane	Ave	0.5691	0.6028	0.1000	10.6	10.0	5.9	20.0
Vinyl acetate	Ave	0.0505	0.0387		7.67	10.0	-23.3*	20.0
2-Butanone	Ave	0.1356	0.1389	0.0500	20.5	20.0	2.4	20.0
2,2-Dichloropropane	Ave	0.2932	0.2855		9.74	10.0	-2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.3186	0.1000	10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1283	0.1312		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0828	0.0852		10.3	10.0	2.9	20.0
Chloroform	Ave	0.5296	0.5462	0.2000	10.3	10.0	3.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3794	0.1000	10.3	10.0	3.2	20.0
Cyclohexane	Ave	0.4605	0.4767	0.1000	10.4	10.0	3.5	20.0
1,1-Dichloropropene	Ave	0.4264	0.4383		10.3	10.0	2.8	20.0
Carbon tetrachloride	Ave	0.2770	0.2912	0.1000	10.5	10.0	5.1	20.0
1,2-Dichloroethane	Ave	0.4694	0.4938	0.1000	10.5	10.0	5.2	20.0
Benzene	Ave	1.251	1.319	0.5000	10.5	10.0	5.4	20.0
Trichloroethene	Ave	0.2698	0.2968	0.2000	11.0	10.0	10.0	20.0
1,2-Dichloropropane	Ave	0.3083	0.3319	0.1000	10.8	10.0	7.7	20.0
Methylcyclohexane	Ave	0.3477	0.3665	0.1000	10.5	10.0	5.4	20.0
Dibromomethane	Ave	0.1606	0.1738		10.8	10.0	8.2	20.0
Bromodichloromethane	Ave	0.3092	0.3331	0.1000	10.8	10.0	7.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1599	0.1722		10.8	10.0	7.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.4089	0.1500	9.41	10.0	-5.9	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2914	0.0500	22.1	20.0	10.3	20.0
Toluene	Ave	1.877	1.918	0.4000	10.2	10.0	2.2	20.0
trans-1,3-Dichloropropene	Lin1		0.5291	0.1000	9.28	10.0	-7.2	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3442	0.1000	10.4	10.0	4.1	20.0
1,3-Dichloropropane	Ave	0.6962	0.7105		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	0.2617	0.2644	0.2000	10.1	10.0	1.0	20.0
2-Hexanone	Ave	0.2698	0.2927	0.0500	21.7	20.0	8.5	20.0
Dibromochloromethane	Lin1		0.2623		9.02	10.0	-9.8	20.0
1,2-Dibromoethane	Ave	0.3223	0.3341		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	1.104	1.136	0.3000	10.3	10.0	2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3283		10.5	10.0	5.4	20.0
Ethylbenzene	Ave	0.5828	0.6250		10.7	10.0	7.2	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7452		20.5	20.0	2.7	20.0
o-Xylene	Ave	0.7207	0.7518		10.4	10.0	4.3	20.0
Styrene	Ave	1.192	1.255	0.3000	10.5	10.0	5.3	20.0
Bromoform	Lin1		0.1220	0.1000	9.03	10.0	-9.7	20.0
Isopropylbenzene	Ave	1.713	1.779	0.1000	10.4	10.0	3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.9195	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8159	0.8010		9.82	10.0	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2982		10.5	10.0	5.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2617		20.8	20.0	4.2	20.0
n-Propylbenzene	Ave	0.8598	0.9010		10.5	10.0	4.8	20.0
2-Chlorotoluene	Ave	0.8362	0.8214		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.836		10.2	10.0	1.6	20.0
4-Chlorotoluene	Ave	0.8762	0.8813		10.1	10.0	0.6	20.0
tert-Butylbenzene	Ave	2.471	2.497		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.988		10.3	10.0	2.8	20.0
sec-Butylbenzene	Ave	3.036	3.064		10.1	10.0	0.9	20.0
1,3-Dichlorobenzene	Ave	1.506	1.484	0.6000	9.85	10.0	-1.5	20.0
p-Isopropyltoluene	Ave	2.486	2.579		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.584	0.5000	9.98	10.0	-0.2	20.0
n-Butylbenzene	Ave	2.286	2.295		10.0	10.0	0.4	20.0
1,2-Dichlorobenzene	Ave	1.485	1.504	0.4000	10.1	10.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.1049	0.0500	11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6660	0.2000	9.77	10.0	-2.3	20.0
Hexachlorobutadiene	Ave	0.2577	0.2217		8.60	10.0	-14.0	20.0
Naphthalene	Ave	2.063	2.211		10.7	10.0	7.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5920	0.6250		10.6	10.0	5.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2274		9.72	10.2	-4.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3583		9.46	10.2	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.552	1.491		9.81	10.2	-3.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5469		10.1	10.2	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3065		9.63	10.0	-3.7	20.0
Diisopropyl ether	Ave	0.2775	0.2745		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		527	500	5.4	20.0
Cyclohexanone	Lin1		0.0256		52.9	200	-73.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	3.178		10.7	10.0	6.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: BFB2916.D BFB Injection Date: 04/30/2012

Instrument ID: A3UX16 BFB Injection Time: 11:22

Analysis Batch No.: 42171

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.1	(0.2)1
174	50.0 - 120.00 % of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	4.8	(7.3)1
176	95.0 - 101.0 % of mass 174	63.9	(96.5)1
177	5.0 - 9.0 % of mass 176	4.2	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-42171/2	UXM5270.D	04/30/2012	11:50
	CCV 240-42171/3	UXM5271.D	04/30/2012	12:13
	LCS 240-42171/4	UXM5272.D	04/30/2012	12:36
	MB 240-42171/5	UXM5273.D	04/30/2012	12:59
MSA-MW15D-041812	240-10350-5	UXM5274.D	04/30/2012	13:34
MSA-MW15D-041812 MS	240-10350-5 MS	UXM5284.D	04/30/2012	17:25
MSA-MW15D-041812 MSD	240-10350-5 MSD	UXM5285.D	04/30/2012	17:48

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2885	0.1000	10.2	10.0	2.0	20.0
Chloromethane	Ave	0.4613	0.4195	0.1000	9.10	10.0	-9.0	20.0
Vinyl chloride	Ave	0.4246	0.4029	0.1000	9.49	10.0	-5.1	20.0
Bromomethane	Ave	0.1684	0.1518	0.0500	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2371	0.2197	0.0500	9.27	10.0	-7.3	20.0
Trichlorofluoromethane	Ave	0.3035	0.3119	0.1000	10.3	10.0	2.8	20.0
Acrolein	Ave	0.0489	0.0440 NT		89.9	100	-10.1	20.0
1,1-Dichloroethene	Ave	0.2446	0.2428	0.1000	9.93	10.0	-0.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1669	0.0500	10.8	10.0	8.0	20.0
Acetone	Lin1		0.0864	0.0500	16.6	20.0	-17.0	20.0
Iodomethane	Ave	0.3433	0.3500		10.2	10.0	1.9	20.0
Carbon disulfide	Ave	0.7261	0.7265	0.1000	10.0	10.0	0.0	20.0
Acetonitrile	Ave	0.0346	0.0292		84.2	100	-15.8	20.0
Methyl acetate	Ave	0.2327	0.1967	0.1000	16.9	20.0	-15.5	20.0
Methylene Chloride	Lin1		0.3004	0.1000	9.58	10.0	-4.2	20.0
tert-Butyl alcohol	Ave	0.0189	0.0158		167	200	-16.6	20.0
Acrylonitrile	Ave	0.1114	0.0998		17.9	20.0	-10.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7869	0.1000	9.36	10.0	-6.4	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2775	0.1000	9.66	10.0	-3.4	20.0
Hexane	Ave	0.0529	0.0551		10.4	10.0	4.1	20.0
1,1-Dichloroethane	Ave	0.5691	0.5381	0.1000	9.45	10.0	-5.5	20.0
Vinyl acetate	Ave	0.0505	0.0473		9.37	10.0	-6.3	20.0
2-Butanone	Ave	0.1356	0.1228	0.0500	18.1	20.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2944	0.1000	9.54	10.0	-4.6	20.0
2,2-Dichloropropane	Ave	0.2932	0.3012		10.3	10.0	2.7	20.0
Bromochloromethane	Ave	0.1283	0.1246		9.71	10.0	-2.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		8.61	10.0	-13.9	20.0
Chloroform	Ave	0.5296	0.5127	0.2000	9.68	10.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3764	0.1000	10.2	10.0	2.3	20.0
Cyclohexane	Ave	0.4605	0.4777	0.1000	10.4	10.0	3.7	20.0
1,1-Dichloropropene	Ave	0.4264	0.4061		9.53	10.0	-4.7	20.0
Carbon tetrachloride	Ave	0.2770	0.2871	0.1000	10.4	10.0	3.7	20.0
1,2-Dichloroethane	Ave	0.4694	0.4390	0.1000	9.35	10.0	-6.5	20.0
Benzene	Ave	1.251	1.173	0.5000	9.38	10.0	-6.2	20.0
Trichloroethene	Ave	0.2698	0.2578	0.2000	9.56	10.0	-4.4	20.0
1,2-Dichloropropane	Ave	0.3083	0.2961	0.1000	9.61	10.0	-3.9	20.0
Methylcyclohexane	Ave	0.3477	0.3809	0.1000	11.0	10.0	9.5	20.0
Dibromomethane	Ave	0.1606	0.1478		9.20	10.0	-8.0	20.0
1,4-Dioxane	Ave	0.0024	0.0019 NT		403	500	-19.5	20.0
Bromodichloromethane	Ave	0.3092	0.3153	0.1000	10.2	10.0	2.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1599	0.1432		17.9	20.0	-10.4	20.0
cis-1,3-Dichloropropene	Lin1		0.3918	0.1500	9.04	10.0	-9.6	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2348	0.0500	17.8	20.0	-11.1	20.0
Toluene	Ave	1.877	1.787	0.4000	9.52	10.0	-4.8	20.0
trans-1,3-Dichloropropene	Lin1		0.5043	0.1000	8.87	10.0	-11.3	20.0
Ethyl methacrylate	Ave	0.5543	0.5335		9.62	10.0	-3.8	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3148	0.1000	9.52	10.0	-4.8	20.0
1,3-Dichloropropane	Ave	0.6962	0.6368		9.15	10.0	-8.5	20.0
Tetrachloroethene	Ave	0.2617	0.2605	0.2000	9.95	10.0	-0.5	20.0
2-Hexanone	Ave	0.2698	0.2379	0.0500	17.6	20.0	-11.8	20.0
Dibromochloromethane	Lin1		0.2633		9.05	10.0	-9.5	20.0
1,2-Dibromoethane	Ave	0.3223	0.3055		9.48	10.0	-5.2	20.0
Chlorobenzene	Ave	1.104	1.033	0.3000	9.36	10.0	-6.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3137		10.1	10.0	0.7	20.0
Ethylbenzene	Ave	0.5828	0.5604		9.61	10.0	-3.9	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7011		19.3	20.0	-3.4	20.0
o-Xylene	Ave	0.7207	0.6828		9.47	10.0	-5.3	20.0
Styrene	Ave	1.192	1.161	0.3000	9.74	10.0	-2.6	20.0
Bromoform	Lin1		0.1180	0.1000	8.76	10.0	-12.4	20.0
Isopropylbenzene	Ave	1.713	1.674	0.1000	9.78	10.0	-2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.8145	0.3000	9.03	10.0	-9.7	20.0
Bromobenzene	Ave	0.8159	0.7672		9.40	10.0	-6.0	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2411		8.50	10.0	-15.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2253		8.97	10.0	-10.3	20.0
n-Propylbenzene	Ave	0.8598	0.8408		9.78	10.0	-2.2	20.0
2-Chlorotoluene	Ave	0.8362	0.7704		9.21	10.0	-7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.685		9.62	10.0	-3.8	20.0
4-Chlorotoluene	Ave	0.8762	0.8030		9.16	10.0	-8.4	20.0
tert-Butylbenzene	Ave	2.471	2.377		9.62	10.0	-3.8	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.768		9.52	10.0	-4.8	20.0
sec-Butylbenzene	Ave	3.036	2.929		9.65	10.0	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.506	1.415	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.486	2.404		9.67	10.0	-3.3	20.0
1,4-Dichlorobenzene	Ave	1.587	1.474	0.5000	9.29	10.0	-7.1	20.0
n-Butylbenzene	Ave	2.286	2.220		9.71	10.0	-2.9	20.0
1,2-Dichlorobenzene	Ave	1.485	1.388	0.4000	9.35	10.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.0894	0.0500	9.39	10.0	-6.1	20.0
1,3,5-Trichlorobenzene	Ave	0.7690	0.7641		9.94	10.0	-0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6748	0.2000	9.90	10.0	-1.0	20.0
Hexachlorobutadiene	Ave	0.2577	0.2544		9.87	10.0	-1.3	20.0
Naphthalene	Ave	2.063	1.886		9.14	10.0	-8.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5920	0.5682		9.60	10.0	-4.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2170		9.27	10.2	-9.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3153		8.32	10.2	-18.5	20.0
Toluene-d8 (Surr)	Ave	1.552	1.338		8.81	10.2	-13.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5067		9.34	10.2	-8.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2389	0.2197		9.39	10.2	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3395		8.96	10.2	-12.2	20.0
Toluene-d8 (Surr)	Ave	1.552	1.410		9.28	10.2	-9.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5352		9.87	10.2	-3.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4967		9.39	10.0	-6.1	20.0
Ethyl ether	Ave	0.3182	0.2722		8.56	10.0	-14.4	20.0
3-Chloro-1-propene	Ave	0.1408	0.1458		10.4	10.0	3.5	20.0
Diisopropyl ether	Ave	0.2775	0.2702		48.7	50.0	-2.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.4999		9.70	10.0	-3.0	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.8664		9.74	10.0	-2.6	20.0
Propionitrile	Ave	0.0386	0.0384		19.9	20.0	-0.6	20.0
Ethyl acetate	Ave	0.2719	0.2478		18.2	20.0	-8.9	20.0
Methacrylonitrile	Ave	0.1921	0.1753		9.13	10.0	-8.7	20.0
Isobutyl alcohol	Ave	0.0086	0.0076		176	200	-12.2	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6972		9.74	10.0	-2.6	20.0
n-Heptane	Ave	0.0406	0.0438		10.8	10.0	7.7	20.0
n-Butanol	Lin1		0.0054		165	200	-17.6	20.0
2-Nitropropane	Qua		0.0379		18.5	20.0	-7.5	20.0
Cyclohexanone	Lin1		0.0798		79.4	100	-20.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.888		9.68	10.0	-3.2	20.0
2-Methylnaphthalene	Qua		0.8088		16.2	20.0	-19.0	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: UXM5273.D Lab Sample ID: MB 240-42171/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 04/30/2012 12:59

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42171/4	UXM5272.D	04/30/2012 12:36
MSA-MW15D-041812	240-10350-5	UXM5274.D	04/30/2012 13:34
MSA-MW15D-041812 MS	240-10350-5 MS	UXM5284.D	04/30/2012 17:25
MSA-MW15D-041812 MSD	240-10350-5 MSD	UXM5285.D	04/30/2012 17:48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.288	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	96		66-117
2037-26-5	Toluene-d8 (Surr)	92		74-115
1868-53-7	Dibromofluoromethane (Surr)	86		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 0.197

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	0.197	J

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-041812	240-10350-1	107	107	96	78
MSA-MW15S-041812	240-10350-2	107	108	95	79
MSA-MW38S-041812	240-10350-3	105	105	95	79
MSA-MW15I-041812	240-10350-4	105	106	96	80
MSA-MW15D-041812	240-10350-5	83	80	84	88
	MB 240-41857/6	100	102	96	81
	MB 240-42171/5	86	87	92	96
	LCS 240-41857/4	106	110	98	89
	LCS 240-42171/4	84	80	83	90
	MRL 240-41857/5	105	106	96	84
MSA-MW15D-041812 MS	240-10350-5 MS	86	84	90	93
	240-10494-C-3 MS	108	111	100	89
MSA-MW15D-041812 MSD	240-10350-5 MSD	86	83	89	88
	240-10494-C-3 MSD	108	110	100	89

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4988.D

Lab ID: LCS 240-41857/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.58	96	72-116	
1,1,1-Trichloroethane	10.0	11.0	110	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.96	90	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	14.3	143	74-151	
1,1-Dichloroethane	10.0	9.72	97	82-115	
1,1-Dichloroethene	10.0	11.1	111	78-131	
1,1-Dichloropropene	10.0	9.91	99	83-114	
1,2,3-Trichlorobenzene	10.0	8.96	90	54-126	
1,2,3-Trichloropropane	10.0	9.75	98	73-129	
1,2,3-Trimethylbenzene	10.0	9.13	91	70-130	
1,2,4-Trichlorobenzene	10.0	7.90	79	48-135	
1,2,4-Trimethylbenzene	10.0	8.94	89	76-120	
1,2-Dibromo-3-Chloropropane	10.0	7.90	79	42-136	
1,2-Dichlorobenzene	10.0	9.36	94	81-110	
1,2-Dichloroethane	10.0	11.0	110	71-127	
1,2-Dichloropropane	10.0	9.86	99	81-115	
1,3-Dichlorobenzene	10.0	9.49	95	80-110	
1,3-Dichloropropane	10.0	9.49	95	79-116	
1,4-Dichlorobenzene	10.0	9.19	92	82-110	
2,2-Dichloropropane	10.0	10.1	101	50-129	
2-Chloroethyl vinyl ether	10.0	9.05 J	91	52-131	
2-Chlorotoluene	10.0	9.40	94	76-116	
2-Hexanone	20.0	14.2	71	55-133	
Bromobenzene	10.0	9.99	100	76-115	
Bromochloromethane	10.0	10.8	108	77-120	
4-Chlorotoluene	10.0	9.67	97	77-115	
p-Isopropyltoluene	10.0	9.02	90	74-120	
Acetone	20.0	18.1	91	43-136	
Benzene	10.0	9.62	96	83-112	
Bromoform	10.0	7.33	73	40-131	
Bromomethane	10.0	12.0	120	11-185	
Carbon disulfide	10.0	9.10	91	62-142	
Carbon tetrachloride	10.0	11.0	110	66-128	
Chlorobenzene	10.0	9.83	98	85-110	
Chloroethane	10.0	9.46	95	25-153	
Chloroform	10.0	10.4	104	79-117	
Chloromethane	10.0	9.29	93	44-126	
cis-1,2-Dichloroethene	10.0	9.80	98	80-113	
cis-1,3-Dichloropropene	10.0	9.24	92	61-115	
Hexachlorobutadiene	10.0	6.58	66	36-134	
Dibromomethane	10.0	11.4	114	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4988.D

Lab ID: LCS 240-41857/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.4	104	72-121	
Dichlorodifluoromethane	10.0	10.8	108	19-129	
Ethylbenzene	10.0	9.59	96	83-112	
1,2-Dibromoethane	10.0	9.87	99	79-113	
Diisopropyl ether	10.0	9.52 J	95	77-118	
Naphthalene	10.0	7.58	76	32-141	
m-Xylene & p-Xylene	20.0	19.6	98	83-113	
n-Butylbenzene	10.0	7.80	78	66-125	
Isopropylbenzene	10.0	9.41	94	75-114	
n-Propylbenzene	10.0	9.45	95	74-121	
2-Butanone	20.0	15.7	79	60-126	
4-Methyl-2-pentanone	20.0	16.5	83	63-128	
sec-Butylbenzene	10.0	8.62	86	70-117	
Methyl tert-butyl ether	10.0	9.36	94	52-144	
Methylene Chloride	10.0	9.93	99	66-131	
o-Xylene	10.0	9.42	94	83-113	
Styrene	10.0	9.44	94	79-114	
tert-Butylbenzene	10.0	8.64	86	71-115	
Tetrachloroethene	10.0	11.2	112	79-114	
Toluene	10.0	9.87	99	84-111	
trans-1,2-Dichloroethene	10.0	10.3	103	83-117	
trans-1,3-Dichloropropene	10.0	8.77	88	58-117	
Trichloroethene	10.0	11.0	110	76-117	
Trichlorofluoromethane	10.0	14.3	143	49-157	
Vinyl acetate	10.0	7.66	77	46-161	
Vinyl chloride	10.0	9.37	94	53-127	
tert-Butyl alcohol	200	128	64	70-130	*
Xylenes, Total	30.0	29.0	97	83-112	
Dibromochloromethane	10.0	8.49	85	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.29	93	72-116	
1,1,1-Trichloroethane	10.0	9.17	92	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.61	86	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.47	95	74-151	
1,1-Dichloroethane	10.0	9.12	91	82-115	
1,1-Dichloroethene	10.0	9.37	94	78-131	
1,1-Dichloropropene	10.0	8.82	88	83-114	
1,2,3-Trichlorobenzene	10.0	9.27	93	54-126	
1,2,3-Trichloropropane	10.0	8.58	86	73-129	
1,2,3-Trimethylbenzene	10.0	9.34	93	70-130	
1,2,4-Trichlorobenzene	10.0	9.24	92	48-135	
1,2,4-Trimethylbenzene	10.0	9.09	91	76-120	
1,2-Dibromo-3-Chloropropane	10.0	8.48	85	42-136	
1,2-Dichlorobenzene	10.0	8.87	89	81-110	
1,2-Dichloroethane	10.0	9.10	91	71-127	
1,2-Dichloropropane	10.0	9.15	92	81-115	
1,3-Dichlorobenzene	10.0	9.09	91	80-110	
1,3-Dichloropropane	10.0	8.52	85	79-116	
1,4-Dichlorobenzene	10.0	8.91	89	82-110	
2,2-Dichloropropane	10.0	9.51	95	50-129	
2-Chloroethyl vinyl ether	10.0	8.76 J	88	52-131	
2-Chlorotoluene	10.0	8.59	86	76-116	
2-Hexanone	20.0	17.5	88	55-133	
Bromobenzene	10.0	9.12	91	76-115	
Bromochloromethane	10.0	9.21	92	77-120	
4-Chlorotoluene	10.0	8.82	88	77-115	
p-Isopropyltoluene	10.0	9.20	92	74-120	
Acetone	20.0	16.4	82	43-136	
Benzene	10.0	9.16	92	83-112	
Bromoform	10.0	8.16	82	40-131	
Bromomethane	10.0	7.64	76	11-185	
Carbon disulfide	10.0	8.61	86	62-142	
Carbon tetrachloride	10.0	9.19	92	66-128	
Chlorobenzene	10.0	8.95	90	85-110	
Chloroethane	10.0	8.17	82	25-153	
Chloroform	10.0	8.84	88	79-117	
Chloromethane	10.0	7.91	79	44-126	
cis-1,2-Dichloroethene	10.0	9.23	92	80-113	
cis-1,3-Dichloropropene	10.0	8.36	84	61-115	
Hexachlorobutadiene	10.0	8.77	88	36-134	
Dibromomethane	10.0	9.18	92	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	9.60	96	72-121	
Dichlorodifluoromethane	10.0	5.86	59	19-129	
Ethylbenzene	10.0	9.06	91	83-112	
1,2-Dibromoethane	10.0	8.75	88	79-113	
Diisopropyl ether	10.0	8.74 J	87	77-118	
Naphthalene	10.0	8.79	88	32-141	
m-Xylene & p-Xylene	20.0	18.0	90	83-113	
n-Butylbenzene	10.0	8.83	88	66-125	
Isopropylbenzene	10.0	9.08	91	75-114	
n-Propylbenzene	10.0	9.50	95	74-121	
2-Butanone	20.0	16.7	84	60-126	
4-Methyl-2-pentanone	20.0	17.3	87	63-128	
sec-Butylbenzene	10.0	8.78	88	70-117	
Methyl tert-butyl ether	10.0	8.66	87	52-144	
Methylene Chloride	10.0	8.84	88	66-131	
o-Xylene	10.0	9.15	92	83-113	
Styrene	10.0	9.27	93	79-114	
tert-Butylbenzene	10.0	8.95	90	71-115	
Tetrachloroethene	10.0	9.17	92	79-114	
Toluene	10.0	8.87	89	84-111	
trans-1,2-Dichloroethene	10.0	9.08	91	83-117	
trans-1,3-Dichloropropene	10.0	8.11	81	58-117	
Trichloroethene	10.0	9.17	92	76-117	
Trichlorofluoromethane	10.0	9.25	93	49-157	
Vinyl acetate	10.0	8.12	81	46-161	
Vinyl chloride	10.0	8.25	83	53-127	
tert-Butyl alcohol	200	167	84	70-130	
Xylenes, Total	30.0	27.2	91	83-112	
Dibromochloromethane	10.0	8.13	81	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4989.D

Lab ID: MRL 240-41857/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	1.00	0.746 J	75		
1,1,1-Trichloroethane	1.00	1.05	105		
1,1,2,2-Tetrachloroethane	1.00	0.930 J	93		
1,1,2-Trichloro-1,2,2-trichfluoroethane	1.00	1.27	127		
1,1-Dichloroethane	1.00	0.904 J	90		
1,1-Dichloroethene	1.00	0.990 J	99		
1,1-Dichloropropene	1.00	0.896 J	90		
1,2,3-Trichlorobenzene	1.00	1.13	113		
1,2,3-Trichloropropane	1.00	1.00	100		
1,2,4-Trichlorobenzene	1.00	0.944 J	94		
1,2,4-Trimethylbenzene	1.00	0.771 J	77		
1,2-Dibromo-3-Chloropropane	1.00	0.750 J	75		
1,2-Dichlorobenzene	1.00	0.955 J	96		
1,2-Dichloroethane	1.00	1.04	104		
1,2-Dichloropropane	1.00	0.877 J	88		
1,3-Dichlorobenzene	1.00	0.943 J	94		
1,3-Dichloropropane	1.00	0.869 J	87		
1,4-Dichlorobenzene	1.00	0.951 J	95		
2,2-Dichloropropane	1.00	0.872 J	87		
2-Chloroethyl vinyl ether	2.00	1.37 J	69		
2-Chlorotoluene	1.00	0.916 J	92		
2-Hexanone	10.0	6.56 J	66		
Bromobenzene	1.00	1.01	101		
Bromochloromethane	1.00	0.956 J	96		
4-Chlorotoluene	1.00	0.925 J	92		
p-Isopropyltoluene	1.00	0.761 J	76		
Acetone	10.0	9.05 J	91		
Benzene	1.00	0.945 J	95		
Bromoform	1.00	0.848 J	85		
Bromomethane	1.00	1.23	123		
Carbon disulfide	1.00	0.824 J	82		
Carbon tetrachloride	1.00	0.897 J	90		
Chlorobenzene	1.00	0.948 J	95		
Chloroethane	1.00	0.936 J	94		
Chloroform	1.00	1.01	101		
Chloromethane	1.00	0.959 J	96		
cis-1,2-Dichloroethene	1.00	0.913 J	91		
cis-1,3-Dichloropropene	1.00	0.721 J	72		
Hexachlorobutadiene	1.00	0.908 J	91		
Dibromomethane	1.00	0.990 J	99		
Bromodichloromethane	1.00	0.845 J	84		

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4989.D

Lab ID: MRL 240-41857/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Dichlorodifluoromethane	1.00	0.976 J	98		
Ethylbenzene	1.00	0.856 J	86		
1,2-Dibromoethane	1.00	0.880 J	88		
Naphthalene	1.00	0.963 J	96		
m-Xylene & p-Xylene	2.00	1.63 J	82		
n-Butylbenzene	1.00	0.681 J	68		
Isopropylbenzene	1.00	0.765 J	77		
n-Propylbenzene	1.00	0.845 J	84		
2-Butanone	10.0	7.60 J	76		
4-Methyl-2-pentanone	10.0	6.97 J	70		
sec-Butylbenzene	1.00	0.791 J	79		
Methyl tert-butyl ether	1.00	0.866 J	87		
Methylene Chloride	1.00	0.912 J	91		
o-Xylene	1.00	0.810 J	81		
Styrene	1.00	0.720 J	72		
tert-Butylbenzene	1.00	0.792 J	79		
Tetrachloroethene	1.00	1.05	105		
Toluene	1.00	0.912 J	91		
trans-1,2-Dichloroethene	1.00	0.951 J	95		
trans-1,3-Dichloropropene	1.00	0.653 J	65		
Trichloroethene	1.00	1.04	104		
Trichlorofluoromethane	1.00	1.32	132		
Vinyl acetate	1.00	0.822 J	82		
Vinyl chloride	1.00	0.911 J	91		
tert-Butyl alcohol	20.0	15.9 J	80		
Xylenes, Total	3.00	2.44	81		
Dibromochloromethane	1.00	0.887 J	89		

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-5 MS Client ID: MSA-MW15D-041812 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	1.0 U	9.57	96	64-118	
1,1,1-Trichloroethane	10.0	1.0 U	9.42	94	68-121	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.56	96	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	11.6	116	70-152	
1,1-Dichloroethane	10.0	1.0 U	9.26	93	79-116	
1,1-Dichloroethene	10.0	1.0 U	10.0	100	74-135	
1,1-Dichloropropene	10.0	1.0 U	9.55	96	80-114	
1,2,3-Trichlorobenzene	10.0	1.0 U	9.86	99	45-129	
1,2,3-Trichloropropane	10.0	1.0 U	9.72	97	67-132	
1,2,3-Trimethylbenzene	10.0	5.0 U	9.43	94	70-130	
1,2,4-Trichlorobenzene	10.0	1.0 U	9.37	94	38-138	
1,2,4-Trimethylbenzene	10.0	1.0 U	9.37	94	67-124	
1,2-Dibromo-3-Chloropropane	10.0	2.0 U	9.54	95	32-139	
1,2-Dichlorobenzene	10.0	1.0 U	9.15	92	75-111	
1,2-Dichloroethane	10.0	1.0 U	9.37	94	68-129	
1,2-Dichloropropane	10.0	1.0 U	9.68	97	78-115	
1,3-Dichlorobenzene	10.0	1.0 U	9.16	92	73-110	
1,3-Dichloropropane	10.0	1.0 U	9.44	94	74-118	
1,4-Dichlorobenzene	10.0	1.0 U	9.01	90	75-110	
2,2-Dichloropropane	10.0	1.0 U	9.23	92	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	(0)	10-150	F
2-Chlorotoluene	10.0	1.0 U	8.96	90	69-117	
2-Hexanone	20.0	10 U	21.3	107	47-139	
Bromobenzene	10.0	1.0 U	9.39	94	71-116	
Bromochloromethane	10.0	1.0 U	9.28	93	73-121	
4-Chlorotoluene	10.0	1.0 U	8.98	90	71-116	
p-Isopropyltoluene	10.0	1.0 U	9.57	96	64-122	
Acetone	20.0	10 U	17.7	89	33-145	
Benzene	10.0	1.0 U	9.36	94	72-121	
Bromoform	10.0	1.0 U	8.55	86	32-128	
Bromomethane	10.0	1.0 U	4.44	44	10-186	
Carbon disulfide	10.0	1.0 U	8.83	88	57-147	
Carbon tetrachloride	10.0	1.0 U	9.67	97	59-129	
Chlorobenzene	10.0	1.0 U	9.37	94	80-110	
Chloroethane	10.0	1.0 U	6.84	68	21-165	
Chloroform	10.0	1.0 U	9.03	90	76-118	
Chloromethane	10.0	1.0 U	7.92	79	33-132	
cis-1,2-Dichloroethene	10.0	1.0 U	9.38	94	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	8.26	83	51-110	
Hexachlorobutadiene	10.0	1.0 U	8.51	85	27-132	
Dibromomethane	10.0	1.0 U	9.68	97	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-5 MS Client ID: MSA-MW15D-041812 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	1.0 U	9.64	96	67-120	
Dichlorodifluoromethane	10.0	1.0 U	7.19	72	17-128	
Ethylbenzene	10.0	1.0 U	9.51	95	75-116	
1,2-Dibromoethane	10.0	1.0 U	9.96	100	74-113	
Diisopropyl ether	10.0	10 U	8.79 J	88	73-118	
Naphthalene	10.0	1.0 U	9.96	100	15-158	
m-Xylene & p-Xylene	20.0	2.0 U	19.0	95	75-117	
n-Butylbenzene	10.0	1.0 U	9.11	91	56-127	
Isopropylbenzene	10.0	1.0 U	9.45	95	68-116	
n-Propylbenzene	10.0	1.0 U	9.58	96	64-124	
2-Butanone	20.0	10 U	19.4	97	54-129	
4-Methyl-2-pentanone	20.0	10 U	20.9	105	56-131	
sec-Butylbenzene	10.0	1.0 U	9.33	93	60-119	
Methyl tert-butyl ether	10.0	5.0 U	9.03	90	46-144	
Methylene Chloride	10.0	1.0 U	8.65	87	63-128	
o-Xylene	10.0	1.0 U	9.39	94	76-116	
Styrene	10.0	1.0 U	9.60	96	71-117	
tert-Butylbenzene	10.0	1.0 U	9.33	93	61-119	
Tetrachloroethene	10.0	1.0 U	10.0	100	70-117	
Toluene	10.0	1.0 U	9.36	94	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	9.18	92	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	8.16	82	46-116	
Trichloroethene	10.0	1.0 U	9.41	94	66-120	
Trichlorofluoromethane	10.0	1.0 U	8.71	87	46-157	
Vinyl acetate	10.0	2.0 U	8.93	89	43-157	
Vinyl chloride	10.0	1.0 U	9.08	91	49-130	
tert-Butyl alcohol	200	50 U	217	109	70-130	
Xylenes, Total	30.0	2.0 U	28.4	95	76-116	
Dibromochloromethane	10.0	1.0 U	8.56	86	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-5 MSD Client ID: MSA-MW15D-041812 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.67	97	1	30	64-118	
1,1,1-Trichloroethane	10.0	9.09	91	4	30	68-121	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	5	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.92	99	16	30	70-152	
1,1-Dichloroethane	10.0	9.28	93	0	30	79-116	
1,1-Dichloroethene	10.0	9.69	97	3	30	74-135	
1,1-Dichloropropene	10.0	9.22	92	4	30	80-114	
1,2,3-Trichlorobenzene	10.0	8.21	82	18	30	45-129	
1,2,3-Trichloropropane	10.0	9.80	98	1	30	67-132	
1,2,3-Trimethylbenzene	10.0	9.03	90	4	30	70-130	
1,2,4-Trichlorobenzene	10.0	7.84	78	18	30	38-138	
1,2,4-Trimethylbenzene	10.0	9.00	90	4	30	67-124	
1,2-Dibromo-3-Chloropropane	10.0	9.69	97	2	30	32-139	
1,2-Dichlorobenzene	10.0	8.74	87	5	30	75-111	
1,2-Dichloroethane	10.0	9.04	90	4	30	68-129	
1,2-Dichloropropane	10.0	9.25	93	5	30	78-115	
1,3-Dichlorobenzene	10.0	8.99	90	2	30	73-110	
1,3-Dichloropropane	10.0	9.43	94	0	30	74-118	
1,4-Dichlorobenzene	10.0	8.88	89	1	30	75-110	
2,2-Dichloropropane	10.0	8.87	89	4	30	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
2-Chlorotoluene	10.0	9.37	94	4	30	69-117	
2-Hexanone	20.0	20.5	103	4	30	47-139	
Bromobenzene	10.0	9.57	96	2	30	71-116	
Bromochloromethane	10.0	8.92	89	4	30	73-121	
4-Chlorotoluene	10.0	9.06	91	1	30	71-116	
p-Isopropyltoluene	10.0	8.93	89	7	30	64-122	
Acetone	20.0	13.9	70	24	30	33-145	
Benzene	10.0	9.16	92	2	30	72-121	
Bromoform	10.0	8.51	85	0	30	32-128	
Bromomethane	10.0	5.19	52	16	30	10-186	
Carbon disulfide	10.0	8.03	80	9	30	57-147	
Carbon tetrachloride	10.0	9.13	91	6	30	59-129	
Chlorobenzene	10.0	9.23	92	2	30	80-110	
Chloroethane	10.0	6.73	67	2	30	21-165	
Chloroform	10.0	8.90	89	1	30	76-118	
Chloromethane	10.0	8.81	88	11	30	33-132	
cis-1,2-Dichloroethene	10.0	9.27	93	1	30	70-120	
cis-1,3-Dichloropropene	10.0	7.99	80	3	30	51-110	
Hexachlorobutadiene	10.0	6.53	65	26	30	27-132	
Dibromomethane	10.0	9.52	95	2	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-5 MSD Client ID: MSA-MW15D-041812 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	10.0	9.34	93	3	30	67-120	
Dichlorodifluoromethane	10.0	5.82	58	21	30	17-128	
Ethylbenzene	10.0	9.29	93	2	30	75-116	
1,2-Dibromoethane	10.0	9.55	96	4	30	74-113	
Diisopropyl ether	10.0	8.71 J	87	1	30	73-118	
Naphthalene	10.0	8.36	84	17	30	15-158	
m-Xylene & p-Xylene	20.0	18.3	92	4	30	75-117	
n-Butylbenzene	10.0	8.35	84	9	30	56-127	
Isopropylbenzene	10.0	9.07	91	4	30	68-116	
n-Propylbenzene	10.0	9.61	96	0	30	64-124	
2-Butanone	20.0	17.6	88	10	30	54-129	
4-Methyl-2-pentanone	20.0	20.2	101	3	30	56-131	
sec-Butylbenzene	10.0	8.71	87	7	30	60-119	
Methyl tert-butyl ether	10.0	8.88	89	2	30	46-144	
Methylene Chloride	10.0	8.38	84	3	30	63-128	
o-Xylene	10.0	9.08	91	3	30	76-116	
Styrene	10.0	9.26	93	4	30	71-117	
tert-Butylbenzene	10.0	9.04	90	3	30	61-119	
Tetrachloroethene	10.0	9.57	96	4	30	70-117	
Toluene	10.0	9.29	93	1	30	78-114	
trans-1,2-Dichloroethene	10.0	8.99	90	2	30	80-119	
trans-1,3-Dichloropropene	10.0	8.50	85	4	30	46-116	
Trichloroethene	10.0	9.19	92	2	30	66-120	
Trichlorofluoromethane	10.0	8.33	83	4	30	46-157	
Vinyl acetate	10.0	9.09	91	2	30	43-157	
Vinyl chloride	10.0	8.71	87	4	30	49-130	
tert-Butyl alcohol	200	159	79	31	30	70-130	F
Xylenes, Total	30.0	27.4	91	4	30	76-116	
Dibromochloromethane	10.0	8.69	87	2	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5009.D

Lab ID: 240-10494-C-3 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	667	67 U	580	87	64-118	
1,1,1-Trichloroethane	667	67 U	633	95	68-121	
1,1,2,2-Tetrachloroethane	667	67 U	575	86	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	667	67 U	807	121	70-152	
1,1-Dichloroethane	667	67 U	589	88	79-116	
1,1-Dichloroethene	667	17 J	680	99	74-135	
1,1-Dichloropropene	667	67 U	584	88	80-114	
1,2,3-Trichlorobenzene	667	67 U	525	79	45-129	
1,2,3-Trichloropropane	667	67 U	637	96	67-132	
1,2,3-Trimethylbenzene	667	330 U	556	83	70-130	
1,2,4-Trichlorobenzene	667	67 U	468	70	38-138	
1,2,4-Trimethylbenzene	667	67 U	531	80	67-124	
1,2-Dibromo-3-Chloropropane	667	130 U	503	76	32-139	
1,2-Dichlorobenzene	667	67 U	576	86	75-111	
1,2-Dichloroethane	667	67 U	713	107	68-129	
1,2-Dichloropropane	667	67 U	601	90	78-115	
1,3-Dichlorobenzene	667	67 U	569	85	73-110	
1,3-Dichloropropane	667	67 U	609	91	74-118	
1,4-Dichlorobenzene	667	67 U	556	83	75-110	
2,2-Dichloropropane	667	67 U	529	79	38-127	
2-Chloroethyl vinyl ether	667	670 U	96.7 J	15	10-150	
2-Chlorotoluene	667	67 U	566	85	69-117	
2-Hexanone	1330	670 U	980	74	47-139	
Bromobenzene	667	67 U	611	92	71-116	
Bromochloromethane	667	67 U	673	101	73-121	
4-Chlorotoluene	667	67 U	589	88	71-116	
p-Isopropyltoluene	667	67 U	524	79	64-122	
Acetone	1330	670 U	1210	91	33-145	
Benzene	667	23 J	615	89	72-121	
Bromoform	667	67 U	447	67	32-128	
Bromomethane	667	67 U	587	88	10-186	
Carbon disulfide	667	67 U	505	76	57-147	
Carbon tetrachloride	667	67 U	615	92	59-129	
Chlorobenzene	667	250	873	93	80-110	
Chloroethane	667	67 U	547	82	21-165	
Chloroform	667	67 U	638	96	76-118	
Chloromethane	667	67 U	574	86	33-132	
cis-1,2-Dichloroethene	667	1700	2320	91	70-120	
cis-1,3-Dichloropropene	667	67 U	545	82	51-110	
Hexachlorobutadiene	667	67 U	367	55	27-132	
Dibromomethane	667	67 U	720	108	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5009.D

Lab ID: 240-10494-C-3 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	667	67 U	623	93	67-120	
Dichlorodifluoromethane	667	67 U	611	92	17-128	
Ethylbenzene	667	67 U	595	89	75-116	
1,2-Dibromoethane	667	67 U	638	96	74-113	
Diisopropyl ether	667	670 U	587 J	88	73-118	
Naphthalene	667	67 U	479	72	15-158	
m-Xylene & p-Xylene	1330	130 U	1190	90	75-117	
n-Butylbenzene	667	67 U	444	67	56-127	
Isopropylbenzene	667	67 U	559	84	68-116	
n-Propylbenzene	667	67 U	547	82	64-124	
2-Butanone	1330	670 U	1040	78	54-129	
4-Methyl-2-pentanone	1330	670 U	1090	82	56-131	
sec-Butylbenzene	667	67 U	493	74	60-119	
Methyl tert-butyl ether	667	330 U	583	88	46-144	
Methylene Chloride	667	67 U	606	91	63-128	
o-Xylene	667	67 U	587	88	76-116	
Styrene	667	67 U	580	87	71-117	
tert-Butylbenzene	667	67 U	521	78	61-119	
Tetrachloroethene	667	67 U	680	102	70-117	
Toluene	667	12 J	612	90	78-114	
trans-1,2-Dichloroethene	667	25 J	656	95	80-119	
trans-1,3-Dichloropropene	667	67 U	517	78	46-116	
Trichloroethene	667	510	1200	103	66-120	
Trichlorofluoromethane	667	67 U	740	111	46-157	
Vinyl acetate	667	130 U	479	72	43-157	
Vinyl chloride	667	920	1460	81	49-130	
tert-Butyl alcohol	13300	3300 U	8930	67	70-130	F
Xylenes, Total	2000	130 U	1780	89	76-116	
Dibromochloromethane	667	67 U	516	77	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5010.D

Lab ID: 240-10494-C-3 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	667	644	97	10	30	64-118	
1,1,1-Trichloroethane	667	680	102	7	30	68-121	
1,1,2,2-Tetrachloroethane	667	611	92	6	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	667	733	110	10	30	70-152	
1,1-Dichloroethane	667	625	94	6	30	79-116	
1,1-Dichloroethene	667	707	103	4	30	74-135	
1,1-Dichloropropene	667	603	90	3	30	80-114	
1,2,3-Trichlorobenzene	667	610	92	15	30	45-129	
1,2,3-Trichloropropane	667	657	99	3	30	67-132	
1,2,3-Trimethylbenzene	667	586	88	5	30	70-130	
1,2,4-Trichlorobenzene	667	525	79	11	30	38-138	
1,2,4-Trimethylbenzene	667	558	84	5	30	67-124	
1,2-Dibromo-3-Chloropropane	667	562	84	11	30	32-139	
1,2-Dichlorobenzene	667	620	93	7	30	75-111	
1,2-Dichloroethane	667	760	114	6	30	68-129	
1,2-Dichloropropane	667	654	98	8	30	78-115	
1,3-Dichlorobenzene	667	603	91	6	30	73-110	
1,3-Dichloropropane	667	644	97	6	30	74-118	
1,4-Dichlorobenzene	667	591	89	6	30	75-110	
2,2-Dichloropropane	667	565	85	7	30	38-127	
2-Chloroethyl vinyl ether	667	98.7 J	15	2	30	10-150	
2-Chlorotoluene	667	595	89	5	30	69-117	
2-Hexanone	1330	1040	78	6	30	47-139	
Bromobenzene	667	645	97	5	30	71-116	
Bromochloromethane	667	740	111	9	30	73-121	
4-Chlorotoluene	667	612	92	4	30	71-116	
p-Isopropyltoluene	667	543	82	4	30	64-122	
Acetone	1330	1360	102	12	30	33-145	
Benzene	667	667	97	8	30	72-121	
Bromoform	667	487	73	9	30	32-128	
Bromomethane	667	733	110	22	30	10-186	
Carbon disulfide	667	537	81	6	30	57-147	
Carbon tetrachloride	667	635	95	3	30	59-129	
Chlorobenzene	667	920	100	5	30	80-110	
Chloroethane	667	611	92	11	30	21-165	
Chloroform	667	687	103	7	30	76-118	
Chloromethane	667	603	91	5	30	33-132	
cis-1,2-Dichloroethene	667	2470	113	6	30	70-120	
cis-1,3-Dichloropropene	667	605	91	11	30	51-110	
Hexachlorobutadiene	667	403	60	9	30	27-132	
Dibromomethane	667	773	116	7	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5010.D

Lab ID: 240-10494-C-3 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	667	693	104	11	30	67-120	
Dichlorodifluoromethane	667	552	83	10	30	17-128	
Ethylbenzene	667	631	95	6	30	75-116	
1,2-Dibromoethane	667	680	102	6	30	74-113	
Diisopropyl ether	667	637 J	96	8	30	73-118	
Naphthalene	667	555	83	15	30	15-158	
m-Xylene & p-Xylene	1330	1250	94	5	30	75-117	
n-Butylbenzene	667	469	70	5	30	56-127	
Isopropylbenzene	667	589	88	5	30	68-116	
n-Propylbenzene	667	563	85	3	30	64-124	
2-Butanone	1330	1130	85	8	30	54-129	
4-Methyl-2-pentanone	1330	1170	88	8	30	56-131	
sec-Butylbenzene	667	505	76	2	30	60-119	
Methyl tert-butyl ether	667	639	96	9	30	46-144	
Methylene Chloride	667	654	98	8	30	63-128	
o-Xylene	667	623	93	6	30	76-116	
Styrene	667	615	92	6	30	71-117	
tert-Butylbenzene	667	512	77	2	30	61-119	
Tetrachloroethene	667	707	106	4	30	70-117	
Toluene	667	647	95	6	30	78-114	
trans-1,2-Dichloroethene	667	687	99	5	30	80-119	
trans-1,3-Dichloropropene	667	573	86	10	30	46-116	
Trichloroethene	667	1260	112	5	30	66-120	
Trichlorofluoromethane	667	740	111	0	30	46-157	
Vinyl acetate	667	522	78	9	30	43-157	
Vinyl chloride	667	1520	90	4	30	49-130	
tert-Butyl alcohol	13300	10700	80	18	30	70-130	
Xylenes, Total	2000	1870	94	5	30	76-116	
Dibromochloromethane	667	556	83	7	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: STD8260 240-39613/4 Date Analyzed: 04/09/2012 11:26

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX0992.D Heated Purge: (Y/N) N

Calibration ID: 7930

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2023865	5.13	1264122	7.80	691088	10.05
UPPER LIMIT		4047730	5.63	2528244	8.30	1382176	10.55
LOWER LIMIT		1011933	4.63	632061	7.30	345544	9.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-39613/14		2014325	5.13	1243566	7.80	646887	10.04
CCVIS 240-41857/2		1657236	5.13	1149455	7.80	631644	10.05

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: CCVIS 240-41857/2 Date Analyzed: 04/27/2012 09:48

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): UXX4986.D Heated Purge: (Y/N) N

Calibration ID: 7932

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1657236	5.13	1149455	7.80	631644	10.05
UPPER LIMIT		3314472	5.63	2298910	8.30	1263288	10.55
LOWER LIMIT		828618	4.63	574728	7.30	315822	9.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-41857/3		1701441	5.13	1135876	7.80	553520	10.05
LCS 240-41857/4		1735205	5.12	1189359	7.80	645165	10.04
MB 240-41857/6		1689303	5.13	1120643	7.80	529855	10.05
240-10350-4	MSA-MW15I-041812	1579024	5.13	1076459	7.80	522462	10.04
240-10350-2	MSA-MW15S-041812	1506946	5.13	1027479	7.80	510120	10.04
240-10350-3	MSA-MW38S-041812	1526919	5.13	1031369	7.80	501952	10.05
240-10350-1	TB-041812	1493954	5.13	1034925	7.80	501868	10.04
240-10494-C-3 MS		1597014	5.13	1083469	7.80	602393	10.05
240-10494-C-3 MSD		1594815	5.13	1100398	7.80	619776	10.04

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: STD8260 240-42092/4 Date Analyzed: 04/29/2012 16:26

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5241.D Heated Purge: (Y/N) N

Calibration ID: 8426

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1530000	5.70	1036987	8.39	499405	10.64
UPPER LIMIT		3060000	6.20	2073974	8.89	998810	11.14
LOWER LIMIT		765000	5.20	518494	7.89	249703	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42092/14		1382789	5.70	929711	8.39	462842	10.64
CCVIS 240-42171/2		1827438	5.70	1228317	8.39	614323	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII

GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: CCVIS 240-42171/2 Date Analyzed: 04/30/2012 11:50

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5270.D Heated Purge: (Y/N) N

Calibration ID: 8428

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1827438	5.70	1228317	8.39	614323	10.64
UPPER LIMIT		3654876	6.20	2456634	8.89	1228646	11.14
LOWER LIMIT		913719	5.20	614159	7.89	307162	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42171/3		1675303	5.70	1143405	8.39	543922	10.64
LCS 240-42171/4		1858112	5.70	1240826	8.39	615173	10.64
MB 240-42171/5		1636782	5.70	1107392	8.39	536650	10.64
240-10350-5	MSA-MW15D-041812	1799212	5.70	1205876	8.39	575475	10.64
240-10350-5 MS	MSA-MW15D-041812 MS	1710874	5.70	1135916	8.39	559548	10.64
240-10350-5 MSD	MSA-MW15D-041812 MSD	1786806	5.70	1151558	8.39	541302	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: 20420001.D DFTPP Injection Date: 04/20/2012

Instrument ID: A4HP7 DFTPP Injection Time: 11:18

Analysis Batch No.: 40988

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	61.3	
68	Less than 2.0% of mass 69	0.1	(0.2)1
69	Mass 69 relative abundance	46.9	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	51.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.4	
275	10.0- 30.0% of mass 198	21.6	
365	Greater than 0.75% of mass 198	1.9	
441	Present, but less than mass 443	7.2	
442	40.0 - 110.0% of mass 198	49.0	
443	15.0 - 24.0% of mass 442	9.7	(19.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-40988/2	20420002.D	04/20/2012	11:37
	STD4 240-40988/3	20420003.D	04/20/2012	11:56
	STD3 240-40988/4	20420004.D	04/20/2012	12:15
	STD2 240-40988/5	20420005.D	04/20/2012	12:34
	STD1 240-40988/6	20420006.D	04/20/2012	12:53
	STD9 240-40988/7	20420007.D	04/20/2012	13:12
	STD8 240-40988/8	20420008.D	04/20/2012	13:31
	STD7 240-40988/9	20420009.D	04/20/2012	13:50
	STD6 240-40988/10	20420010.D	04/20/2012	14:10
	ICV 240-40988/11	20420011.D	04/20/2012	14:29
	ICV 240-40988/20	20420020.D	04/20/2012	17:20

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 40988

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/20/2012 11:37 Calibration End Date: 04/20/2012 14:10 Calibration ID: 8188

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40988/6	20420006.D
Level 2	STD2 240-40988/5	20420005.D
Level 3	STD3 240-40988/4	20420004.D
Level 4	STD4 240-40988/3	20420003.D
Level 5	STD5 240-40988/2	20420002.D
Level 6	STD6 240-40988/10	20420010.D
Level 7	STD7 240-40988/9	20420009.D
Level 8	STD8 240-40988/8	20420008.D
Level 9	STD9 240-40988/7	20420007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4580	0.5213 0.4435	0.4975 0.4767	0.4696 0.4763	0.4635	Ave		0.4758				5.1		15.0			
N-Nitrosodimethylamine	0.7762	0.7096 0.7495	0.8297 0.7768	0.7995 0.7542	0.7512	Ave		0.7683				4.7		15.0			
Pyridine	1.2959	1.0333 1.3226	1.1579 1.4062	1.1705 1.3748	1.2428	Ave		1.2505				10.0		15.0			
Ethyl methacrylate	1.0953	1.0002 1.0690	1.1995 1.1449	1.1354 1.1106	1.0666	Ave		1.1027				5.4		15.0			
Benzaldehyde	1.4365 0.7968	1.2617 +++++	1.2404 +++++	1.1680 +++++	0.9978	Ave		1.1502				19.0	*	15.0			
3-Chloropropionitrile	0.9723	0.9387 0.9321	1.0355 0.9983	0.9809 0.9606	0.9272	Ave		0.9682				3.8		15.0			
Malononitrile	1.4758	1.4899 1.2535	1.6039 1.1422	1.5609 0.9814	1.5566	Qua	-0.153	1.7553	-0.031						0.9990		0.9900
Phenol	1.7818	1.6123 1.7753	1.6862 1.9381	1.7203 1.8531	1.6871	Ave		1.7568				5.9		15.0			
Aniline	2.1342	1.7597 2.2964	2.0070 2.3514	2.0167 2.2299	2.0154	Ave		2.1013				9.1		15.0			
Bis(2-chloroethyl)ether	1.4736	1.4167 1.3370	1.4991 1.5779	1.4155 1.5731	1.3915	Ave		1.4606				5.9		15.0			
2-Chlorophenol	1.4938	1.3643 1.4535	1.4947 1.6574	1.4653 1.5517	1.4240	Ave		1.4881				5.9		15.0			
1,3-Dichlorobenzene	1.5578	1.5091 1.5419	1.5822 1.6611	1.5794 1.6321	1.4970	Ave		1.5701				3.6		15.0			
1,4-Dichlorobenzene	1.6212	1.5221 1.5745	1.6466 1.7497	1.5967 1.6724	1.5462	Ave		1.6162				4.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-40988/11 Calibration Date: 04/20/2012 14:29

Instrument ID: A4HP7 Calib Start Date: 04/20/2012 11:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/20/2012 14:10

Lab File ID: 20420011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4758	0.4703		9.88	10.0	-1.2	50.0
N-Nitrosodimethylamine	Ave	0.7683	0.7632		9.93	10.0	-0.7	50.0
Pyridine	Ave	1.250	1.328		10.6	10.0	6.2	50.0
Ethyl methacrylate	Ave	1.103	1.088		9.87	10.0	-1.3	50.0
3-Chloropropionitrile	Ave	0.9682	0.9462		9.77	10.0	-2.3	50.0
Malononitrile	Qua		1.426		9.94	10.0	-0.6	50.0
Benzaldehyde	Ave	1.150	0.7026		6.11	10.0	-38.9	50.0
Phenol	Ave	1.757	1.820		10.4	10.0	3.6	20.0
Aniline	Ave	2.101	2.151		10.2	10.0	2.3	50.0
Bis(2-chloroethyl)ether	Ave	1.461	1.467		10.0	10.0	0.4	50.0
2-Chlorophenol	Ave	1.488	1.508		10.1	10.0	1.3	50.0
1,3-Dichlorobenzene	Ave	1.570	1.591		10.1	10.0	1.3	50.0
1,4-Dichlorobenzene	Ave	1.616	1.669		10.3	10.0	3.3	20.0
Benzyl alcohol	Ave	0.8736	0.9081		10.4	10.0	3.9	50.0
1,2-Dichlorobenzene	Ave	1.498	1.549		10.3	10.0	3.4	50.0
2-Methylphenol	Ave	1.342	1.375		10.2	10.0	2.4	50.0
bis (2-chloroisopropyl) ether	Ave	2.252	2.262		10.0	10.0	0.5	50.0
3 & 4 Methylphenol	Ave	1.386	1.437		10.4	10.0	3.7	50.0
N-Nitrosodi-n-propylamine	Ave	1.033	1.066	0.0500	10.3	10.0	3.2	50.0
Acetophenone	Ave	2.012	2.078		10.3	10.0	3.3	50.0
Hexachloroethane	Ave	0.5865	0.5942		10.1	10.0	1.3	50.0
Nitrobenzene	Ave	0.3776	0.3780		10.0	10.0	0.1	50.0
Isophorone	Ave	0.6703	0.6832		10.2	10.0	1.9	50.0
2,4-Dimethylphenol	Ave	0.3866	0.3785		9.79	10.0	-2.1	50.0
2-Nitrophenol	Ave	0.2014	0.2043		10.1	10.0	1.4	20.0
1,3,5-Trichlorobenzene	Ave	0.3355	0.3385		10.1	10.0	0.9	50.0
Bis(2-chloroethoxy)methane	Ave	0.3928	0.3896		9.92	10.0	-0.8	50.0
Benzoic acid	Qua		0.2082		20.0	20.0	0.0	50.0
2,4-Dichlorophenol	Ave	0.2842	0.2972		10.5	10.0	4.6	20.0
1,2,4-Trichlorobenzene	Ave	0.3274	0.3340		10.2	10.0	2.0	50.0
Naphthalene	Ave	1.094	1.129		10.3	10.0	3.1	50.0
4-Chloroaniline	Ave	0.4452	0.4655		10.5	10.0	4.6	50.0
Hexachlorobutadiene	Ave	0.1704	0.1803		10.6	10.0	5.8	20.0
1,2,3-Trichlorobenzene	Ave	0.3072	0.3134		10.2	10.0	2.0	50.0
Caprolactam	Qua		0.1203		9.97	10.0	-0.3	50.0
4-Chloro-3-methylphenol	Ave	0.3278	0.3366		10.3	10.0	2.7	20.0
2-Methylnaphthalene	Ave	0.7250	0.7315		10.1	10.0	0.9	50.0
1-Methylnaphthalene	Ave	0.7008	0.6947		9.91	10.0	-0.9	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5176	0.5262		10.2	10.0	1.7	50.0
Hexachlorocyclopentadiene	Ave	0.3099	0.3262	0.0500	10.5	10.0	5.3	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: 20423001.D DFTPP Injection Date: 04/23/2012

Instrument ID: A4HP7 DFTPP Injection Time: 10:54

Analysis Batch No.: 41177

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	62.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	47.7	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	50.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	22.3	
365	Greater than 0.75% of mass 198	2.0	
441	Present, but less than mass 443	7.5	
442	40.0 - 110.0% of mass 198	50.4	
443	15.0 - 24.0% of mass 442	9.4	(18.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-41177/2	20423002.D	04/23/2012	11:10
	CCV 240-41177/3	20423003.D	04/23/2012	11:29
	MB 240-40937/18-A	20423006.D	04/23/2012	12:25
	LCS 240-40937/19-A	20423007.D	04/23/2012	12:43
MSA-MW15S-041812	240-10350-2	20423017.D	04/23/2012	15:49
MSA-MW38S-041812	240-10350-3	20423018.D	04/23/2012	16:08
MSA-MW15I-041812	240-10350-4	20423019.D	04/23/2012	16:26
MSA-MW15D-041812	240-10350-5	20423020.D	04/23/2012	16:45

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-41177/2 Calibration Date: 04/23/2012 11:10

Instrument ID: A4HP7 Calib Start Date: 04/20/2012 11:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/20/2012 14:10

Lab File ID: 20423002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4758	0.4648		9.77	10.0	-2.3	50.0
N-Nitrosodimethylamine	Ave	0.7683	0.7899		10.3	10.0	2.8	50.0
Pyridine	Ave	1.250	1.370		11.0	10.0	9.6	50.0
Ethyl methacrylate	Ave	1.103	1.124		10.2	10.0	2.0	50.0
3-Chloropropionitrile	Ave	0.9682	0.9894		10.2	10.0	2.2	50.0
Malononitrile	Qua		1.522		10.8	10.0	8.0	50.0
Benzaldehyde	Ave	1.150	0.7751		6.74	10.0	-32.6	50.0
Phenol	Ave	1.757	1.850		10.5	10.0	5.3	20.0
Aniline	Ave	2.101	2.192		10.4	10.0	4.3	50.0
Bis(2-chloroethyl)ether	Ave	1.461	1.429		9.78	10.0	-2.2	50.0
2-Chlorophenol	Ave	1.488	1.531		10.3	10.0	2.9	50.0
1,3-Dichlorobenzene	Ave	1.570	1.600		10.2	10.0	1.9	50.0
1,4-Dichlorobenzene	Ave	1.616	1.616		10.0	10.0	-0.0	50.0
Benzyl alcohol	Ave	0.8736	0.9443		10.8	10.0	8.1	50.0
1,2-Dichlorobenzene	Ave	1.498	1.522		10.2	10.0	1.6	50.0
2-Methylphenol	Ave	1.342	1.373		10.2	10.0	2.3	50.0
bis (2-chloroisopropyl) ether	Ave	2.252	2.173		9.65	10.0	-3.5	50.0
3 & 4 Methylphenol	Ave	1.386	1.445		10.4	10.0	4.2	50.0
N-Nitrosodi-n-propylamine	Ave	1.033	1.038	0.0500	10.1	10.0	0.5	50.0
Acetophenone	Ave	2.012	2.041		10.1	10.0	1.5	50.0
Hexachloroethane	Ave	0.5865	0.5866		10.0	10.0	0.0	50.0
Nitrobenzene	Ave	0.3776	0.3764		9.97	10.0	-0.3	50.0
Isophorone	Ave	0.6703	0.6864		10.2	10.0	2.4	50.0
2,4-Dimethylphenol	Ave	0.3866	0.3917		10.1	10.0	1.3	50.0
2-Nitrophenol	Ave	0.2014	0.2096		10.4	10.0	4.1	20.0
1,3,5-Trichlorobenzene	Ave	0.3355	0.3364		10.0	10.0	0.3	50.0
Bis(2-chloroethoxy)methane	Ave	0.3928	0.3912		9.96	10.0	-0.4	50.0
Benzoic acid	Qua		0.2387		22.3	20.0	11.5	50.0
2,4-Dichlorophenol	Ave	0.2842	0.3033		10.7	10.0	6.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3274	0.3309		10.1	10.0	1.1	50.0
Naphthalene	Ave	1.094	1.110		10.1	10.0	1.5	50.0
4-Chloroaniline	Ave	0.4452	0.4632		10.4	10.0	4.0	50.0
Hexachlorobutadiene	Ave	0.1704	0.1749		10.3	10.0	2.6	20.0
1,2,3-Trichlorobenzene	Ave	0.3072	0.3070		10.0	10.0	-0.0	50.0
Caprolactam	Qua		0.1205		9.98	10.0	-0.2	50.0
4-Chloro-3-methylphenol	Ave	0.3278	0.3343		10.2	10.0	2.0	20.0
2-Methylnaphthalene	Ave	0.7250	0.7155		9.87	10.0	-1.3	50.0
1-Methylnaphthalene	Ave	0.7008	0.6863		9.79	10.0	-2.1	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5176	0.5414		10.5	10.0	4.6	50.0
Hexachlorocyclopentadiene	Ave	0.3099	0.3402	0.0500	11.0	10.0	9.8	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab File ID: 20423006.D Lab Sample ID: MB 240-40937/18-A

Matrix: Water Date Extracted: 04/20/2012 08:28

Instrument ID: A4HP7 Date Analyzed: 04/23/2012 12:25

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-40937/19-A	20423007.D	04/23/2012 12:43
MSA-MW15S-041812	240-10350-2	20423017.D	04/23/2012 15:49
MSA-MW38S-041812	240-10350-3	20423018.D	04/23/2012 16:08
MSA-MW15I-041812	240-10350-4	20423019.D	04/23/2012 16:26
MSA-MW15D-041812	240-10350-5	20423020.D	04/23/2012 16:45

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-40937/18-A

Matrix: Water | Lab File ID: 20423006.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/20/2012 08:28

Sample wt/vol: 1000(mL) | Date Analyzed: 04/23/2012 12:25

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41177 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	70		28-110
367-12-4	2-Fluorophenol (Surr)	75		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	65		27-111
4165-62-2	Phenol-d5 (Surr)	75		10-110
1718-51-0	Terphenyl-d14 (Surr)	79		37-119

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MSA-MW15S-041812	240-10350-2	45	49	41	46	59	56
MSA-MW38S-041812	240-10350-3	60	60	55	56	66	63
MSA-MW15I-041812	240-10350-4	59	61	54	57	63	63
MSA-MW15D-041812	240-10350-5	62	61	56	55	57	67
	MB 240-40937/18-A	75	75	65	70	69	79
	LCS 240-40937/19-A	81	81	72	72	79	80

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20423007.D

Lab ID: LCS 240-40937/19-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	13.9	70	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: STD6 240-40988/10 Date Analyzed: 04/20/2012 14:10

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20420010.D Heated Purge: (Y/N) N

Calibration ID: 8188

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		278041	3.47	1151968	4.36	703518	5.63
UPPER LIMIT		556082	3.97	2303936	4.86	1407036	6.13
LOWER LIMIT		139021	2.97	575984	3.86	351759	5.13
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-40988/11		228587	3.47	953048	4.36	591000	5.62
ICV 240-40988/20		290215	3.47	1201426	4.36	754136	5.63
CCV 240-41177/2 CCVIS		277796	3.45	1147044	4.34	692415	5.61

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: STD6 240-40988/10 Date Analyzed: 04/20/2012 14:10

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20420010.D Heated Purge: (Y/N) N

Calibration ID: 8188

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1128751	6.71	1095128	8.68	847095	10.06
UPPER LIMIT		2257502	7.21	2190256	9.18	1694190	10.56
LOWER LIMIT		564376	6.21	547564	8.18	423548	9.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-40988/11		952061	6.71	926423	8.69	698575	10.07
ICV 240-40988/20		1277589	6.71	1252238	8.66	970914	10.04
CCV 240-41177/2 CCVIS		1097442	6.69	1099880	8.66	823276	10.01

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: CCV 240-41177/2 Date Analyzed: 04/23/2012 11:10

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20423002.D Heated Purge: (Y/N) N

Calibration ID: 8192

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		277796	3.45	1147044	4.34	692415	5.61
UPPER LIMIT		555592	3.95	2294088	4.84	1384830	6.11
LOWER LIMIT		138898	2.95	573522	3.84	346208	5.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-41177/3		190171	3.45	844208	4.34	516090	5.61
MB 240-40937/18-A		216128	3.45	927346	4.34	563742	5.60
LCS 240-40937/19-A		197045	3.45	845533	4.34	534793	5.61
240-10350-2	MSA-MW15S-041812	267333	3.45	1152251	4.34	710935	5.61
240-10350-3	MSA-MW38S-041812	285929	3.46	1181496	4.34	759545	5.61
240-10350-4	MSA-MW15I-041812	265341	3.46	1112462	4.34	699708	5.61
240-10350-5	MSA-MW15D-041812	270679	3.46	1124777	4.34	714146	5.61

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: CCV 240-41177/2 Date Analyzed: 04/23/2012 11:10

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20423002.D Heated Purge: (Y/N) N

Calibration ID: 8192

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1097442	6.69	1099880	8.66	823276	10.01
UPPER LIMIT		2194884	7.19	2199760	9.16	1646552	10.51
LOWER LIMIT		548721	6.19	549940	8.16	411638	9.51
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-41177/3		860415	6.68	849930	8.65	627541	10.01
MB 240-40937/18-A		902705	6.68	910629	8.65	691490	10.00
LCS 240-40937/19-A		860804	6.68	882067	8.65	666638	10.01
240-10350-2	MSA-MW15S-041812	1189290	6.69	1199256	8.66	943287	10.03
240-10350-3	MSA-MW38S-041812	1244633	6.69	1218027	8.65	964271	10.01
240-10350-4	MSA-MW15I-041812	1173529	6.69	1154400	8.65	904890	10.01
240-10350-5	MSA-MW15D-041812	1186769	6.69	1158719	8.65	903235	10.01

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: YPID Start Date: 04/24/2012 11:15

Analysis Batch Number: 41320 End Date: 04/24/2012 19:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/24/2012 11:15	1		RTX-VRX 0.45(mm)
CCV 240-41320/5 CCVRT		04/24/2012 12:31	1	YF042405.D	RTX-VRX 0.45(mm)
MB 240-41320/6		04/24/2012 14:30	1	YF042408.D	RTX-VRX 0.45(mm)
LCS 240-41320/7		04/24/2012 15:10	1	YF042409.D	RTX-VRX 0.45(mm)
240-10350-2	MSA-MW15S-041812	04/24/2012 15:50	1	YF042410.D	RTX-VRX 0.45(mm)
240-10350-2 MS	MSA-MW15S-041812 MS	04/24/2012 16:28	1	YF042411.D	RTX-VRX 0.45(mm)
240-10350-2 MSD	MSA-MW15S-041812 MSD	04/24/2012 17:07	1	YF042412.D	RTX-VRX 0.45(mm)
240-10350-3	MSA-MW38S-041812	04/24/2012 17:46	1	YF042413.D	RTX-VRX 0.45(mm)
ZZZZZ		04/24/2012 18:24	1		RTX-VRX 0.45(mm)
ZZZZZ		04/24/2012 19:02	1		RTX-VRX 0.45(mm)
CCV 240-41320/14		04/24/2012 19:41	1	YF042416.D	RTX-VRX 0.45(mm)

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-41320/5 Calibration Date: 04/24/2012 12:31

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042405.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	316263		844	800	5.5	15.0
C6-C12	Ave	336931	361718		859	800	7.4	15.0
Trifluorotoluene (Surr)	Ave	420494	327802		7.80	10.0	-22.0*	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-41320/14 Calibration Date: 04/24/2012 19:41

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042416.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	310149		827	800	3.4	15.0
C6-C12	Ave	336931	347612		825	800	3.2	15.0
Trifluorotoluene (Surr)	Ave	420494	315664		7.51	10.0	-24.9*	15.0

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: MB 240-41320/6

Matrix: Water Date Extracted: 04/24/2012 14:30

Lab File ID:(1) YF042408.D Lab File ID:(2)

Date Analyzed:(1) 04/24/2012 14:30 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-41320/7	04/24/2012 15:10	
MSA-MW15S-041812	240-10350-2	04/24/2012 15:50	
MSA-MW15S-041812 MS	240-10350-2 MS	04/24/2012 16:28	
MSA-MW15S-041812 MSD	240-10350-2 MSD	04/24/2012 17:07	
MSA-MW38S-041812	240-10350-3	04/24/2012 17:46	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41320/6

Matrix: Water | Lab File ID: YF042408.D

Analysis Method: 8015B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2012 14:30

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41320 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	26.5	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MSA-MW15S-041812	240-10350-2	62
MSA-MW38S-041812	240-10350-3	64
	MB 240-41320/6	63
	LCS 240-41320/7	79
MSA-MW15S-041812 MS	240-10350-2 MS	76
MSA-MW15S-041812 MSD	240-10350-2 MSD	80

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042409.D

Lab ID: LCS 240-41320/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	884	111	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042411.D

Lab ID: 240-10350-2 MS Client ID: MSA-MW15S-041812 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	62 J	931	109	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III

GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042412.D

Lab ID: 240-10350-2 MSD Client ID: MSA-MW15S-041812 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	919	107	1	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: CCV 240-41320/5 Date Analyzed: 04/24/2012 12:31

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF042405.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.75		
UPPER LIMIT				9.85		
LOWER LIMIT				9.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-41320/5 CCVRT		04/24/2012 12:31	YF042405.D	9.75		
MB 240-41320/6		04/24/2012 14:30	YF042408.D	9.75		
LCS 240-41320/7		04/24/2012 15:10	YF042409.D	9.75		
240-10350-2	MSA-MW15S-041812	04/24/2012 15:50	YF042410.D	9.75		
240-10350-2 MS	MSA-MW15S-041812 MS	04/24/2012 16:28	YF042411.D	9.76		
240-10350-2 MSD	MSA-MW15S-041812 MSD	04/24/2012 17:07	YF042412.D	9.75		
240-10350-3	MSA-MW38S-041812	04/24/2012 17:46	YF042413.D	9.75		
CCV 240-41320/14		04/24/2012 19:41	YF042416.D	9.76		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: A2HP5F Start Date: 04/13/2012 10:08

Analysis Batch Number: 40180 End Date: 04/13/2012 15:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-40180/4 IC		04/13/2012 10:08	1	P5F04134.D	
STD2 240-40180/5 IC		04/13/2012 10:38	1	P5F04135.D	
STD3 240-40180/6 IC		04/13/2012 11:08	1	P5F04136.D	
STD4 240-40180/7 IC		04/13/2012 11:38	1	P5F04137.D	
STD5 240-40180/8 IC		04/13/2012 12:08	1	P5F04138.D	
ICV 240-40180/9		04/13/2012 12:38	1	P5F04139.D	
STD1 240-40180/10 IC		04/13/2012 13:08	1		
STD2 240-40180/11 IC		04/13/2012 13:38	1		
STD3 240-40180/12 IC		04/13/2012 14:08	1		
STD4 240-40180/13 IC		04/13/2012 14:37	1		
STD5 240-40180/14 IC		04/13/2012 15:06	1		
ICV 240-40180/15		04/13/2012 15:36	1		

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	197527 183497	194334	179644	186362	Ave		188272.909				4.0		20.0			
n-Nonane	222434 217668	222225	205767	214296	Ave		216478.041				3.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICV 240-40180/9 Calibration Date: 04/13/2012 12:38

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04139.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	191992		510	500	2.0	20.0

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: A2HP5F Start Date: 04/26/2012 14:06

Analysis Batch Number: 41730 End Date: 04/26/2012 22:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-41730/4		04/26/2012 14:06	1	P5F04264.D	
ZZZZZ		04/26/2012 14:37	1		
ZZZZZ		04/26/2012 15:07	1		
ZZZZZ		04/26/2012 15:37	1		
ZZZZZ		04/26/2012 16:07	1		
240-10350-2	MSA-MW15S-041812	04/26/2012 16:36	1	P5F04269.D	
240-10350-3	MSA-MW38S-041812	04/26/2012 17:06	1	P5F04270.D	
ZZZZZ		04/26/2012 17:35	1		
ZZZZZ		04/26/2012 18:05	1		
ZZZZZ		04/26/2012 18:35	1		
ZZZZZ		04/26/2012 19:04	1		
ZZZZZ		04/26/2012 19:33	1		
ZZZZZ		04/26/2012 20:03	1		
ZZZZZ		04/26/2012 20:33	1		
ZZZZZ		04/26/2012 21:02	1		
MB 240-41524/15-A		04/26/2012 21:31	1	P5F04279.D	
LCS 240-41524/16-A		04/26/2012 22:01	1	P5F04280.D	
CCV 240-41730/21		04/26/2012 22:30	1	P5F04281.D	

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCVRT 240-41730/4 Calibration Date: 04/26/2012 14:06

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04264.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	189345		503	500	0.6	15.0
n-Nonane	Ave	216478	225212		52.0	50.0	4.0	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: CCV 240-41730/21 Calibration Date: 04/26/2012 22:30

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04281.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	203215		540	500	7.9	15.0
n-Nonane	Ave	216478	240937		55.6	50.0	11.3	15.0

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Sample No.: CCVRT 240-41730/4 Date Analyzed: 04/26/2012 14:06

Instrument ID: A2HP5F GC Column: ID: ()

Lab File ID (Standard): P5F04264.D Heated Purge: (Y/N) N

Calibration ID: 8059

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				3.79		
UPPER LIMIT				3.89		
LOWER LIMIT				3.69		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-41730/4		04/26/2012 14:06	P5F04264.D	3.79		
240-10350-2	MSA-MW15S-041812	04/26/2012 16:36	P5F04269.D	3.79		
240-10350-3	MSA-MW38S-041812	04/26/2012 17:06	P5F04270.D	3.79		
MB 240-41524/15-A		04/26/2012 21:31	P5F04279.D	3.79		
LCS 240-41524/16-A		04/26/2012 22:01	P5F04280.D	3.79		
CCV 240-41730/21		04/26/2012 22:30	P5F04281.D	3.79		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: MB 240-41524/15-A

Matrix: Water Date Extracted: 04/25/2012 10:55

Lab File ID:(1) P5F04279.D Lab File ID:(2)

Date Analyzed:(1) 04/26/2012 21:31 Date Analyzed:(2)

Instrument ID:(1) A2HP5F Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MSA-MW15S-041812	240-10350-2	04/26/2012 16:36	
MSA-MW38S-041812	240-10350-3	04/26/2012 17:06	
	LCS 240-41524/16-A	04/26/2012 22:01	

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41524/15-A

Matrix: Water Lab File ID: P5F04279.D

Analysis Method: 8015B Date Collected:

Extraction Method: 3520C Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1000(mL) Date Analyzed: 04/26/2012 21:31

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	54		10-110

FORM II

DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C91 #
MSA-MW15S-041812	240-10350-2	61
MSA-MW38S-041812	240-10350-3	66
	MB 240-41524/15-A	54
	LCS 240-41524/16-A	78

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P5F04280.D

Lab ID: LCS 240-41524/16-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	2240	89	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

TETRA TECH **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT Lockheed-MSA		JOB NUMBER SDG 240-10350-1	
SUBJECT Sample Calculations			
BASED ON		DRAWING NUMBER	
BY Ann Cognetta	CHECKED BY	APPROVED BY	DATE May 19. 2012

I. VOC; Sample MSA-MW15I-041812, Vinyl Chloride

$$\frac{27597}{1579024} * \frac{10\,ug/L}{0.2981} * 20 * = 12.1\,ug/L$$

II. SVOC; Sample MSA-MW15S-041812; 1,4-dioxane

$$\frac{10886}{267333} * \frac{4\,ng/uL}{0.4758} * \frac{2mL}{1050mL} * 1000 = 0.65\,ug/L$$

III. GRO; Sample MSA-MW15S-041812

$$\frac{18657056}{299875.299} = 62.2\,ug/L$$

IV DRO; Sample MSA-MW15S-041812

$$\frac{12782758}{188272.909} * \frac{5mL}{1030mL} * 1000 = 330.\,ug/L$$

Sample Calculation

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15I-041812 Lab Sample ID: 240-10350-4

Matrix: Water Lab File ID: UXX4994.D

Analysis Method: 8260C Date Collected: 04/18/2012 14:16

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 13:02

Soil Aliquot Vol: Dilution Factor: 20

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	20	U	20	3.2
74-87-3	Chloromethane	20	U	20	6.0
156-59-2	cis-1,2-Dichloroethene	150		20	3.4
10061-01-5	cis-1,3-Dichloropropene	20	U	20	2.8
87-68-3	Hexachlorobutadiene	20	U	20	6.0
74-95-3	Dibromomethane	20	U	20	5.6
75-27-4	Bromodichloromethane	20	U	20	3.0
75-71-8	Dichlorodifluoromethane	20	U	20	6.2
100-41-4	Ethylbenzene	20	U	20	3.4
106-93-4	1,2-Dibromoethane	20	U	20	4.8
108-20-3	Diisopropyl ether	200	U	200	30
91-20-3	Naphthalene	20	U	20	4.8
179601-23-1	m-Xylene & p-Xylene	40	U	40	4.8
104-51-8	n-Butylbenzene	20	U	20	2.4
98-82-8	Isopropylbenzene	20	U	20	2.6
103-65-1	n-Propylbenzene	20	U	20	2.8
78-93-3	2-Butanone	200	U	200	11
108-10-1	4-Methyl-2-pentanone	200	U	200	6.4
135-98-8	sec-Butylbenzene	20	U	20	2.6
1634-04-4	Methyl tert-butyl ether	100	U	100	3.4
994-05-8	Tert-amyl-methyl ether (TAME)	100	U	100	1.3
75-09-2	Methylene Chloride	20	U	20	6.6
95-47-6	o-Xylene	20	U	20	2.8
100-42-5	Styrene	20	U	20	2.2
637-92-3	Ethyl-t-butyl ether (ETBE)	100	U	100	2.2
98-06-6	tert-Butylbenzene	20	U	20	2.6
127-18-4	Tetrachloroethene	20	U	20	5.8
108-88-3	Toluene	20	U	20	2.6
156-60-5	trans-1,2-Dichloroethene	20	U	20	3.8
10061-02-6	trans-1,3-Dichloropropene	20	U	20	3.8
79-01-6	Trichloroethene	580		20	3.4
75-69-4	Trichlorofluoromethane	20	U	20	4.2
108-05-4	Vinyl acetate	40	U	40	3.8
75-01-4	Vinyl chloride	12	J	20	4.4
75-65-0	tert-Butyl alcohol	1000	U *	1000	78

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File: \\NCChrom\ChromData\A3UX10\20120427-9453.b\UXX4994.D
Lims ID: 240-10350-C-4 Client ID: MSA-MW15I-041812
Inject. Date: 27-Apr-2012 13:02:30 Dil. Factor: 20.0000
Sample Type: Client
Sample ID: 240-0009453-010
Misc. Info.: P20427A,8260LLUX10,,1904 =P20427A,8260LLUX10,,1904
Operator: 1904 Instrument ID: A3UX10
Vol. Injected: 1.0000 ALS Bottle#: 9
Lims Batch ID: 41857 Lims Sample ID: 10
Detector: MS SCAN

Method: \\NCChrom\ChromData\A3UX10\20120427-9453.b\8260_10.m
Last Update: 07-May-2012 18:31:21 Calib Date: 09-Apr-2012 14:40:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\NCChrom\ChromData\A3UX10\20120409-8883.b\UXX1001.D
Limit Group: MSV 8260DOD ICAL
Integrator: RTE ID Type: Deconvolution ID
Process Host: CORP-CTX-17

First Level Reviewer: laveyt Date: 07-May-2012 18:33:01

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.129	5.126	0.003	99	1579024	10.0	
* 2 Chlorobenzene-d5	117	7.803	7.800	0.003	85	1076459	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.039	10.048	-0.009	95	522462	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.549	4.546	0.003	59	364035	12.6	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.833	4.830	0.003	0	468187	12.8	
$ 7 Toluene-d8 (Surr)	98	6.489	6.487	0.002	93	1410636	11.5	
$ 131 4-Bromofluorobenzene (Surr)	95	8.915	8.912	0.003	96	450162	9.66	
12 Dichlorodifluoromethane	85		1.492					
13 Chloromethane	50		1.622					
14 Vinyl chloride	62	1.721	1.717	0.004	80	27597	0.5963	
15 Bromomethane	94		2.001					
16 Chloroethane	64		2.096					
18 Trichlorofluoromethane	101		2.309					
21 1,1-Dichloroethene	96		2.723					
22 Acetone	43		2.735					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.746					
26 Carbon disulfide	76		2.924					
30 Methylene Chloride	84		3.113					
31 2-Methyl-2-propanol	59		3.172					
34 Methyl tert-butyl ether	73		3.350					
33 trans-1,2-Dichloroethene	96	3.354	3.350	0.004	55	4889	0.1323	
36 1,1-Dichloroethane	63		3.681					
37 Vinyl acetate	86		3.717					
38 Isopropyl ether	87		3.741					
40 Tert-butyl ethyl ether	59		4.037					
41 2-Butanone (MEK)	43		4.155					
42 cis-1,2-Dichloroethene	96	4.158	4.166	-0.008	83	299161	7.43	
43 2,2-Dichloropropane	77		4.166					
47 Chlorobromomethane	128		4.356					
49 Chloroform	83		4.415					

Sample Calculation

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-39613/7	UXX0995.D
Level 2	STD8260 240-39613/6	UXX0994.D
Level 3	STD8260 240-39613/5	UXX0993.D
Level 4	STD8260 240-39613/4	UXX0992.D
Level 5	STD8260 240-39613/3	UXX0991.D
Level 6	STD8260 240-39613/2	UXX0990.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1922 0.1920	0.1832	0.1942	0.1712	0.1791	Ave		0.1853			0.1000	4.9		15.0			
Chloromethane	0.2986 0.2893	0.3127	0.2900	0.2885	0.3062	Ave		0.2976			0.1000	3.4		15.0			
Vinyl chloride	0.2876 0.2937	0.2940	0.2946	0.2867	0.3020	Ave		0.2931			0.1000	1.9		15.0			
Bromomethane	0.1058 0.0872	0.1244	0.0954	0.1061	0.1061	Ave		0.1041			0.0500	12.0		15.0			
Chloroethane	0.1423 0.1435	0.1560	0.1496	0.1525	0.1578	Ave		0.1503				4.2		15.0			
Trichlorofluoromethane	0.2195 0.2316	0.2381	0.2442	0.2249	0.2394	Ave		0.2330			0.1000	4.0		15.0			
Acrolein	0.0270 0.0353	0.0353	0.0335	0.0353	0.0387	Ave		0.0342				11.0		15.0			
1,1-Dichloroethene	0.2065 0.2066	0.2039	0.1970	0.1975	0.2117	Ave		0.2039			0.1000	2.8		15.0			
Acetone	0.0847 0.0537	0.0729	0.0526	0.0546	0.0602	Lin1	0.0298	0.0547			0.0500				0.9960		0.9950
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1545 0.1565	0.1488	0.1580	0.1391	0.1516	Ave		0.1514			0.0500	4.6		15.0			
Iodomethane	0.2922 0.3012	0.3044	0.2997	0.3038	0.3300	Ave		0.3052				4.2		15.0			
Carbon disulfide	0.7012 0.7556	0.6734	0.6914	0.7088	0.7810	Ave		0.7186			0.1000	5.7		15.0			
Acetonitrile	0.0197 0.0153	0.0213	0.0162	0.0166	0.0168	Ave		0.0176				13.0		15.0			
Methyl acetate	0.1785 0.1672	0.1799	0.1553	0.1657	0.1792	Ave		0.1710			0.1000	5.8		15.0			
Methylene Chloride	0.4964 0.2337	0.3611	0.2578	0.2506	0.2588	Lin1	0.1287	0.2373			0.1000				0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Matrix: Water Lab File ID: 20423017.D

Analysis Method: 8270C Date Collected: 04/18/2012 11:40

Extract. Method: 3520C Date Extracted: 04/20/2012 08:28

Sample wt/vol: 1050(mL) Date Analyzed: 04/23/2012 15:49

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 41177 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.65	J	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	46		28-110
367-12-4	2-Fluorophenol (Surr)	45		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	59		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	41		27-111
4165-62-2	Phenol-d5 (Surr)	49		10-110
1718-51-0	Terphenyl-d14 (Surr)	56		37-119

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4HP7\20120423-9291.b\20423017.D		
Lims ID:	240-10350-K-2-A	Client ID:	MSA-MW15S-041812
Inject. Date:	23-Apr-2012 15:49:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009291-017		
Misc. Info.:	240-10350-K-2-A		
Operator:	001710	Instrument ID:	A4HP7
Vol. Injected:	1.0000	ALS Bottle#:	17
Lims Batch ID:	41177	Lims Sample ID:	17
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4HP7\20120423-9291.b\8270_hp7.m		
Last Update:	24-Apr-2012 08:21:24	Calib Date:	20-Apr-2012 17:01:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4HP7\20120420-9232.b\20420019.D		
Limit Group:	MSS 8270C ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-18		
First Level Reviewer: hulat		Date:	24-Apr-2012 06:57:53

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	3.451	3.451	0.0	96	267333	4.00	
* 2 Naphthalene-d8	136	4.344	4.339	0.005	99	1152251	4.00	
* 3 Acenaphthene-d10	164	5.607	5.607	0.0	93	710935	4.00	
* 4 Phenanthrene-d10	188	6.687	6.682	0.005	98	1189290	4.00	
* 5 Chrysene-d12	240	8.655	8.650	0.005	98	1199256	4.00	
* 6 Perylene-d12	264	10.025	10.014	0.011	92	943287	4.00	
$ 7 2-Fluorophenol	112	2.590	2.585	0.005	94	578886	6.76	
$ 8 Phenol-d5	99	3.162	3.162	0.0	92	821198	7.28	
$ 9 Nitrobenzene-d5	82	3.825	3.826	-0.001	96	479343	4.08	
$ 10 2-Fluorobiphenyl (Surr)	172	5.098	5.098	0.0	100	1087738	4.63	
$ 11 2,4,6-Tribromophenol	330	6.174	6.174	0.0	78	175801	8.87	
$ 12 Terphenyl-d14	244	7.826	7.826	0.0	99	1342132	5.55	
24 1,4-Dioxane	88	1.670	1.659	0.011	64	10886	0.3423	

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Sample Calculation

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 40988

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/20/2012 11:37 Calibration End Date: 04/20/2012 14:10 Calibration ID: 8188

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40988/6	20420006.D
Level 2	STD2 240-40988/5	20420005.D
Level 3	STD3 240-40988/4	20420004.D
Level 4	STD4 240-40988/3	20420003.D
Level 5	STD5 240-40988/2	20420002.D
Level 6	STD6 240-40988/10	20420010.D
Level 7	STD7 240-40988/9	20420009.D
Level 8	STD8 240-40988/8	20420008.D
Level 9	STD9 240-40988/7	20420007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4580	0.5213 0.4435	0.4975 0.4767	0.4696 0.4763	0.4635	Ave		0.4758				5.1		15.0			
N-Nitrosodimethylamine	0.7762	0.7096 0.7495	0.8297 0.7768	0.7995 0.7542	0.7512	Ave		0.7683				4.7		15.0			
Pyridine	1.2959	1.0333 1.3226	1.1579 1.4062	1.1705 1.3748	1.2428	Ave		1.2505				10.0		15.0			
Ethyl methacrylate	1.0953	1.0002 1.0690	1.1995 1.1449	1.1354 1.1106	1.0666	Ave		1.1027				5.4		15.0			
Benzaldehyde	1.4365 0.7968	1.2617 +++++	1.2404 +++++	1.1680 +++++	0.9978	Ave		1.1502				19.0	*	15.0			
3-Chloropropionitrile	0.9723	0.9387 0.9321	1.0355 0.9983	0.9809 0.9606	0.9272	Ave		0.9682				3.8		15.0			
Malononitrile	1.4758	1.4899 1.2535	1.6039 1.1422	1.5609 0.9814	1.5566	Qua	-0.153	1.7553	-0.031						0.9990		0.9900
Phenol	1.7818	1.6123 1.7753	1.6862 1.9381	1.7203 1.8531	1.6871	Ave		1.7568				5.9		15.0			
Aniline	2.1342	1.7597 2.2964	2.0070 2.3514	2.0167 2.2299	2.0154	Ave		2.1013				9.1		15.0			
Bis(2-chloroethyl)ether	1.4736	1.4167 1.3370	1.4991 1.5779	1.4155 1.5731	1.3915	Ave		1.4606				5.9		15.0			
2-Chlorophenol	1.4938	1.3643 1.4535	1.4947 1.6574	1.4653 1.5517	1.4240	Ave		1.4881				5.9		15.0			
1,3-Dichlorobenzene	1.5578	1.5091 1.5419	1.5822 1.6611	1.5794 1.6321	1.4970	Ave		1.5701				3.6		15.0			
1,4-Dichlorobenzene	1.6212	1.5221 1.5745	1.6466 1.7497	1.5967 1.6724	1.5462	Ave		1.6162				4.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 | Lab Sample ID: 240-10350-2

Matrix: Water | Lab File ID: YF042410.D

Analysis Method: 8015B | Date Collected: 04/18/2012 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2012 15:50

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41320 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	62	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	62		10-150

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File:	\\Ncchrom\ChromData\YPID\20120424-9330.b\YF042410.D		
Lims ID:	240-10350-B-2	Client ID:	MSA-MW15S-041812
Inject. Date:	24-Apr-2012 15:50:01	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009330-008		
Misc. Info.:			
Operator:	4275	Instrument ID:	YPID
Vol. Injected:	1.0000	ALS Bottle#:	1
Lims Batch ID:	41320	Lims Sample ID:	8
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\YPID\20120424-9330.b\Y80158021.m		
Last Update:	25-Apr-2012 09:26:30	Calib Date:	21-Feb-2012 16:37:39
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\YPID\20120221-7767.b\YF022110.D		
Limit Group:	GCV 8015B GRO ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-15		

First Level Reviewer: bolgrind Date: 25-Apr-2012 09:24:21

Compound	Det	RT	ADJ RT	DLT RT	Response	On-Col Amt ug/l	Flags
S 17 Xylenes, Total	1		0.000				7
6 2-Methylpentane	2	5.002	5.092	-0.090	310400	0	
12 Methyl tert-butyl ether	1		5.167				1
3 Benzene	1		8.053				1
* 15 Fluorobenzene	1	0.000	8.477	-8.477	0	0	
$ 16 Trifluorotoluene (Surr)	2	9.747	9.753	-0.006	2617537	6.22	
$ 18 a,a,a-Trifluorotoluene (pid)	1		9.772				1
A 5 C6-C10	2	11.797	4.817 - 18.778		18657056	62.2	
8 Toluene	1		12.016				1
A 1 C6-C12	2	13.407	4.917 - 21.898		33487810	99.4	
A 11 GRO	2	13.614	5.048 - 22.179		40117542	0	
13 Ethylbenzene	1		15.080				1
2 m-Xylene & p-Xylene	1		15.449				1
4 o-Xylene	1		16.098				1
10 1,3,5-Trimethylbenzene	1		18.018				1
7 1,2,4-Trimethylbenzene	1		18.613				
14 Dodecane	2	21.761	21.762	-0.001	135853	0	
9 Naphthalene							

QC Flag Legend

Processing Flags
1 - Missing Peaks
7 - Failed Limit of Detection

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Sample Calculation

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10350-1

SDG No.:

Client Sample ID: MSA-MW15S-041812 | Lab Sample ID: 240-10350-2

Matrix: Water | Lab File ID: P5F04269.D

Analysis Method: 8015B | Date Collected: 04/18/2012 11:40

Extraction Method: 3520C | Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1030(mL) | Date Analyzed: 04/26/2012 16:36

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	330	J	490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	61		10-110

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File:	\\Ncchrom\ChromData\A2HP5F\20120426-9423.b\P5F04269.D		
Lims ID:	240-10350-J-2-A	Client ID:	MSA-MW15S-041812
Inject. Date:	26-Apr-2012 16:36:21	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009423-009		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP5F
Vol. Injected:	1.0000	ALS Bottle#:	9
Lims Batch ID:	41730	Lims Sample ID:	9
Detector:	GC FID1A		
Method:	\\Ncchrom\ChromData\A2HP5F\20120426-9423.b\TPH5F.m		
Last Update:	27-Apr-2012 13:25:37	Calib Date:	13-Apr-2012 15:06:59
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP5F\20120413-9029.b\P5F04144.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
3.793	3.794	-0.001	13242955	61.2	
A 15 Diesel					
9.247	4.909 -	13.586	8811825	46.8	
A 17 C10-C32					
9.946	4.909 -	14.984	12782758	67.9	

Sample Calculation

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10350-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	197527 183497	194334	179644	186362	Ave		188272.909				4.0		20.0			
n-Nonane	222434 217668	222225	205767	214296	Ave		216478.041				3.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE: JUNE 15, 2012**

FROM: **TERRI L. SOLOMON** **COPIES: DV FILE**

SUBJECT: **INORGANIC AND ORGANIC DATA VALIDATION – SELECT METALS, PERCHLORATE**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-10350-1

SAMPLES: 4/Aqueous/

MSA-MW15D-041812	MSA-MW15I-041812
MSA-MW15S-041812	MSA-MW38S-041812

Overview

The sample set for Martin State Airport - Groundwater, SDG 240-10350-1, consists of four (4) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for perchlorate and select total and dissolved metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, tungsten, vanadium and zinc. The samples were collected by Tetra Tech on April 18, 2012 and analyzed by TestAmerica. Metals analyses were conducted using SW-846 method 6020A. Mercury analyses were conducted using SW-846 method 7470A. Perchlorate analyses were conducted using SW-846 method 6850.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, laboratory control sample recoveries, matrix spike/matrix spike duplicate recoveries, ICP serial dilution results, internal standard recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Molybdenum[1]	0.883 ug/L	4.415 ug/L
Thallium[1]	0.537 ug/L	2.685 ug/L
Tungsten[1]	0.632 ug/L	3.16 ug/L
Cobalt[2]	0.0770 ug/L	0.385 ug/L
Molybdenum[2]	0.449 ug/L	2.245 ug/L
Thallium[2]	0.702 ug/L	3.51 ug/L
Tungsten[2]	0.584 ug/L	2.92 ug/L
Barium[3]	0.964 ug/L	4.82 ug/L
Copper[3]	0.703 ug/L	3.515 ug/L
Zinc[3]	4.00 ug/L	20.0 ug/L
Barium[4]	0.953 ug/L	4.765 ug/L
Copper[4]	0.750 ug/L	3.75 ug/L
Zinc[4]	14.1 ug/L	70.5 ug/L

(1) Maximum concentration present in a method blank affecting all samples except MSA-MW15S-041812 (total).
(2) Maximum concentration present in a method blank affecting sample MSA-MW15S-041812 (total).
(3) Maximum concentration present in a total preparation blank.
(4) Maximum concentration present in a dissolved preparation blank.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results less than the blank action level reported for copper, molybdenum, thallium, tungsten and zinc were qualified "B" as a result of laboratory blank contamination.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

Nondetected results are reported to the method detection limits.

The contract required detection limit (CRDL) percent recoveries for copper, nickel, silver and thallium on 04/24/2012 and 04/25/2012 were > 110% quality control limit affecting all samples. However, no validation actions were required as all sample results were either > 2X CRDL, nondetects or were qualified as a result of blank contamination.

Executive Summary

Laboratory Performance: Several contaminants were present in the laboratory method / preparation blanks.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993 and the Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-5			240-10350-4			240-10350-2			240-10350-3		
FRACTION: M	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.23	J	P	0.13	U	
ARSENIC		0.69	J	P	1.8	J	P	3.4	J	P	16		
BARIUM		6.4			7.3			14			51		
BERYLLIUM		0.2	U		0.22	J	P	1.4			0.5	J	P
CADMIUM		0.13	U		0.13	U		0.98	J	P	0.13	U	
CHROMIUM		0.99	J	P	1.7	J	P	5			0.71	J	P
COBALT		12			21			110			17		
COPPER		5.6			2.8	B	A	180			0.46	B	A
LEAD		0.18	U		0.28	J	P	1.3			0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.13	B	A	0.19	B	A	0.49	B	A	0.58	B	A
NICKEL		17			26			120			10		
SELENIUM		0.57	U		0.57	U		3.7	J	P	0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.17	B	A	1.2	B	A	0.23	B	A
TUNGSTEN		0.37	U		0.37	U		0.7	B	A	0.37	U	
VANADIUM		0.5	J	P	1	J	P	2.3	J	P	4.5	J	P
ZINC		23			48			130			13	B	A

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-5			240-10350-4			240-10350-2			240-10350-3		
FRACTION: MF	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.13	U		0.13	U	
ARSENIC		0.63	J	P	1.6	J	P	3.6	J	P	13		
BARIUM		5.9			6.5			16			50		
BERYLLIUM		0.2	U		0.22	J	P	1.5			0.34	J	P
CADMIUM		0.13	U		0.15	J	P	0.98	J	P	0.13	U	
CHROMIUM		0.71	U		1.5	J	P	5			0.71	U	
COBALT		12			22			110			17		
COPPER		5			1.7	B	A	190			0.29	U	
LEAD		0.18	U		0.18	U		1.3			0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.093	U		0.093	U		0.093	U		0.53	B	A
NICKEL		17			28			130			11		
SELENIUM		0.57	U		0.57	U		3.7	J	P	0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.15	B	A	0.34	B	A	0.26	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U		0.37	U	
VANADIUM		0.44	U		0.68	J	P	1.7	J	P	0.53	J	P
ZINC		21	B	A	39	B	A	140			5.9	B	A

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: 240-10350-1	LAB_ID	240-10350-5			240-10350-4			240-10350-2			240-10350-3		
FRACTION: MISC	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.72	J	P	0.25	J	P	0.082	U		0.082	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-MW15D-041812 Lab Sample ID: 240-10350-5

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 15:35

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.69	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	6.4	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	0.99	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	12	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	5.6	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.13	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	17	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	0.50	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	23	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-MW15D-041812 Lab Sample ID: 240-10350-5

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 15:35

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-MW15I-041812 Lab Sample ID: 240-10350-4

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 14:16

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.8	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	7.3	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.22	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	1.7	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	21	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	2.8	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.28	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.19	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	26	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.17	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	1.0	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	48	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-MW15I-041812 Lab Sample ID: 240-10350-4

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 14:16

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 11:40

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.23	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	3.4	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	14	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.4	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.98	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	5.0	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	110	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	180	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.3	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.49	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	120	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	3.7	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	1.2	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	0.70	10	0.37	ug/L	J		1	6020
7440-62-2	Vanadium	2.3	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	130	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 11:40

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-MW38S-041812 Lab Sample ID: 240-10350-3

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 11:55

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	16	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	51	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.50	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	0.71	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	17	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.46	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.58	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	10	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.23	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	4.5	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	13	20	2.3	ug/L	J	B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-MW38S-041812 Lab Sample ID: 240-10350-3

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 11:55

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-MW15D-041812 Lab Sample ID: 240-10350-5

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 15:35

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.63	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	5.9	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	12	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	5.0	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	17	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	21	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-MW15I-041812 Lab Sample ID: 240-10350-4

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 14:16

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.6	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	6.5	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.22	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.15	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	1.5	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	22	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.7	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	28	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.15	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	0.68	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	39	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-MW15S-041812 Lab Sample ID: 240-10350-2

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 11:40

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	3.6	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	16	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.5	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.98	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	5.0	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	110	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	190	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.3	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	130	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	3.7	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.34	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	1.7	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	140	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-MW38S-041812 Lab Sample ID: 240-10350-3

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG ID.:

Matrix: Water Date Sampled: 04/18/2012 11:55

Reporting Basis: WET Date Received: 04/19/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	13	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	50	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.34	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	17	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	2.0	2.0	0.29	ug/L	U		1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.53	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	11	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.26	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	0.53	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	5.9	20	2.3	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

TestAmerica Canton

Client Sample ID: MSA-MW15D-041812

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D230413-004	Work Order #...: MR5Q41AA		Matrix.....: WATER	
Date Sampled...: 04/18/12	Date Received..: 04/20/12			
Prep Date.....: 04/27/12	Analysis Date..: 05/02/12			
Prep Batch #...: 2118065				
Dilution Factor: 1	Method.....: SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.72 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

TestAmerica Canton

Client Sample ID: MSA-MW151-041812

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D230413-003 Work Order #...: MR5Q11AA Matrix.....: WATER
Date Sampled...: 04/18/12 Date Received..: 04/20/12
Prep Date.....: 04/27/12 Analysis Date..: 05/02/12
Prep Batch #...: 2118065
Dilution Factor: 1 Method.....: SW846 6850

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.25 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

TestAmerica Canton

Client Sample ID: MSA-MW15S-041812

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D230413-001	**Work Order #...:** MR5QT1AA		**Matrix.....:** WATER	
Date Sampled...: 04/18/12	**Date Received..:** 04/20/12			
Prep Date.....: 04/27/12	**Analysis Date..:** 05/01/12			
Prep Batch #...: 2118065				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW38S-041812

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D230413-002 Work Order #...: MR5QX1AA Matrix.....: WATER
Date Sampled...: 04/18/12 Date Received..: 04/20/12
Prep Date.....: 04/27/12 Analysis Date..: 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1 Method.....: SW846 6850

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10350-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/19/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4 and 2.6 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-041812 (240-10350-1), MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/27/2012 and 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample (LCS) for batch 41857 exceeded control limits for tert-Butyl alcohol. This has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample MSA-MW15D-041812 (240-10350-5) in batch 240-42171. tert-Butyl alcohol exceeded the rpd limit.

Sample MSA-MW15I-041812 (240-10350-4)[20X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 41857 exceeded control criteria for several compounds. The samples associated with this CCV were not detected for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is is reportable per the facility Standard operating Procedure (SOP).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and

MSA-MW15D-041812 (240-10350-5) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/20/2012 and analyzed on 04/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 40937, 8270.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MSA-MW15S-041812 (240-10350-2) and MSA-MW38S-041812 (240-10350-3) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/24/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-41320/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MSA-MW15S-041812 (240-10350-2) and MSA-MW38S-041812 (240-10350-3) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/25/2012 and analyzed on 04/26/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batches 41067 and 41524, 8015.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/23/2012 and analyzed on 04/24/2012.

Several analytes were detected in method blank MB 240-41173/1-B at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/23/2012 and 04/24/2012 and analyzed on 04/24/2012 and 04/25/2012.

Several analytes were detected in method blank MB 240-41295/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW15S-041812 (240-10350-2), MSA-MW38S-041812 (240-10350-3), MSA-MW15I-041812 (240-10350-4) and MSA-MW15D-041812 (240-10350-5) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanavage	Site Contact: Walt Payne	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of ____ COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: 301 528-3021		TAT if different from below ____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: MSA Ground water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04021-02	Shipping/Tracking No:			Job/SDG No:
PO#				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite-C / Grab-G	VOCs	Total PPM	Diss PPM	1,4 Dioxane	Perchlorate	Gro & Dro					Sample Specific Notes / Special Instructions:
TB-041812	4-18-12	—		X						2					N	G	X										
MSA-MW15s-041812	↓	1140		X					2	5			5		↓	↓	X	X	X	X	X	X					
MSA-MW38s-041812	↓	1155		X					2	5			5		↓	↓	X	X	X	X	X	X					
MSA-MW15I-041812	↓	1416		X					2	3			3		↓	↓	X	X	X	X	X						
MSA-MW15D-041812	↓	1535		X					2	3			3		↓	↓	X	X	X	X	X						

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Payne	TT Inc	4-18-12 / 1620	Paul Gaylord	Test America	4/18/12 / 1621
Paul Gaylord	Test America	4/18/12 / 1700			
			Received in Laboratory by: [signature]	TAL	4-19-12 915

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TAL-0018 (1008)

05/10/2012

HOLDTIME

SDG 240-10350-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-MW15S-041812	240-10391-1	NM	4/18/2012	4/25/2012	4/27/2012	7	2	9
EXP	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
HG	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HG	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
M	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HGF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HGF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HGF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HGF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
MF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
PCL	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
OS	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
OS	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10350-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10350-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10350-1TB	TB-041812	Water	04/18/2012 0000	04/19/2012 0915
240-10350-2	MSA-MW15S-041812	Water	04/18/2012 1140	04/19/2012 0915
240-10350-3	MSA-MW38S-041812	Water	04/18/2012 1155	04/19/2012 0915
240-10350-4	MSA-MW15I-041812	Water	04/18/2012 1416	04/19/2012 0915
240-10350-5	MSA-MW15D-041812	Water	04/18/2012 1535	04/19/2012 0915

Sample MBA-MW15I041812 Arsenic rep result 1.6 ug/L

240-10350-e-4-a, 4/24/2012 09:50:50 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		67.638%	0.221	24.680
%RSD		3.187	4.755	2.874
Run	**Time**	**23Na**	**25Mg**	**27Al**
		ppb	ppb	ppb
x		9651.000	817.000	415.800
%RSD		1.739	0.380	0.498
Run	**Time**	**35Cl**	**39K**	**43Ca**
		ppb	ppb	ppb
x		T0.000	T420.600	1566.000
%RSD		T0.000	T0.636	1.900
Run	**Time**	**45Sc**	**45Sc**	**47Ti**
		ppb	ppb	ppb
x		T92.090%	93.302%	3.001
%RSD		T0.900	0.587	10.000
Run	**Time**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb
x		1.012	1.684	0.221
%RSD		16.020	3.001	84.670
Run	**Time**	**55Mn**	**56Fe**	**59Co**
		ppb	ppb	ppb
x		72.610	1214.000	20.700
%RSD		0.782	1.857	1.866
Run	**Time**	**60Ni**	**65Cu**	**66Zn**
		ppb	ppb	ppb
x		26.020	2.803	48.180
%RSD		1.509	2.747	1.779
Run	**Time**	**72Ge**	**75As**	**77Ar Cl**
		ppb	ppb	ppb
x		94.087%	1.826	0.348
%RSD		0.647	3.597	13.400
Run	**Time**	**78Se**	**88Sr**	**95Mo**
		ppb	ppb	ppb
x		0.125	6.533	0.187
%RSD		131.200	3.180	8.747
Run	**Time**	**105Pd**	**107Ag**	**108Mo O**
		ppb	ppb	ppb
x		0.000	-0.000	-0.448
%RSD		0.000	2535.000	42.180
Run	**Time**	**111Cd**	**115In**	**118Sn**
		ppb	ppb	ppb
x		0.113	95.431%	0.122
%RSD		16.470	0.664	20.960
Run	**Time**	**121Sb**	**137Ba**	**159Tb**
		ppb	ppb	ppb
x		0.070	7.286	0.000
%RSD		2.500	4.640	0.000
Run	**Time**	**165Ho**	**182W**	**205Tl**
		ppb	ppb	ppb
x		96.574%	0.080	0.173
%RSD		0.997	6.817	1.907
Run	**Time**	**208Pb**	**209Bi**	
		ppb	ppb	
x		0.284	0.000	
%RSD		3.233	0.000	

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00038

Analyte	ICV 240-41434/5 04/24/2012 07:38				CCV 240-41434/12 04/24/2012 08:21				CCV 240-41434/24 04/24/2012 09:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	83.5		80.0	104	100		100	100	101		100	101
Arsenic	80.8		80.0	101	100		100	100	101		100	101
Barium	82.0		80.0	102	100		100	100	99.5		100	99
Beryllium	79.0		80.0	99	99.8		100	100	107		100	107
Cadmium	81.3		80.0	102	102		100	102	101		100	101
Chromium	81.0		80.0	101	101		100	101	101		100	101
Cobalt	80.8		80.0	101	101		100	101	102		100	102
Copper	81.9		80.0	102	101		100	101	102		100	102
Lead	82.9		80.0	104	103		100	103	104		100	104
Molybdenum	83.1		80.0	104	104		100	104	104		100	104
Nickel	82.6		80.0	103	101		100	101	101		100	101
Selenium	81.6		80.0	102	101		100	101	101		100	101
Silver	83.2		80.0	104	102		100	102	102		100	102
Thallium	82.1		80.0	103	101		100	101	102		100	102
Tungsten	80.6		80.0	101	101		100	101	101		100	101
Vanadium	80.7		80.0	101	99.6		100	100	100		100	100
Zinc	81.8		80.0	102	102		100	102	102		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00038

Analyte	CCV 240-41434/36 04/24/2012 10:39											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	102		100	102								
Arsenic	101		100	101								
Barium	99.9		100	100								
Beryllium	107		100	107								
Cadmium	103		100	103								
Chromium	101		100	101								
Cobalt	102		100	102								
Copper	102		100	102								
Lead	105		100	105								
Molybdenum	104		100	104								
Nickel	102		100	102								
Selenium	102		100	102								
Silver	103		100	103								
Thallium	103		100	103								
Tungsten	102		100	102								
Vanadium	101		100	101								
Zinc	102		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-41639/5 04/25/2012 06:30				CCV 240-41639/99 04/25/2012 15:35				CCV 240-41639/111 04/25/2012 16:47			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.8		80.0	103	101		100	101	99.7		100	100
Arsenic	81.2		80.0	102	101		100	101	100		100	100
Barium	80.5		80.0	101	101		100	101	99.8		100	100
Beryllium	78.8		80.0	99	96.4		100	96	94.0		100	94
Cadmium	81.0		80.0	101	103		100	103	102		100	102
Chromium	80.3		80.0	100	101		100	101	100		100	100
Cobalt	81.0		80.0	101	102		100	102	101		100	101
Copper	82.8		80.0	103	104		100	104	102		100	102
Lead	82.1		80.0	103	103		100	103	103		100	103
Molybdenum	83.7		80.0	105	104		100	104	103		100	103
Nickel	82.5		80.0	103	102		100	102	101		100	101
Selenium	82.6		80.0	103	103		100	103	101		100	101
Silver	83.1		80.0	104	104		100	104	102		100	102
Thallium	80.4		80.0	101	101		100	101	102		100	102
Tungsten	81.2		80.0	101	104		100	104	104		100	104
Vanadium	79.8		80.0	100	101		100	101	99.5		100	99
Zinc	81.7		80.0	102	104		100	104	102		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	ICV 240-41478/7-A 04/25/2012 12:07				CCVL 240-41478/12-A 04/25/2012 12:17				CCV 240-41478/10-A 04/25/2012 16:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.53		2.50	101	5.03		5.00	101	4.81		5.00	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	CCV 240-41478/10-A 04/25/2012 17:23				CCV 240-41478/10-A 04/25/2012 17:47							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.85		5.00	97	4.80		5.00	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	ICV 240-41478/7-A 04/26/2012 10:37				CCV 240-41478/10-A 04/26/2012 12:23				CCV 240-41478/10-A 04/26/2012 12:47			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.43		2.50	97	5.04		5.00	101	5.00		5.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	CCV 240-41478/10-A 04/26/2012 13:12											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.00		5.00	100								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-41434/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.08		104	50-150
Arsenic	2.00	2.08	J	104	50-150
Barium	1.00	1.11	J	111	50-150
Beryllium	1.00	0.963	J	96	50-150
Cadmium	0.500	0.538	J	108	50-150
Chromium	2.00	2.01		101	50-150
Cobalt	1.00	1.07		107	50-150
Copper	2.00	2.42		121	50-150
Lead	1.00	1.04		104	50-150
Molybdenum	10.0	9.85	J	98	50-150
Nickel	2.00	2.66		133	50-150
Selenium	2.00	2.13	J	106	50-150
Silver	0.500	0.572	J	114	50-150
Thallium	1.00	1.23	J	123	50-150
Vanadium	5.00	4.83	J	97	50-150
Tungsten	10.0	9.63	J	96	50-150
Zinc	10.0	10.4	J	104	50-150

Lab Sample ID: CRI 240-41639/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.04		102	50-150
Arsenic	2.00	2.07	J	104	50-150
Barium	1.00	1.04	J	104	50-150
Beryllium	1.00	0.941	J	94	50-150
Cadmium	0.500	0.498	J	100	50-150
Chromium	2.00	2.11		106	50-150
Cobalt	1.00	1.02		102	50-150
Copper	2.00	2.49		124	50-150
Lead	1.00	1.02		102	50-150
Molybdenum	10.0	10.2		102	50-150
Nickel	2.00	2.82		141	50-150
Selenium	2.00	2.19	J	110	50-150
Silver	0.500	0.565	J	113	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-41639/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Thallium	1.00	1.24	J	124	50-150
Vanadium	5.00	4.77	J	95	50-150
Tungsten	10.0	9.83	J	98	50-150
Zinc	10.0	10.7	J	107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-41478/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00183

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.184	J	92	50-150

Lab Sample ID: CRA 240-41478/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00183

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.218		109	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41434/6 04/24/2012 07:45		CCB 240-41434/13 04/24/2012 08:28		CCB 240-41434/25 04/24/2012 09:40		CCB 240-41434/37 04/24/2012 10:46	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.384	J	0.883	J	0.371	J	0.335	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.417	J	0.537	J	0.477	J	0.475	J
Tungsten	10	0.536	J	0.632	J	0.500	J	0.504	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41639/6 04/25/2012 06:38		CCB 240-41639/100 04/25/2012 15:42		CCB 240-41639/112 04/25/2012 16:54			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U		
Arsenic	5.0	5.0	U	5.0	U	5.0	U		
Barium	5.0	5.0	U	5.0	U	5.0	U		
Beryllium	1.0	1.0	U	1.0	U	1.0	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	0.0770	J	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	10	0.439	J	0.449	J	0.438	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	5.0	5.0	U	5.0	U	5.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	2.0	0.438	J	0.577	J	0.702	J		
Tungsten	10	0.634	J	0.547	J	0.584	J		
Vanadium	20	20	U	20	U	20	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41478/8-A 04/25/2012 12:09		CCB 240-41478/11-A 04/25/2012 17:00		CCB 240-41478/11-A 04/25/2012 17:25		CCB 240-41478/11-A 04/25/2012 17:49	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41478/8-A 04/26/2012 10:39		CCB 240-41478/11-A 04/26/2012 12:25		CCB 240-41478/11-A 04/26/2012 12:49		CCB 240-41478/11-A 04/26/2012 13:14	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41295/1-A

Instrument Code: I8 Batch No.: 41639

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.964	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.703	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.131	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.306	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	4.00	J		6020

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41173/1-B

Instrument Code: I8 Batch No.: 41434

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.953	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.750	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.350	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.233	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	14.1	J		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41339/1-A

Instrument Code: H4 Batch No.: 41694

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41350/1-A

Instrument Code: H4 Batch No.: 41861

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICSA 240-41434/8 Instrument ID: I8

Lab File ID: I8042412A.csv ICS Source: MTMSICSAW_00013

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.149**	
Arsenic		**0.306**	
Barium		**0.110**	
Beryllium		**0.0230**	
Cadmium		**-0.495**	
Chromium		**0.489**	
Cobalt		**0.0770**	
Copper		**0.258**	
Lead		**0.0260**	
Molybdenum	**1000**	**1044**	**104**
Nickel		**0.737**	
Selenium		**0.0940**	
Silver		**0.0350**	
Thallium		**0.164**	
Tungsten		**0.252**	
Vanadium		**-0.0770**	
Zinc		**1.80**	
Aluminum	*50000*	*50550*	*101*
Boron		*0.858*	
Calcium	*50000*	*51670*	*103*
Iron	*50000*	*51720*	*103*
Magnesium	*50000*	*51450*	*103*
Manganese		*0.443*	
Potassium	*50000*	*52120*	*104*
Sodium	*50000*	*51910*	*104*
Strontium		*0.191*	
Tin		*0.117*	
Titanium	*1000*	*1061*	*106*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICSAB 240-41434/9 Instrument ID: I8

Lab File ID: I8042412A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**103**	**103**
Arsenic	**100**	**102**	**102**
Barium	**100**	**103**	**103**
Beryllium	**100**	**102**	**102**
Cadmium	**100**	**101**	**101**
Chromium	**100**	**108**	**108**
Cobalt	**100**	**102**	**102**
Copper	**100**	**102**	**102**
Lead	**100**	**110**	**110**
Molybdenum	**1100**	**1158**	**105**
Nickel	**100**	**106**	**106**
Selenium	**100**	**102**	**102**
Silver	**100**	**102**	**102**
Thallium	**100**	**108**	**108**
Tungsten	**100**	**102**	**102**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**104**	**104**
Aluminum	*50000*	*50780*	*102*
Boron	*100*	*103*	*103*
Calcium	*50000*	*52070*	*104*
Iron	*50000*	*52810*	*106*
Magnesium	*50000*	*51800*	*104*
Manganese	*100*	*111*	*111*
Potassium	*50000*	*51980*	*104*
Sodium	*50000*	*52060*	*104*
Strontium	*100*	*98.4*	*98*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1159*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICSA 240-41639/8 Instrument ID: I8

Lab File ID: I8042512A.csv ICS Source: MTMSICSAW_00013

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.188**	
Arsenic		**0.313**	
Barium		**0.107**	
Beryllium		**0.0210**	
Cadmium		**-0.452**	
Chromium		**0.684**	
Cobalt		**0.102**	
Copper		**0.369**	
Lead		**0.0360**	
Molybdenum	**1000**	**1051**	**105**
Nickel		**0.800**	
Selenium		**0.134**	
Silver		**0.0450**	
Thallium		**0.237**	
Tungsten		**0.384**	
Vanadium		**-0.0270**	
Zinc		**1.89**	
Aluminum	*50000*	*50070*	*100*
Boron		*0.389*	
Calcium	*50000*	*52450*	*105*
Iron	*50000*	*52270*	*105*
Magnesium	*50000*	*52030*	*104*
Manganese		*0.589*	
Potassium	*50000*	*52290*	*105*
Sodium	*50000*	*52170*	*104*
Strontium		*0.193*	
Tin		*0.124*	
Titanium	*1000*	*1079*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Lab Sample ID: ICSAB 240-41639/9 Instrument ID: I8

Lab File ID: I8042512A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**100**	**100**
Barium	**100**	**103**	**103**
Beryllium	**100**	**99.7**	**100**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**109**	**109**
Cobalt	**100**	**103**	**103**
Copper	**100**	**101**	**101**
Lead	**100**	**109**	**109**
Molybdenum	**1100**	**1157**	**105**
Nickel	**100**	**106**	**106**
Selenium	**100**	**102**	**102**
Silver	**100**	**103**	**103**
Thallium	**100**	**107**	**107**
Tungsten	**100**	**104**	**104**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**104**	**104**
Aluminum	*50000*	*50810*	*102*
Boron	*100*	*101*	*101*
Calcium	*50000*	*52820*	*106*
Iron	*50000*	*52370*	*105*
Magnesium	*50000*	*52070*	*104*
Manganese	*100*	*112*	*112*
Potassium	*50000*	*51910*	*104*
Sodium	*50000*	*52180*	*104*
Strontium	*100*	*98.1*	*98*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1183*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MSA-MW15S-041812 MS Lab ID: 240-10350-2 MS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.972		0.20	U	1.00	97	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: MSA-MW15S-041812 MSD Lab ID: 240-10350-2 MSD

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.964	1.00	96	69-134	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

P12 SDG

Client ID: _____ Lab ID: 240-10487-U-12-B MS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	102		0.59	J	100	102	44-153		6020
Arsenic	1030		14		1000	102	82-123		6020
Barium	1120		83		1000	104	45-144		6020
Beryllium	965		1.0	U	1000	97	77-124		6020
Cadmium	1020		0.16	J	1000	101	78-117		6020
Chromium	1010		2.0	U	1000	101	72-110		6020
Cobalt	1010		0.25	J	1000	101	67-114		6020
Copper	1010		2.9		1000	101	60-123		6020
Lead	1080		0.40	J	1000	107	73-115		6020
Molybdenum	112		8.0	J	100	104	80-110		6020
Nickel	1010		1.7	J	1000	101	72-111		6020
Selenium	943		0.92	J	1000	94	72-148		6020
Silver	101		1.0	U	100	101	10-139		6020
Thallium	264		0.93	J	250	105	69-117		6020
Vanadium	1020		4.1	J	1000	102	70-112		6020
Tungsten	107		4.4	J	100	102	43-133		6020
Zinc	1000		3.2	J	1000	100	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

NOT IN SDG

Client ID: _____ Lab ID: 240-10487-U-12-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	100		100	100	44-153	2	20		6020
Arsenic	1030		1000	101	82-123	0	20		6020
Barium	1120		1000	104	45-144	0	20		6020
Beryllium	939		1000	94	77-124	3	20		6020
Cadmium	1010		1000	101	78-117	1	20		6020
Chromium	1020		1000	102	72-110	0	20		6020
Cobalt	1010		1000	101	67-114	0	20		6020
Copper	1010		1000	101	60-123	0	20		6020
Lead	1070		1000	107	73-115	0	20		6020
Molybdenum	111		100	103	80-110	1	20		6020
Nickel	1020		1000	102	72-111	1	20		6020
Selenium	939		1000	94	72-148	0	20		6020
Silver	99.6		100	100	10-139	2	20		6020
Thallium	264		250	105	69-117	0	20		6020
Vanadium	1020		1000	102	70-112	0	20		6020
Tungsten	106		100	101	43-133	1	20		6020
Zinc	1000		1000	100	49-156	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

NOT IN SDG

Client ID: _____ Lab ID: 240-10436-H-3-K MS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	104		0.64	J	100	103	44-153		6020
Arsenic	1060		0.81	J	1000	105	82-123		6020
Barium	1110		40		1000	106	45-144		6020
Beryllium	1070		1.0	U	1000	107	77-124		6020
Cadmium	1060		0.79	J	1000	106	78-117		6020
Chromium	1060		2.0	U	1000	106	72-110		6020
Cobalt	1050		1.2		1000	105	67-114		6020
Copper	1080		24		1000	106	60-123		6020
Lead	1230		86		1000	115	73-115		6020
Molybdenum	106		1.4	J	100	104	80-110		6020
Nickel	1070		3.8		1000	106	72-111		6020
Selenium	1050		1.6	J	1000	105	72-148		6020
Silver	106		1.0	U	100	106	10-139		6020
Thallium	269		0.83	J	250	107	69-117		6020
Vanadium	1050		20	U	1000	105	70-112		6020
Tungsten	101		0.71	J	100	100	43-133		6020
Zinc	1260		210		1000	104	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

NOT IN SDG

Client ID: Lab ID: 240-10436-H-3-L MSD

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	105	100	104	44-153	1	20		6020
Arsenic	1060	1000	106	82-123	0	20		6020
Barium	1120	1000	108	45-144	1	20		6020
Beryllium	1060	1000	106	77-124	1	20		6020
Cadmium	1060	1000	106	78-117	0	20		6020
Chromium	1060	1000	106	72-110	0	20		6020
Cobalt	1060	1000	106	67-114	1	20		6020
Copper	1090	1000	106	60-123	0	20		6020
Lead	1250	1000	116	73-115	1	20	F	6020
Molybdenum	107	100	105	80-110	1	20		6020
Nickel	1070	1000	107	72-111	1	20		6020
Selenium	1060	1000	106	72-148	1	20		6020
Silver	106	100	106	10-139	0	20		6020
Thallium	272	250	109	69-117	1	20		6020
Vanadium	1050	1000	105	70-112	1	20		6020
Tungsten	103	100	102	43-133	1	20		6020
Zinc	1270	1000	105	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Not in SDG

Client ID: _____ Lab ID: 240-10487-S-12-B MS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.928		0.20	U	1.00	93	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Not IP SDG

Client ID: _____ Lab ID: 240-10487-S-12-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.910	1.00	91	69-134	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41180/2-A

Lab Name: TestAmerica Canton Job No.: 240-10350-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	105		105	80	120		6020
Arsenic	1000	1050		105	80	120		6020
Barium	1000	1090		109	80	120		6020
Beryllium	1000	1080		108	80	120		6020
Cadmium	1000	1090		109	80	120		6020
Chromium	1000	1080		108	80	120		6020
Cobalt	1000	1080		108	80	120		6020
Copper	1000	1110		111	80	120		6020
Lead	1000	1150		115	80	120		6020
Molybdenum	100	105		105	80	120		6020
Nickel	1000	1100		110	80	120		6020
Selenium	1000	1090		109	80	120		6020
Silver	100	110		110	80	120		6020
Thallium	250	280		112	80	120		6020
Vanadium	1000	1060		106	80	120		6020
Tungsten	100	102		102	80	120		6020
Zinc	1000	1100		110	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41295/2-A

Lab Name: TestAmerica Canton Job No.: 240-10350-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	93.8		94	80	120		6020
Arsenic	1000	931		93	80	120		6020
Barium	1000	944		94	80	120		6020
Beryllium	1000	866		87	80	120		6020
Cadmium	1000	958		96	80	120		6020
Chromium	1000	940		94	80	120		6020
Cobalt	1000	941		94	80	120		6020
Copper	1000	969		97	80	120		6020
Lead	1000	1010		101	80	120		6020
Molybdenum	100	92.5		93	80	120		6020
Nickel	1000	968		97	80	120		6020
Selenium	1000	945		94	80	120		6020
Silver	100	98.0		98	80	120		6020
Thallium	250	244		98	80	120		6020
Vanadium	1000	924		92	80	120		6020
Tungsten	100	90.9		91	80	120		6020
Zinc	1000	966		97	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41339/2-A

Lab Name: TestAmerica Canton Job No.: 240-10350-1

Sample Matrix: Water LCS Source: MTHGICVW_00281

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.99		100	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41350/2-A

Lab Name: TestAmerica Canton Job No.: 240-10350-1

Sample Matrix: Water LCS Source: MTHGICVW_00281

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.68		94	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

NOT IN SDG

Lab ID: 240-10436-H-3-J SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10350-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.64	J	0.785	J	NC		6020
Arsenic	0.81	J	25	U	NC		6020
Barium	40		39.1		NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	0.79	J	0.910	J	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	1.2		1.30	J	NC		6020
Copper	24		24.0		NC		6020
Lead	86		88.1		NC		6020
Molybdenum	1.4	J	1.57	J	NC		6020
Nickel	3.8		3.54	J	NC		6020
Selenium	1.6	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.83	J	1.76	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	0.71	J	50	U	NC		6020
Zinc	210		227		NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN

ICP-AES AND ICP-MS SERIAL DILUTIONS

METALS - TOTAL RECOVERABLE

DOT 12 SDG

Lab ID: 240-10487-U-12-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10350-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.59	J	0.755	J	NC		6020
Arsenic	14		14.1	J	NC		6020
Barium	83		83.9		NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	0.16	J	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	0.25	J	0.575	J	NC		6020
Copper	2.9		3.16	J	NC		6020
Lead	0.40	J	5.0	U	NC		6020
Molybdenum	8.0	J	8.83	J	NC		6020
Nickel	1.7	J	2.30	J	NC		6020
Selenium	0.92	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.93	J	2.51	J	NC		6020
Vanadium	4.1	J	4.05	J	NC		6020
Tungsten	4.4	J	5.21	J	NC		6020
Zinc	3.2	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10350-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41173/1-B	04/23/2012 10:46	41180		50	50
LCS 240-41180/2-A	04/23/2012 10:46	41180		50	50
240-10436-H-3-K MS	04/23/2012 10:46	41180		50	50
240-10436-H-3-L MSD	04/23/2012 10:46	41180		50	50
240-10350-2	04/23/2012 10:46	41180		50	50
240-10350-3	04/23/2012 10:46	41180		50	50
240-10350-3	04/23/2012 10:46	41180		50	50
240-10350-4	04/23/2012 10:46	41180		50	50
240-10350-4	04/23/2012 10:46	41180		50	50
240-10350-5	04/23/2012 10:46	41180		50	50
240-10350-5	04/23/2012 10:46	41180		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41295/1-A	04/24/2012 08:36	41295		50	50
LCS 240-41295/2-A	04/24/2012 08:36	41295		50	50
240-10487-U-12-B MS	04/24/2012 08:36	41295		50	50
240-10487-U-12-C MSD	04/24/2012 08:36	41295		50	50
240-10350-2	04/24/2012 08:36	41295		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41339/1-A	04/24/2012 11:50	41339		100	100
LCS 240-41339/2-A	04/24/2012 11:50	41339		100	100
240-10487-S-12-B MS	04/24/2012 11:50	41339		100	100
240-10487-S-12-C MSD	04/24/2012 11:50	41339		100	100
240-10350-3	04/24/2012 11:50	41339		100	100
240-10350-4	04/24/2012 11:50	41339		100	100
240-10350-4	04/24/2012 11:50	41339		100	100
240-10350-5	04/24/2012 11:50	41339		100	100
240-10350-5	04/24/2012 11:50	41339		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41350/1-A	04/24/2012 14:00	41350		100	100
LCS 240-41350/2-A	04/24/2012 14:00	41350		100	100
240-10350-2	04/24/2012 14:00	41350		100	100
240-10350-2 MS	04/24/2012 14:00	41350		100	100
240-10350-2 MSD	04/24/2012 14:00	41350		100	100
240-10350-2	04/24/2012 14:00	41350		100	100
240-10350-3	04/24/2012 14:00	41350		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/24/2012 End Date: 04/24/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-41434/2 IC	07:19	84		91		97		94		97	
STD3 240-41434/3 IC	07:26	78		92		96		92		95	
STD4 240-41434/4 IC	07:33	97		108		105		105		105	
ICV 240-41434/5	07:38	84		97		100		97		99	
ICB 240-41434/6	07:45	95		105		103		102		101	
CRI 240-41434/7	07:51	90		103		102		101		101	
ICSA 240-41434/8	07:56	68		86		88		87		92	
ICSAB 240-41434/9	08:01	59		77		82		83		89	
CCV 240-41434/12	08:21	67		84		90		87		91	
CCB 240-41434/13	08:28	82		94		94		93		95	
MB 240-41173/1-B	08:34	81		94		94		94		94	
LCS 240-41180/2-A	08:39	72		89		94		93		96	
240-10436-H-3-J SD	08:51	73		87		90		88		90	
240-10436-H-3-K MS	08:57	64		86		92		89		93	
240-10436-H-3-L MSD	09:04	65		87		92		90		93	
240-10350-2	09:22	64		83		90		88		89	
240-10350-3	09:27	64		85		91		92		93	
CCV 240-41434/24	09:32	58		85		91		88		93	
CCB 240-41434/25	09:40	74		97		96		95		96	
240-10350-3	09:45	67		91		96		95		96	
240-10350-4	09:50	68		92		93		94		95	
240-10350-4	09:56	65		88		92		92		94	
240-10350-5	10:01	65		88		92		91		94	
240-10350-5	10:06	65		87		90		91		93	
CCV 240-41434/36	10:39	48		75		84		83		87	
CCB 240-41434/37	10:46	61		88		91		91		93	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/24/2012 End Date: 04/24/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-41434/2 IC	07:19			100							
STD3 240-41434/3 IC	07:26			97							
STD4 240-41434/4 IC	07:33			103							
ICV 240-41434/5	07:38			99							
ICB 240-41434/6	07:45			100							
CRI 240-41434/7	07:51			100							
ICSA 240-41434/8	07:56			92							
ICSAB 240-41434/9	08:01			91							
CCV 240-41434/12	08:21			94							
CCB 240-41434/13	08:28			95							
MB 240-41173/1-B	08:34			94							
LCS 240-41180/2-A	08:39			97							
240-10436-H-3-J SD	08:51			92							
240-10436-H-3-K MS	08:57			96							
240-10436-H-3-L MSD	09:04			96							
240-10350-2	09:22			103							
240-10350-3	09:27			96							
CCV 240-41434/24	09:32			94							
CCB 240-41434/25	09:40			96							
240-10350-3	09:45			97							
240-10350-4	09:50			97							
240-10350-4	09:56			95							
240-10350-5	10:01			95							
240-10350-5	10:06			94							
CCV 240-41434/36	10:39			91							
CCB 240-41434/37	10:46			94							

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-41639/2 IC	06:11	91		94		96		95		96	
STD3 240-41639/3 IC	06:18	91		96		94		91		93	
STD4 240-41639/4 IC	06:25	110		116		106		106		105	
ICV 240-41639/5	06:30	99		105		102		98		100	
ICB 240-41639/6	06:38	112		117		107		106		104	
CRI 240-41639/7	06:43	111		116		106		104		104	
ICSA 240-41639/8	06:48	86		96		88		90		92	
ICSAB 240-41639/9	06:54	74		85		83		84		89	
CCV 240-41639/99	15:35	66		79		79		77		78	
CCB 240-41639/100	15:42	82		89		85		85		84	
MB 240-41295/1-A	15:48	83		90		86		86		85	
LCS 240-41295/2-A	15:53	80		88		85		84		86	
240-10487-U-12-A SD	16:05	78		82		81		80		80	
240-10487-U-12-B MS	16:11	66		79		79		77		79	
240-10487-U-12-C	16:18	69		80		78		77		79	
240-10350-2	16:25	80		84		81		80		80	
CCV 240-41639/111	16:47	69		78		80		76		78	
CCB 240-41639/112	16:54	88		92		87		85		85	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-41639/2 IC	06:11			98							
STD3 240-41639/3 IC	06:18			94							
STD4 240-41639/4 IC	06:25			103							
ICV 240-41639/5	06:30			100							
ICB 240-41639/6	06:38			102							
CRI 240-41639/7	06:43			102							
ICSA 240-41639/8	06:48			93							
ICSAB 240-41639/9	06:54			91							
CCV 240-41639/99	15:35			81							
CCB 240-41639/100	15:42			84							
MB 240-41295/1-A	15:48			85							
LCS 240-41295/2-A	15:53			86							
240-10487-U-12-A SD	16:05			82							
240-10487-U-12-B MS	16:11			81							
240-10487-U-12-C	16:18			81							
240-10350-2	16:25			91							
CCV 240-41639/111	16:47			80							
CCB 240-41639/112	16:54			84							

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/24/2012 07:14 End Date: 04/24/2012 18:55

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-41434/1			07:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-41434/2 IC	1		07:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-41434/3 IC	1		07:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-41434/4 IC	1		07:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-41434/5	1		07:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-41434/6	1		07:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-41434/7	1		07:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-41434/8	1		07:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-41434/9	1		08:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41434/10			08:09																				
CCB 240-41434/11			08:16																				
CCV 240-41434/12	1		08:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41434/13	1		08:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-41173/1-B	1	D	08:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-41180/2-A	1	R	08:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:46																				
240-10436-H-3-J SD ^5	5	D	08:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10436-H-3-K MS	1	D	08:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10436-H-3-L MSD	1	D	09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			09:11																				
ZZZZZZ			09:16																				
240-10350-2	1	D	09:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10350-3	1	R	09:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41434/24	1		09:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41434/25	1		09:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10350-3	1	D	09:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10350-4	1	R	09:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10350-4	1	D	09:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10350-5	1	R	10:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10350-5	1	D	10:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:12																				
ZZZZZZ			10:17																				
ZZZZZZ			10:23																				
ZZZZZZ			10:28																				
ZZZZZZ			10:33																				
CCV 240-41434/36	1		10:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41434/37	1		10:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:51																				
ZZZZZZ			10:57																				
ZZZZZZ			11:02																				
ZZZZZZ			11:08																				
ZZZZZZ			11:13																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/24/2012 07:14 End Date: 04/24/2012 18:55

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn				
ZZZZZZ			11:19																					
ZZZZZZ			11:24																					
ZZZZZZ			11:31																					
ZZZZZZ			11:36																					
ZZZZZZ			11:42																					
CCV 240-41434/48			11:47																					
CCB 240-41434/49			11:54																					
ZZZZZZ			12:00																					
CCV 240-41434/51			12:05																					
CCB 240-41434/52			12:13																					
CCV 240-41434/53			12:18																					
CCB 240-41434/54			12:25																					
ZZZZZZ			12:31																					
ZZZZZZ			12:36																					
ZZZZZZ			12:43																					
CCV 240-41434/58			12:49																					
CCB 240-41434/59			12:56																					
ZZZZZZ			13:01																					
ZZZZZZ			13:07																					
ZZZZZZ			13:12																					
ZZZZZZ			13:19																					
ZZZZZZ			13:27																					
ZZZZZZ			13:32																					
ZZZZZZ			13:37																					
ZZZZZZ			13:43																					
CCV 240-41434/68			13:48																					
CCB 240-41434/69			13:55																					
ZZZZZZ			14:01																					
ZZZZZZ			14:06																					
ZZZZZZ			14:11																					
ZZZZZZ			14:17																					
ZZZZZZ			14:22																					
ZZZZZZ			14:28																					
ZZZZZZ			14:33																					
ZZZZZZ			14:39																					
ZZZZZZ			14:44																					
ZZZZZZ			14:49																					
CCV 240-41434/80			14:55																					
CCB 240-41434/81			15:02																					
ZZZZZZ			15:07																					
ZZZZZZ			15:13																					
ZZZZZZ			15:18																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/24/2012 07:14 End Date: 04/24/2012 18:55

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			15:24																					
ZZZZZZ			15:29																					
ZZZZZZ			15:36																					
ZZZZZZ			15:42																					
ZZZZZZ			15:47																					
ZZZZZZ			15:53																					
ZZZZZZ			15:59																					
CCV 240-41434/92			16:04																					
CCB 240-41434/93			16:11																					
ZZZZZZ			16:17																					
ZZZZZZ			16:24																					
ZZZZZZ			16:31																					
ZZZZZZ			16:36																					
ZZZZZZ			16:43																					
ZZZZZZ			16:50																					
ZZZZZZ			16:56																					
ZZZZZZ			17:01																					
ZZZZZZ			17:07																					
ZZZZZZ			17:12																					
CCV 240-41434/104			17:18																					
CCB 240-41434/105			17:25																					
ZZZZZZ			17:30																					
ZZZZZZ			17:36																					
ZZZZZZ			17:41																					
ZZZZZZ			17:46																					
ZZZZZZ			17:52																					
ZZZZZZ			17:57																					
ZZZZZZ			18:03																					
ZZZZZZ			18:08																					
ZZZZZZ			18:13																					
ZZZZZZ			18:19																					
CCV 240-41434/116			18:25																					
CCB 240-41434/117			18:32																					
ZZZZZZ			18:37																					
ZZZZZZ			18:43																					
CCV 240-41434/120			18:48																					
CCB 240-41434/121			18:55																					

Prep Types
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D/F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-41639/1			06:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-41639/2 IC	1		06:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-41639/3 IC	1		06:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-41639/4 IC	1		06:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-41639/5	1		06:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-41639/6	1		06:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-41639/7	1		06:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-41639/8	1		06:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-41639/9	1		06:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41639/10			07:01																				
CCB 240-41639/11			07:08																				
ZZZZZZ			07:13																				
ZZZZZZ			07:19																				
ZZZZZZ			07:26																				
CCV 240-41639/15			07:32																				
CCB 240-41639/16			07:39																				
ZZZZZZ			07:45																				
ZZZZZZ			07:50																				
ZZZZZZ			07:57																				
ZZZZZZ			08:02																				
ZZZZZZ			08:08																				
ZZZZZZ			08:15																				
ZZZZZZ			08:22																				
ZZZZZZ			08:27																				
ZZZZZZ			08:33																				
ZZZZZZ			08:38																				
CCV 240-41639/27			08:44																				
CCB 240-41639/28			08:51																				
ZZZZZZ			08:56																				
ZZZZZZ			09:02																				
ZZZZZZ			09:07																				
ZZZZZZ			09:12																				
ZZZZZZ			09:18																				
ZZZZZZ			09:23																				
ZZZZZZ			09:29																				
ZZZZZZ			09:34																				
ZZZZZZ			09:39																				
ZZZZZZ			09:45																				
CCV 240-41639/39			09:50																				
CCB 240-41639/40			09:57																				
ZZZZZZ			10:03																				
ZZZZZZ			10:08																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D/F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			10:14																				
ZZZZZZ			10:19																				
ZZZZZZ			10:24																				
ZZZZZZ			10:30																				
ZZZZZZ			10:35																				
ZZZZZZ			10:42																				
ZZZZZZ			10:48																				
ZZZZZZ			10:53																				
CCV 240-41639/51			11:01																				
CCB 240-41639/52			11:08																				
ZZZZZZ			11:13																				
ZZZZZZ			11:20																				
ZZZZZZ			11:26																				
ZZZZZZ			11:31																				
ZZZZZZ			11:37																				
ZZZZZZ			11:42																				
ZZZZZZ			11:47																				
ZZZZZZ			11:53																				
ZZZZZZ			11:58																				
ZZZZZZ			12:04																				
CCV 240-41639/63			12:09																				
CCB 240-41639/64			12:16																				
ZZZZZZ			12:22																				
ZZZZZZ			12:27																				
ZZZZZZ			12:32																				
ZZZZZZ			12:38																				
ZZZZZZ			12:43																				
ZZZZZZ			12:49																				
ZZZZZZ			12:54																				
ZZZZZZ			13:00																				
ZZZZZZ			13:05																				
ZZZZZZ			13:11																				
CCV 240-41639/75			13:16																				
CCB 240-41639/76			13:23																				
ZZZZZZ			13:29																				
ZZZZZZ			13:34																				
ZZZZZZ			13:41																				
ZZZZZZ			13:46																				
ZZZZZZ			13:52																				
ZZZZZZ			13:59																				
ZZZZZZ			14:06																				
ZZZZZZ			14:12																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			14:17																				
ZZZZZZ			14:23																				
CCV 240-41639/87			14:28																				
CCB 240-41639/88			14:35																				
ZZZZZZ			14:41																				
ZZZZZZ			14:46																				
ZZZZZZ			14:51																				
ZZZZZZ			14:57																				
ZZZZZZ			15:02																				
ZZZZZZ			15:08																				
ZZZZZZ			15:13																				
ZZZZZZ			15:19																				
ZZZZZZ			15:24																				
ZZZZZZ			15:30																				
CCV 240-41639/99	1		15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/100	1		15:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-41295/1-A	1	R	15:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-41295/2-A	1	R	15:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			16:00																				
240-10487-U-12-A SD ^5	5	R	16:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10487-U-12-B MS	1	R	16:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10487-U-12-C MSD	1	R	16:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10350-2	1	R	16:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			16:31																				
ZZZZZZ			16:36																				
ZZZZZZ			16:42																				
CCV 240-41639/111	1		16:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/112	1		16:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			17:00																				
ZZZZZZ			17:05																				
ZZZZZZ			17:10																				
ZZZZZZ			17:16																				
ZZZZZZ			17:21																				
ZZZZZZ			17:27																				
ZZZZZZ			17:32																				
ZZZZZZ			17:38																				
ZZZZZZ			17:43																				
ZZZZZZ			17:49																				
CCV 240-41639/123			17:54																				
CCB 240-41639/124			18:01																				
ICSA 240-41639/125			18:07																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICSAB 240-41639/126			18:12																					
CCV 240-41639/127			18:19																					
CCB 240-41639/128			18:26																					
ZZZZZZ			18:32																					
ZZZZZZ			18:37																					
ZZZZZZ			18:43																					
ZZZZZZ			18:48																					
ZZZZZZ			18:54																					
ZZZZZZ			18:59																					
ZZZZZZ			19:05																					
ZZZZZZ			19:12																					
ZZZZZZ			19:17																					
ZZZZZZ			19:23																					
CCV 240-41639/139			19:30																					
CCB 240-41639/140			19:37																					
ZZZZZZ			19:42																					
ZZZZZZ			19:50																					
ZZZZZZ			19:55																					
ZZZZZZ			20:01																					
ZZZZZZ			20:06																					
ZZZZZZ			20:11																					
ZZZZZZ			20:17																					
ZZZZZZ			20:22																					
ZZZZZZ			20:28																					
ZZZZZZ			20:33																					
CCV 240-41639/151			20:39																					
CCB 240-41639/152			20:46																					
ZZZZZZ			20:52																					
ZZZZZZ			20:57																					
ZZZZZZ			21:03																					
ZZZZZZ			21:08																					
CCV 240-41639/157			21:14																					
CCB 240-41639/158			21:21																					
ZZZZZZ			21:26																					

Prep Types
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-41478/1-A			11:48	X																				
IC 240-41478/2-A			11:50	X																				
IC 240-41478/3-A			11:52	X																				
IC 240-41478/4-A			11:55	X																				
IC 240-41478/5-A			11:57	X																				
IC 240-41478/6-A			12:00	X																				
ICV 240-41478/7-A	1		12:07	X																				
ICB 240-41478/8-A	1		12:09	X																				
CRA 240-41478/9-A	1		12:11	X																				
CCVL 240-41478/12-A	1		12:17	X																				
CCB 240-41478/11-A			12:19																					
ZZZZZZ			12:21																					
ZZZZZZ			12:23																					
ZZZZZZ			12:26																					
ZZZZZZ			12:28																					
ZZZZZZ			12:30																					
ZZZZZZ			12:32																					
ZZZZZZ			12:34																					
ZZZZZZ			12:36																					
ZZZZZZ			12:38																					
ZZZZZZ			12:40																					
CCV 240-41478/10-A			12:42																					
CCB 240-41478/11-A			12:44																					
ZZZZZZ			12:46																					
ZZZZZZ			12:48																					
ZZZZZZ			12:50																					
ZZZZZZ			12:52																					
ZZZZZZ			12:54																					
ZZZZZZ			12:56																					
ZZZZZZ			12:58																					
ZZZZZZ			13:00																					
ZZZZZZ			13:02																					
ZZZZZZ			13:05																					
CCV 240-41478/10-A			13:07																					
CCB 240-41478/11-A			13:09																					
ZZZZZZ			13:10																					
ZZZZZZ			13:13																					
ZZZZZZ			13:15																					
ZZZZZZ			13:17																					
ZZZZZZ			13:19																					
ZZZZZZ			13:21																					
ZZZZZZ			13:23																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			13:25																					
ZZZZZZ			13:27																					
ZZZZZZ			13:30																					
CCV 240-41478/10-A			13:32																					
CCB 240-41478/11-A			13:34																					
ZZZZZZ			13:36																					
ZZZZZZ			13:38																					
ZZZZZZ			13:40																					
ZZZZZZ			13:42																					
ZZZZZZ			13:44																					
ZZZZZZ			13:46																					
ZZZZZZ			13:48																					
ZZZZZZ			13:50																					
ZZZZZZ			13:51																					
ZZZZZZ			13:53																					
CCV 240-41478/10-A			13:55																					
CCB 240-41478/11-A			13:58																					
ZZZZZZ			14:00																					
ZZZZZZ			14:02																					
ZZZZZZ			14:04																					
ZZZZZZ			14:05																					
CCV 240-41478/10-A			14:07																					
CCB 240-41478/11-A			14:09																					
CCV 240-41478/10-A			14:28																					
CCB 240-41478/11-A			14:30																					
ZZZZZZ			14:32																					
ZZZZZZ			14:34																					
ZZZZZZ			14:36																					
ZZZZZZ			14:38																					
ZZZZZZ			14:40																					
ZZZZZZ			14:42																					
ZZZZZZ			14:44																					
ZZZZZZ			14:46																					
ZZZZZZ			14:48																					
ZZZZZZ			14:50																					
CCV 240-41478/10-A			14:53																					
CCB 240-41478/11-A			14:55																					
ZZZZZZ			14:57																					
ZZZZZZ			15:00																					
ZZZZZZ			15:02																					
ZZZZZZ			15:04																					
ZZZZZZ			15:06																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			15:07																					
ZZZZZZ			15:09																					
ZZZZZZ			15:11																					
ZZZZZZ			15:13																					
ZZZZZZ			15:15																					
CCV 240-41478/10-A			15:17																					
CCB 240-41478/11-A			15:19																					
ZZZZZZ			15:21																					
ZZZZZZ			15:24																					
ZZZZZZ			15:26																					
ZZZZZZ			15:28																					
ZZZZZZ			15:31																					
ZZZZZZ			15:33																					
ZZZZZZ			15:35																					
ZZZZZZ			15:36																					
ZZZZZZ			15:39																					
ZZZZZZ			15:41																					
CCV 240-41478/10-A			15:43																					
CCB 240-41478/11-A			15:46																					
ZZZZZZ			15:49																					
ZZZZZZ			15:51																					
ZZZZZZ			15:53																					
ZZZZZZ			15:55																					
ZZZZZZ			15:57																					
ZZZZZZ			15:59																					
ZZZZZZ			16:01																					
ZZZZZZ			16:04																					
ZZZZZZ			16:06																					
ZZZZZZ			16:08																					
CCV 240-41478/10-A			16:10																					
CCB 240-41478/11-A			16:12																					
ZZZZZZ			16:13																					
ZZZZZZ			16:15																					
ZZZZZZ			16:18																					
ZZZZZZ			16:20																					
ZZZZZZ			16:23																					
ZZZZZZ			16:24																					
ZZZZZZ			16:26																					
ZZZZZZ			16:28																					
ZZZZZZ			16:30																					
ZZZZZZ			16:32																					
CCV 240-41478/10-A			16:34																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
CCB 240-41478/11-A			16:36																					
ZZZZZZ			16:38																					
ZZZZZZ			16:40																					
ZZZZZZ			16:42																					
ZZZZZZ			16:44																					
ZZZZZZ			16:46																					
ZZZZZZ			16:48																					
ZZZZZZ			16:50																					
ZZZZZZ			16:52																					
ZZZZZZ			16:55																					
ZZZZZZ			16:57																					
CCV 240-41478/10-A	1		16:59	X																				
CCB 240-41478/11-A	1		17:00	X																				
ZZZZZZ			17:02																					
ZZZZZZ			17:04																					
MB 240-41339/1-A	1	T	17:06	X																				
LCS 240-41339/2-A	1	T	17:08	X																				
ZZZZZZ			17:10																					
240-10487-S-12-B MS	1	T	17:13	X																				
240-10487-S-12-C MSD	1	T	17:15	X																				
240-10350-3	1	D	17:17	X																				
240-10350-4	1	T	17:19	X																				
240-10350-4	1	D	17:21	X																				
CCV 240-41478/10-A	1		17:23	X																				
CCB 240-41478/11-A	1		17:25	X																				
240-10350-5	1	T	17:27	X																				
240-10350-5	1	D	17:29	X																				
ZZZZZZ			17:31																					
ZZZZZZ			17:33																					
ZZZZZZ			17:36																					
ZZZZZZ			17:37																					
ZZZZZZ			17:39																					
ZZZZZZ			17:41																					
ZZZZZZ			17:43																					
ZZZZZZ			17:45																					
CCV 240-41478/10-A	1		17:47	X																				
CCB 240-41478/11-A	1		17:49	X																				
ZZZZZZ			17:51																					
ZZZZZZ			17:53																					
ZZZZZZ			17:55																					
ZZZZZZ			17:57																					
ZZZZZZ			17:59																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																			
				Hg																			
ZZZZZZ			18:01																				
CCV 240-41478/10-A			18:03																				
CCB 240-41478/11-A			18:05																				

Prep Types
D = Dissolved
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-41478/1-A			10:23	X																				
IC 240-41478/2-A			10:25	X																				
IC 240-41478/3-A			10:27	X																				
IC 240-41478/4-A			10:29	X																				
IC 240-41478/5-A			10:32	X																				
IC 240-41478/6-A			10:35	X																				
ICV 240-41478/7-A	1		10:37	X																				
ICB 240-41478/8-A	1		10:39	X																				
CRA 240-41478/9-A	1		10:41	X																				
CCV 240-41478/10-A			10:43																					
CCB 240-41478/11-A			10:45																					
ZZZZZZ			10:47																					
ZZZZZZ			10:49																					
ZZZZZZ			10:51																					
ZZZZZZ			10:53																					
ZZZZZZ			10:55																					
ZZZZZZ			10:57																					
ZZZZZZ			10:59																					
ZZZZZZ			11:00																					
ZZZZZZ			11:02																					
ZZZZZZ			11:04																					
CCV 240-41478/10-A			11:09																					
CCB 240-41478/11-A			11:12																					
ZZZZZZ			11:14																					
ZZZZZZ			11:16																					
ZZZZZZ			11:18																					
ZZZZZZ			11:20																					
ZZZZZZ			11:22																					
ZZZZZZ			11:24																					
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
ZZZZZZ			11:31																					
ZZZZZZ			11:33																					
CCV 240-41478/10-A			11:35																					
CCB 240-41478/11-A			11:37																					
ZZZZZZ			11:39																					
ZZZZZZ			11:42																					
ZZZZZZ			11:43																					
ZZZZZZ			11:45																					
ZZZZZZ			11:47																					
ZZZZZZ			11:49																					
ZZZZZZ			11:51																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			11:53																					
ZZZZZZ			11:55																					
ZZZZZZ			11:58																					
CCV 240-41478/10-A			11:59																					
CCB 240-41478/11-A			12:01																					
ZZZZZZ			12:03																					
ZZZZZZ			12:05																					
ZZZZZZ			12:07																					
ZZZZZZ			12:09																					
ZZZZZZ			12:11																					
ZZZZZZ			12:13																					
ZZZZZZ			12:15																					
ZZZZZZ			12:18																					
ZZZZZZ			12:20																					
ZZZZZZ			12:22																					
CCV 240-41478/10-A	1		12:23	X																				
CCB 240-41478/11-A	1		12:25	X																				
ZZZZZZ			12:28																					
ZZZZZZ			12:29																					
ZZZZZZ			12:31																					
ZZZZZZ			12:33																					
MB 240-41350/1-A	1	T	12:35	X																				
LCS 240-41350/2-A	1	T	12:37	X																				
240-10350-2	1	T	12:39	X																				
240-10350-2 MS	1	T	12:42	X																				
240-10350-2 MSD	1	T	12:43	X																				
240-10350-2	1	D	12:45	X																				
CCV 240-41478/10-A	1		12:47	X																				
CCB 240-41478/11-A	1		12:49	X																				
240-10350-3	1	T	12:51	X																				
ZZZZZZ			12:53																					
ZZZZZZ			12:55																					
ZZZZZZ			12:57																					
ZZZZZZ			13:00																					
ZZZZZZ			13:02																					
ZZZZZZ			13:04																					
ZZZZZZ			13:06																					
ZZZZZZ			13:08																					
ZZZZZZ			13:09																					
CCV 240-41478/10-A	1		13:12	X																				
CCB 240-41478/11-A	1		13:14	X																				
ZZZZZZ			13:16																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10350-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			13:19																					
ZZZZZZ			13:21																					
ZZZZZZ			13:24																					
ZZZZZZ			13:26																					
ZZZZZZ			13:28																					
ZZZZZZ			13:31																					
ZZZZZZ			13:33																					
ZZZZZZ			13:34																					
ZZZZZZ			13:36																					
CCV 240-41478/10-A			13:38																					
CCB 240-41478/11-A			13:40																					
ZZZZZZ			13:42																					
ZZZZZZ			13:44																					
ZZZZZZ			13:46																					
ZZZZZZ			13:48																					
ZZZZZZ			13:50																					
ZZZZZZ			13:53																					
ZZZZZZ			13:55																					
ZZZZZZ			13:57																					
ZZZZZZ			13:59																					
ZZZZZZ			14:01																					
CCV 240-41478/10-A			14:03																					
CCB 240-41478/11-A			14:05																					
ZZZZZZ			14:08																					
ZZZZZZ			14:10																					
ZZZZZZ			14:12																					
ZZZZZZ			14:14																					
ZZZZZZ			14:16																					
ZZZZZZ			14:18																					
ZZZZZZ			14:20																					
ZZZZZZ			14:22																					
CCV 240-41478/10-A			14:25																					
CCB 240-41478/11-A			14:27																					

Prep Types
D = Dissolved
T = Total/NA

Case Narrative

TestAmerica West Sacramento Project Number G2D230413

WATER, 6850, Perchlorate
Sample(s): 1, 1MS, 1MSD, 2, 3, 4
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MR8L91AC
SMCS: MR8L91AD

There were no other anomalies associated with this project.

Sample Summary

TestAmerica West Sacramento Project Number G2D230413

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MR5QT	1	MSA-MW15S-041812	4/18/2012 11:40 AM	4/20/2012 09:00 AM
MR5QX	2	MSA-MW38S-041812	4/18/2012 11:55 AM	4/20/2012 09:00 AM
MR5Q1	3	MSA-MW151-041812	4/18/2012 02:16 PM	4/20/2012 09:00 AM
MR5Q4	4	MSA-MW15D-041812	4/18/2012 03:35 PM	4/20/2012 09:00 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

G2D230413

PARAMETER	ANALYTICAL METHOD
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D230413 Work Order #...: MR8L91AA Matrix.....: WATER
MB Lot-Sample #: G2D270000-065

Prep Date.....: 04/27/12
Analysis Date..: 05/01/12 Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D230413 Work Order #...: MR8L91AC Matrix.....: WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 Analysis Date..: 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	93	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D230413 Work Order #...: MR8L91AC Matrix.....: WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 Analysis Date..: 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.67	ug/L	93	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D230413 Work Order #...: MR8L91AD Matrix.....: WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 Analysis Date..: 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	**98**	**(80 - 120)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D230413 Work Order #...: MR8L91AD Matrix.....: WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 Analysis Date..: 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.89	ug/L	98	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D230413 Work Order #...: MR5QT1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2D230413-001 MR5QT1AD-MSD
Date Sampled...: 04/18/12 Date Received..: 04/20/12
Prep Date.....: 04/27/12 Analysis Date..: 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	89	(80 - 120)			SW846 6850
	97	(80 - 120)	8.8	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D230413 Work Order #...: MR5QT1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2D230413-001 MR5QT1AD-MSD
Date Sampled...: 04/18/12 Date Received..: 04/20/12
Prep Date.....: 04/27/12 Analysis Date..: 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.46	ug/L	89		SW846 6850
	ND	5.00	4.87	ug/L	97	8.8	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **MAY 17, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION-**
VOLATILE ORGANIC COMPOUNDS/SVOC SIM/GRO/DRO/EXP/PERCHLORATE
MARTIN STATE AIRPORT GROUNDWATER SAMPLING – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-10391-1

SAMPLES: 6/Aqueous/VOC

MSA-MW19D-041912	MSA-MW19I-041912	MSA-MW34I-041912
MSA-MW34S-041912	MSA-MW39S-041912	TB-041912

5/Aqueous/SVOC SIM/Perchlorate

MSA-MW19D-041912	MSA-MW19I-041912	MSA-MW34I-041912
MSA-MW34S-041912	MSA-MW39S-041912	

2/Aqueous/GRO/DRO

MSA-MW34S-041912	MSA-MW39S-041912

1/Aqueous/EXP

MSA-MW15S-041812

Overview

The sample set for Martin State Airport Groundwater Sampling, SDG 240-10391-1 consists of five (5) aqueous environmental samples and one trip blank. All samples were analyzed for volatile organic compounds (VOCs). Five (5) aqueous environmental samples were analyzed for 1,4-dioxane in the semivolatile organic compound (SVOC) SIM fraction and perchlorate. Two (2) aqueous environmental samples; MSA-MW34S-041912 and MSA-MW39S-041912 were analyzed for gasoline range organics (GRO) and diesel range organics (DRO). GRO is listed on the form 1s and EDD as total petroleum hydrocarbons (TPH) (C6-C10) and DRO as TPH (C10-C32). One (1) aqueous environmental sample, MSA-MW15S-041812, was analyzed for the explosive (EXP), RDX. There are no field duplicate pairs included in this SDG.

The samples were collected on April 18 and 19, 2012 and analyzed by Test America Laboratories, Inc. Volatile organic compound analyses were conducted in accordance to SW-846 Method 8260B. The analyses for 1,4-dioxane followed SW-846 Method 8270C in Selective Ion Monitoring SIM mode. GRO and DRO analyses followed SW-846 Method 8015B. The analyses for RDX and perchlorate were conducted using SW-846 Methods 8330 and 6850, respectively.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, matrix spike/matrix spike duplicate results, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- In the volatile initial calibration of instrument A3UX10 on April 9, 2012 and the continuing calibrations on April 27, 2012 @ 9:48, tert-butyl alcohol and vinyl acetate had relative retention factors (RRFs) less than the 0.05 quality control limit. The nondetected tert-butyl alcohol and vinyl acetate results were qualified as rejected (UR) in the affected samples MSA-MW19D-041912, MSA-MW19I-041912, MSA-MW34I-041912, MSA-MW34S-041912 and TB-041912.

- In the volatile initial calibration of instrument A3UX16 on April 29, 2012 and the continuing calibration on April 30, 2012 @ 11:50, tert-butyl alcohol had a RRF less than the 0.05 quality control limit. In addition, the continuing calibration on April 30, 2012 had a RF for vinyl acetate less than the 0.05 quality control limit. The nondetected vinyl acetate and tert-butyl alcohol results were qualified as rejected (UR) in the affected sample MSA-MW39S-041912.

Minor Problems

- GRO was detected in the laboratory method blank 240-41320/6 affecting all samples.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
GRO	26.5	132.5

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Positive results less than the action level were qualified (B) as a result of blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data.

- TICs were qualified as presumptively present (NJ) in samples MSA-MW34I-041912 and MSA-MW39S-041912.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

The continuing calibration percent differences (%Ds) for several target analytes were greater than the 20% quality control limit but less than 50% on April 27, 2012 @ 9:48 on instrument A3UX10. The analytes were 1,1,2-trichlorotrifluoroethane, tert-butyl alcohol, 4-methyl-2-pentanone, 2-hexanone, bromoform, n-butylbenzene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene and 1,2,3-trichlorobenzene. No action was taken on the nondetected results of the aforementioned analytes in the affected samples MSA-MW19D-041912, MSA-MW19I-041912, MSA-MW34I-041912, MSA-MW34S-041912 and TB-041912.

Contamination was detected in the VOC laboratory method blank associated with batch 240-42171/5 analyzed on April 30, 2012 @ 12:59 on instrument A3UX16.

Contaminant	Maximum Concentration (ug/L)
1,2,3-trichlorobenzene	0.288
Methylcyclohexane (TIC)	0.197

No action was taken on the nondetected 1,2,3-trichlorobenzene result in sample MSA-MW39S-041912.

The laboratory control sample (LCS) percent recovery (%R) of tert-butyl alcohol was less than the lower quality control limit in batch 240-41857/4. No action was taken on the nondetected tert-butyl alcohol results in the affected samples which were qualified as rejected due to a more severe noncompliance.

The matrix spike (MS) %R of tert-butyl alcohol was less than the lower quality control limit in sample 240-10350-A-5. The matrix spike duplicate (MSD) %R and relative percent difference (RPD) were within quality control limits. No action was taken.

The MS/MSD %Rs of 2-chloroethyl vinyl ether were 0% in sample 240-10350-A-5. No action was taken since this was not a sample included in this SDG.

The following sample was diluted in the VOC fraction resulting in elevated reporting limits.

Sample	Dilution Factor
MSA-MW19I-041912	5X

Nondetected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Tert-butyl alcohol and vinyl acetate had RRFs less than quality control limits in the initial and continuing calibrations. GRO was detected in the laboratory method blank.

Other Factors Affecting Data Quality: TICs were detected in several samples.

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (9/94).The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti
Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: OV	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		1.2	U		0.33	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		1.1	U		0.31	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.9	U		0.26	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		1.4	U		0.4	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.75	U		0.21	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.95	U		0.27	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.65	U		0.19	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.85	U		0.24	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		2.2	U		0.61	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.03	U		0.0084	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.75	U		0.21	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.6	U		0.17	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		3.4	U		0.96	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		1.2	U		0.34	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.65	U		0.19	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		1.3	J	P	1.6			0.36	J	P
1,2-DICHLOROPROPANE		0.18	U		0.9	U		0.26	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.7	U		0.2	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.8	U		0.23	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.65	U		0.19	U		0.13	U	
1,4-DIOXANE													
2,2-DICHLOROPROPANE		0.13	U		0.65	U		0.19	U		0.13	U	
2-BUTANONE		0.57	U		2.9	U		0.81	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		5	U		1.4	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.55	U		0.16	U		0.11	U	
2-HEXANONE		0.41	U		2.1	U		0.59	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.9	U		0.26	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.6	U		0.17	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		1.6	U		0.46	U		0.32	U	
ACETONE		1.1	U		5.5	U		1.6	U		1.1	U	
BENZENE		0.13	U		0.74	J	P	1.2	J	P	0.14	J	P
BROMOBENZENE		0.13	U		0.65	U		0.19	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		1.5	U		0.41	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.75	U		0.21	U		0.15	U	
BROMOFORM		0.64	U		3.2	U		0.91	U		0.64	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912			TB-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7			240-10391-2		
FRACTION: OV	SAMP_DATE	4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.18	J	P	0.13	U	
1,2-DICHLOROETHANE		0.41	J	P	0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U	
1,4-DIOXANE		27	NJ	Z1			
2,2-DICHLOROPROPANE		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U	
BENZENE		1.7			0.13	U	
BROMOBENZENE		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: OV	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMOMETHANE		0.41	U		2.1	U		0.59	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.65	U		0.19	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.65	U		0.19	U		0.13	U	
CHLOROBENZENE		0.15	U		0.75	U		0.21	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.9	U		0.26	U		0.18	U	
CHLOROETHANE		0.29	U		1.5	U		0.41	U		0.29	U	
CHLOROFORM		0.16	U		0.8	U		0.23	U		0.16	U	
CHLOROMETHANE		0.3	U		1.5	U		0.43	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		110			4.3			2.2		
CIS-1,3-DICHLOROPROPENE		0.14	U		0.7	U		0.2	U		0.14	U	
CYCLOHEXANE													
DIBROMOMETHANE		0.28	U		1.4	U		0.4	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		1.6	U		0.44	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		7.5	U		2.1	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.55	U		0.16	U		0.11	U	
ETHYLBENZENE		0.17	U		0.85	U		0.24	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		1.5	U		0.43	U		0.3	U	
INDANE													
ISOPROPYLBENZENE		0.13	U		0.65	U		0.19	U		0.13	U	
M+P-XYLENES		0.24	U		1.2	U		7.7			0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.85	U		0.24	U		0.17	U	
METHYLCYCLOHEXANE													
METHYLENE CHLORIDE		0.33	U		1.7	U		0.47	U		0.33	U	
NAPHTHALENE		0.24	U		1.2	U		0.34	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.6	U		0.17	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.7	U		0.2	U		0.14	U	
O-XYLENE		0.14	U		0.7	U		2.5			0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.65	U		0.19	U		0.13	U	
STYRENE		0.11	U		0.55	U		0.16	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.34	U		0.096	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.65	U		0.19	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	20	UR	C	5.6	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		1.5	U		0.41	U		0.29	U	
TETRAHYDROFURAN								1.9	NJ	Z1			
TOLUENE		0.13	U		0.65	U		0.19	U		0.13	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912			TB-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7			240-10391-2		
FRACTION: OV	SAMP_DATE	4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMOMETHANE		0.41	U		0.41	U	
CARBON DISULFIDE		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U	
CHLOROBENZENE		4.8			0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		4.4			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U	
CYCLOHEXANE		0.38	NJ	Z1			
DIBROMOMETHANE		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U	
ETHYLBENZENE		0.21	J	P	0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U	
INDANE		2.9	NJ	Z1			
ISOPROPYLBENZENE		0.13	U		0.13	U	
M+P-XYLENES		0.61	J	P	0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U	
METHYLCYCLOHEXANE		0.28	NJ	Z1			
METHYLENE CHLORIDE		0.33	U		0.33	U	
NAPHTHALENE		2.1			0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U	
O-XYLENE		0.4	J	P	0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
STYRENE		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U	
TETRAHYDROFURAN							
TOLUENE		0.24	J	P	0.13	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: OV	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL XYLENES		0.28	U		1.4	U		10			0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.95	U		0.27	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.95	U		0.27	U		0.19	U	
TRICHLOROETHENE		8.7			39			0.24	U		0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		1.1	U		0.3	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.95	UR	C	0.27	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		52			31			1.1		

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912			TB-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7			240-10391-2		
FRACTION: OV	SAMP_DATE	4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TOTAL XYLENES		1	J	P	0.28	U	
TRANS-1,2-DICHLOROETHENE		0.3	J	P	0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U	
TRICHLOROETHENE		5			0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		3.8			0.22	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: OS	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.49	U		7.8			0.47	U		0.48	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7		
FRACTION: OS	SAMP_DATE	4/19/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,4-DIOXANE		12		

PROJ_NO: 04021	NSAMPLE	MSA-MW34S-041912			MSA-MW39S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-5			240-10391-7		
FRACTION: PET	SAMP_DATE	4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		38	B	A	69	B	A
TPH (C10-C32)		230	U		990		

PROJ_NO: 04021	NSAMPLE	MSA-MW15S-041812		
SDG: 240-10391-1	LAB_ID	240-10391-1		
FRACTION: EXP	SAMP_DATE	4/18/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
RDX		0.037	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: MISC	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U		0.082	U		0.082	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7		
FRACTION: MISC	SAMP_DATE	4/19/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
PERCHLORATE		0.082	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19D-041912 | Lab Sample ID: 240-10391-3

Matrix: Water | Lab File ID: UXX5002.D

Analysis Method: 8260C | Date Collected: 04/19/2012 11:07

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 15:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19D-041912 Lab Sample ID: 240-10391-3

Matrix: Water Lab File ID: UXX5002.D

Analysis Method: 8260C Date Collected: 04/19/2012 11:07

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 15:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	8.7		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19D-041912 | Lab Sample ID: 240-10391-3

Matrix: Water | Lab File ID: UXX5002.D

Analysis Method: 8260C | Date Collected: 04/19/2012 11:07

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 15:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		63-129
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	108		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19D-041912 Lab Sample ID: 240-10391-3

Matrix: Water Lab File ID: UXX5002.D

Analysis Method: 8260C Date Collected: 04/19/2012 11:07

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 15:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19I-041912 | Lab Sample ID: 240-10391-4

Matrix: Water | Lab File ID: UXX4995.D

Analysis Method: 8260C | Date Collected: 04/19/2012 12:18

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:24

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.2
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	1.1
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	5.0	U	5.0	1.4
75-34-3	1,1-Dichloroethane	5.0	U	5.0	0.75
75-35-4	1,1-Dichloroethene	5.0	U	5.0	0.95
563-58-6	1,1-Dichloropropene	5.0	U	5.0	0.65
87-61-6	1,2,3-Trichlorobenzene	5.0	U	5.0	0.85
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	2.2
526-73-8	1,2,3-Trimethylbenzene	25	U	25	0.030
120-82-1	1,2,4-Trichlorobenzene	5.0	U	5.0	0.75
95-63-6	1,2,4-Trimethylbenzene	5.0	U	5.0	0.60
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	3.4
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.65
107-06-2	1,2-Dichloroethane	1.3	J	5.0	1.1
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.90
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.70
142-28-9	1,3-Dichloropropane	5.0	U	5.0	0.80
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.65
594-20-7	2,2-Dichloropropane	5.0	U	5.0	0.65
110-75-8	2-Chloroethyl vinyl ether	50	U	50	5.0
95-49-8	2-Chlorotoluene	5.0	U	5.0	0.55
591-78-6	2-Hexanone	50	U	50	2.1
108-86-1	Bromobenzene	5.0	U	5.0	0.65
74-97-5	Bromochloromethane	5.0	U	5.0	1.5
106-43-4	4-Chlorotoluene	5.0	U	5.0	0.90
99-87-6	p-Isopropyltoluene	5.0	U	5.0	0.60
67-64-1	Acetone	50	U	50	5.5
71-43-2	Benzene	0.74	J	5.0	0.65
75-25-2	Bromoform	5.0	U	5.0	3.2
74-83-9	Bromomethane	5.0	U	5.0	2.1
75-15-0	Carbon disulfide	5.0	U	5.0	0.65
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.65
108-90-7	Chlorobenzene	5.0	U	5.0	0.75
75-00-3	Chloroethane	5.0	U	5.0	1.5

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19I-041912 | Lab Sample ID: 240-10391-4

Matrix: Water | Lab File ID: UXX4995.D

Analysis Method: 8260C | Date Collected: 04/19/2012 12:18

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:24

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	5.0	U	5.0	0.80
74-87-3	Chloromethane	5.0	U	5.0	1.5
156-59-2	cis-1,2-Dichloroethene	110		5.0	0.85
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.70
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.5
74-95-3	Dibromomethane	5.0	U	5.0	1.4
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75
75-71-8	Dichlorodifluoromethane	5.0	U	5.0	1.6
100-41-4	Ethylbenzene	5.0	U	5.0	0.85
106-93-4	1,2-Dibromoethane	5.0	U	5.0	1.2
108-20-3	Diisopropyl ether	50	U	50	7.5
91-20-3	Naphthalene	5.0	U	5.0	1.2
179601-23-1	m-Xylene & p-Xylene	10	U	10	1.2
104-51-8	n-Butylbenzene	5.0	U	5.0	0.60
98-82-8	Isopropylbenzene	5.0	U	5.0	0.65
103-65-1	n-Propylbenzene	5.0	U	5.0	0.70
78-93-3	2-Butanone	50	U	50	2.9
108-10-1	4-Methyl-2-pentanone	50	U	50	1.6
135-98-8	sec-Butylbenzene	5.0	U	5.0	0.65
1634-04-4	Methyl tert-butyl ether	25	U	25	0.85
994-05-8	Tert-amyl-methyl ether (TAME)	25	U	25	0.34
75-09-2	Methylene Chloride	5.0	U	5.0	1.7
95-47-6	o-Xylene	5.0	U	5.0	0.70
100-42-5	Styrene	5.0	U	5.0	0.55
637-92-3	Ethyl-t-butyl ether (ETBE)	25	U	25	0.55
98-06-6	tert-Butylbenzene	5.0	U	5.0	0.65
127-18-4	Tetrachloroethene	5.0	U	5.0	1.5
108-88-3	Toluene	5.0	U	5.0	0.65
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.95
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.95
79-01-6	Trichloroethene	39		5.0	0.85
75-69-4	Trichlorofluoromethane	5.0	U	5.0	1.1
108-05-4	Vinyl acetate	10	U	10	0.95
75-01-4	Vinyl chloride	52		5.0	1.1
75-65-0	tert-Butyl alcohol	250	U *	250	20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19I-041912 | Lab Sample ID: 240-10391-4

Matrix: Water | Lab File ID: UXX4995.D

Analysis Method: 8260C | Date Collected: 04/19/2012 12:18

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:24

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	10	U	10	1.4
124-48-1	Dibromochloromethane	5.0	U	5.0	0.90

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		63-129
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
2037-26-5	Toluene-d8 (Surr)	97		74-115
1868-53-7	Dibromofluoromethane (Surr)	108		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19I-041912 | Lab Sample ID: 240-10391-4

Matrix: Water | Lab File ID: UXX4995.D

Analysis Method: 8260C | Date Collected: 04/19/2012 12:18

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:24

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34I-041912 | Lab Sample ID: 240-10391-6

Matrix: Water | Lab File ID: UXX4996.D

Analysis Method: 8260C | Date Collected: 04/19/2012 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:46

Soil Aliquot Vol: | Dilution Factor: 1.429

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.4	U	1.4	0.33
71-55-6	1,1,1-Trichloroethane	1.4	U	1.4	0.31
79-34-5	1,1,2,2-Tetrachloroethane	1.4	U	1.4	0.26
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.4	U	1.4	0.40
75-34-3	1,1-Dichloroethane	1.4	U	1.4	0.21
75-35-4	1,1-Dichloroethene	1.4	U	1.4	0.27
563-58-6	1,1-Dichloropropene	1.4	U	1.4	0.19
87-61-6	1,2,3-Trichlorobenzene	1.4	U	1.4	0.24
96-18-4	1,2,3-Trichloropropane	1.4	U	1.4	0.61
526-73-8	1,2,3-Trimethylbenzene	7.1	U	7.1	0.0084
120-82-1	1,2,4-Trichlorobenzene	1.4	U	1.4	0.21
95-63-6	1,2,4-Trimethylbenzene	1.4	U	1.4	0.17
96-12-8	1,2-Dibromo-3-Chloropropane	2.9	U	2.9	0.96
95-50-1	1,2-Dichlorobenzene	1.4	U	1.4	0.19
107-06-2	1,2-Dichloroethane	1.6		1.4	0.31
78-87-5	1,2-Dichloropropane	1.4	U	1.4	0.26
541-73-1	1,3-Dichlorobenzene	1.4	U	1.4	0.20
142-28-9	1,3-Dichloropropane	1.4	U	1.4	0.23
106-46-7	1,4-Dichlorobenzene	1.4	U	1.4	0.19
594-20-7	2,2-Dichloropropane	1.4	U	1.4	0.19
110-75-8	2-Chloroethyl vinyl ether	14	U	14	1.4
95-49-8	2-Chlorotoluene	1.4	U	1.4	0.16
591-78-6	2-Hexanone	14	U	14	0.59
108-86-1	Bromobenzene	1.4	U	1.4	0.19
74-97-5	Bromochloromethane	1.4	U	1.4	0.41
106-43-4	4-Chlorotoluene	1.4	U	1.4	0.26
99-87-6	p-Isopropyltoluene	1.4	U	1.4	0.17
67-64-1	Acetone	14	U	14	1.6
71-43-2	Benzene	1.2	J	1.4	0.19
75-25-2	Bromoform	1.4	U	1.4	0.91
74-83-9	Bromomethane	1.4	U	1.4	0.59
75-15-0	Carbon disulfide	1.4	U	1.4	0.19
56-23-5	Carbon tetrachloride	1.4	U	1.4	0.19
108-90-7	Chlorobenzene	1.4	U	1.4	0.21
75-00-3	Chloroethane	1.4	U	1.4	0.41

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34I-041912 Lab Sample ID: 240-10391-6

Matrix: Water Lab File ID: UXX4996.D

Analysis Method: 8260C Date Collected: 04/19/2012 11:10

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 13:46

Soil Aliquot Vol: Dilution Factor: 1.429

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.4	U	1.4	0.23
74-87-3	Chloromethane	1.4	U	1.4	0.43
156-59-2	cis-1,2-Dichloroethene	4.3		1.4	0.24
10061-01-5	cis-1,3-Dichloropropene	1.4	U	1.4	0.20
87-68-3	Hexachlorobutadiene	1.4	U	1.4	0.43
74-95-3	Dibromomethane	1.4	U	1.4	0.40
75-27-4	Bromodichloromethane	1.4	U	1.4	0.21
75-71-8	Dichlorodifluoromethane	1.4	U	1.4	0.44
100-41-4	Ethylbenzene	1.4	U	1.4	0.24
106-93-4	1,2-Dibromoethane	1.4	U	1.4	0.34
108-20-3	Diisopropyl ether	14	U	14	2.1
91-20-3	Naphthalene	1.4	U	1.4	0.34
179601-23-1	m-Xylene & p-Xylene	7.7		2.9	0.34
104-51-8	n-Butylbenzene	1.4	U	1.4	0.17
98-82-8	Isopropylbenzene	1.4	U	1.4	0.19
103-65-1	n-Propylbenzene	1.4	U	1.4	0.20
78-93-3	2-Butanone	14	U	14	0.81
108-10-1	4-Methyl-2-pentanone	14	U	14	0.46
135-98-8	sec-Butylbenzene	1.4	U	1.4	0.19
1634-04-4	Methyl tert-butyl ether	7.1	U	7.1	0.24
994-05-8	Tert-amyl-methyl ether (TAME)	7.1	U	7.1	0.096
75-09-2	Methylene Chloride	1.4	U	1.4	0.47
95-47-6	o-Xylene	2.5		1.4	0.20
100-42-5	Styrene	1.4	U	1.4	0.16
637-92-3	Ethyl-t-butyl ether (ETBE)	7.1	U	7.1	0.16
98-06-6	tert-Butylbenzene	1.4	U	1.4	0.19
127-18-4	Tetrachloroethene	1.4	U	1.4	0.41
108-88-3	Toluene	1.4	U	1.4	0.19
156-60-5	trans-1,2-Dichloroethene	1.4	U	1.4	0.27
10061-02-6	trans-1,3-Dichloropropene	1.4	U	1.4	0.27
79-01-6	Trichloroethene	1.4	U	1.4	0.24
75-69-4	Trichlorofluoromethane	1.4	U	1.4	0.30
108-05-4	Vinyl acetate	2.9	U	2.9	0.27
75-01-4	Vinyl chloride	31		1.4	0.31
75-65-0	tert-Butyl alcohol	71	U *	71	5.6

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34I-041912 | Lab Sample ID: 240-10391-6

Matrix: Water | Lab File ID: UXX4996.D

Analysis Method: 8260C | Date Collected: 04/19/2012 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 13:46

Soil Aliquot Vol: | Dilution Factor: 1.429

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	10		2.9	0.40
124-48-1	Dibromochloromethane	1.4	U	1.4	0.26

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		63-129
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	105		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34I-041912 Lab Sample ID: 240-10391-6

Matrix: Water Lab File ID: UXX4996.D

Analysis Method: 8260C Date Collected: 04/19/2012 11:10

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 13:46

Soil Aliquot Vol: Dilution Factor: 1.429

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
109-99-9	Tetrahydrofuran	4.41	1.9	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 | Lab Sample ID: 240-10391-5

Matrix: Water | Lab File ID: UXX5003.D

Analysis Method: 8260C | Date Collected: 04/19/2012 10:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 16:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	0.36	J	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	0.14	J	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 | Lab Sample ID: 240-10391-5

Matrix: Water | Lab File ID: UXX5003.D

Analysis Method: 8260C | Date Collected: 04/19/2012 10:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 16:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	2.2		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.1		1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 Lab Sample ID: 240-10391-5

Matrix: Water Lab File ID: UXX5003.D

Analysis Method: 8260C Date Collected: 04/19/2012 10:05

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 16:16

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	105		63-129
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	105		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 | Lab Sample ID: 240-10391-5

Matrix: Water | Lab File ID: UXX5003.D

Analysis Method: 8260C | Date Collected: 04/19/2012 10:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 16:16

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 | Lab Sample ID: 240-10391-7

Matrix: Water | Lab File ID: UXM5275.D

Analysis Method: 8260C | Date Collected: 04/19/2012 13:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 14:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	0.18	J	1.0	0.13
107-06-2	1,2-Dichloroethane	0.41	J	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.7		1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	4.8		1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 Lab Sample ID: 240-10391-7

Matrix: Water Lab File ID: UXM5275.D

Analysis Method: 8260C Date Collected: 04/19/2012 13:10

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 14:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	4.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	0.21	J	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	2.1		1.0	0.24
179601-23-1	m-Xylene & p-Xylene	0.61	J	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	0.40	J	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	0.24	J	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	0.30	J	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	5.0		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	3.8		1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 | Lab Sample ID: 240-10391-7

Matrix: Water | Lab File ID: UXM5275.D

Analysis Method: 8260C | Date Collected: 04/19/2012 13:10

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 14:00

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	1.0	J	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	84		63-129
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
2037-26-5	Toluene-d8 (Surr)	85		74-115
1868-53-7	Dibromofluoromethane (Surr)	83		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 Lab Sample ID: 240-10391-7

Matrix: Water Lab File ID: UXM5275.D

Analysis Method: 8260C Date Collected: 04/19/2012 13:10

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 14:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 4 TIC Result Total: 30.56

CAS NO.	COMPOUND NAME	RT	RESULT	Q
110-82-7	Cyclohexane	5.23	0.38	J
108-87-2	Methylcyclohexane	6.20	0.28	J B
123-91-1	1,4-Dioxane	6.32	27	J
496-11-7	Indane	10.91	2.9	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: TB-041912 | Lab Sample ID: 240-10391-2

Matrix: Water | Lab File ID: UXX5001.D

Analysis Method: 8260C | Date Collected: 04/19/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 15:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: TB-041912 Lab Sample ID: 240-10391-2

Matrix: Water Lab File ID: UXX5001.D

Analysis Method: 8260C Date Collected: 04/19/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 15:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: TB-041912 | Lab Sample ID: 240-10391-2

Matrix: Water | Lab File ID: UXX5001.D

Analysis Method: 8260C | Date Collected: 04/19/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 15:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		63-129
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
2037-26-5	Toluene-d8 (Surr)	99		74-115
1868-53-7	Dibromofluoromethane (Surr)	110		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: TB-041912 | Lab Sample ID: 240-10391-2

Matrix: Water | Lab File ID: UXX5001.D

Analysis Method: 8260C | Date Collected: 04/19/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 15:33

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19D-041912 Lab Sample ID: 240-10391-3

Matrix: Water Lab File ID: 20425011.D

Analysis Method: 8270C Date Collected: 04/19/2012 11:07

Extract. Method: 3520C Date Extracted: 04/23/2012 08:50

Sample wt/vol: 1010(mL) Date Analyzed: 04/25/2012 12:12

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 41486 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	50		28-110
367-12-4	2-Fluorophenol (Surr)	50		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	59		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	49		27-111
4165-62-2	Phenol-d5 (Surr)	52		10-110
1718-51-0	Terphenyl-d14 (Surr)	70		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19I-041912 | Lab Sample ID: 240-10391-4

Matrix: Water | Lab File ID: 20425012.D

Analysis Method: 8270C | Date Collected: 04/19/2012 12:18

Extract. Method: 3520C | Date Extracted: 04/23/2012 08:50

Sample wt/vol: 1050(mL) | Date Analyzed: 04/25/2012 12:30

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41486 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	7.8		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	42		28-110
367-12-4	2-Fluorophenol (Surr)	44		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	44		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	41		27-111
4165-62-2	Phenol-d5 (Surr)	44		10-110
1718-51-0	Terphenyl-d14 (Surr)	53		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 | Lab Sample ID: 240-10391-5

Matrix: Water | Lab File ID: 20425013.D

Analysis Method: 8270C | Date Collected: 04/19/2012 10:05

Extract. Method: 3520C | Date Extracted: 04/23/2012 08:50

Sample wt/vol: 1020(mL) | Date Analyzed: 04/25/2012 12:49

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41486 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.98	U	0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	57		28-110
367-12-4	2-Fluorophenol (Surr)	58		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	62		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	59		27-111
4165-62-2	Phenol-d5 (Surr)	62		10-110
1718-51-0	Terphenyl-d14 (Surr)	72		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name:	TestAmerica Canton	Job No.:	240-10391-1
SDG No.:			
Client Sample ID:	MSA-MW34I-041912	Lab Sample ID:	240-10391-6
Matrix:	Water	Lab File ID:	20425015.D
Analysis Method:	8270C	Date Collected:	04/19/2012 11:10
Extract. Method:	3520C	Date Extracted:	04/23/2012 08:50
Sample wt/vol:	1050(mL)	Date Analyzed:	04/25/2012 14:21
Con. Extract Vol.:	2(mL)	Dilution Factor:	1
Injection Volume:	1(uL)	Level: (low/med)	Low
% Moisture:		GPC Cleanup:(Y/N)	N
Analysis Batch No.:	41486	Units:	ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	55		28-110
367-12-4	2-Fluorophenol (Surr)	56		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	59		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	54		27-111
4165-62-2	Phenol-d5 (Surr)	57		10-110
1718-51-0	Terphenyl-d14 (Surr)	72		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 | Lab Sample ID: 240-10391-7

Matrix: Water | Lab File ID: 20425029.D

Analysis Method: 8270C | Date Collected: 04/19/2012 13:10

Extract. Method: 3520C | Date Extracted: 04/23/2012 08:50

Sample wt/vol: 980(mL) | Date Analyzed: 04/25/2012 18:42

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41486 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	12		1.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	49		28-110
367-12-4	2-Fluorophenol (Surr)	43		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	43		27-111
4165-62-2	Phenol-d5 (Surr)	48		10-110
1718-51-0	Terphenyl-d14 (Surr)	58		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 Lab Sample ID: 240-10391-5

Matrix: Water Lab File ID: YF042414.D

Analysis Method: 8015B Date Collected: 04/19/2012 10:05

Sample wt/vol: 5(mL) Date Analyzed: 04/24/2012 18:24

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41320 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	38	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	66		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 Lab Sample ID: 240-10391-7

Matrix: Water Lab File ID: YF042415.D

Analysis Method: 8015B Date Collected: 04/19/2012 13:10

Sample wt/vol: 5(mL) Date Analyzed: 04/24/2012 19:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41320 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	69	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	65		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 | Lab Sample ID: 240-10391-5

Matrix: Water | Lab File ID: P5F04272.D

Analysis Method: 8015B | Date Collected: 04/19/2012 10:05

Extraction Method: 3520C | Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1020(mL) | Date Analyzed: 04/26/2012 18:05

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	490	U	490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	64		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 Lab Sample ID: 240-10391-7

Matrix: Water Lab File ID: P5F04273.D

Analysis Method: 8015B Date Collected: 04/19/2012 13:10

Extraction Method: 3520C Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1010(mL) Date Analyzed: 04/26/2012 18:35

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	990		500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	64		10-110

TestAmerica Canton

Client Sample ID: MSA-MW15S-041812

HPLC

Lot-Sample #...: G2D240430-001 **Work Order #...:** MR6HL1AA **Matrix.....:** WATER
Date Sampled...: 04/18/12 **Date Received..:** 04/24/12
Prep Date.....: 04/25/12 **Analysis Date..:** 04/27/12
Prep Batch #...: 2116029
Dilution Factor: 1.02 **Method.....:** SW846 8330/8330A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
RDX	ND	0.10	ug/L	0.037

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	97	(79 - 111)

TestAmerica Canton

Client Sample ID: MSA-MW19D-041912

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D240430-002 **Work Order #...:** MR6HM1AA **Matrix.....:** WATER
Date Sampled...: 04/19/12 **Date Received..:** 04/24/12
Prep Date.....: 04/27/12 **Analysis Date..:** 05/02/12
Prep Batch #...: 2118065
Dilution Factor: 1 **Method.....:** SW846 6850

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW19I-041912

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D240430-003	**Work Order #...:**	MR6HN1AA	**Matrix.....:**	WATER
Date Sampled...:	04/19/12	**Date Received..:**	04/24/12		
Prep Date.....:	04/27/12	**Analysis Date..:**	05/02/12		
Prep Batch #...:	2118065				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW34I-041912

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D240430-005	**Work Order #...:** MR6HQ1AA		**Matrix.....:** WATER	
Date Sampled...: 04/19/12	**Date Received..:** 04/24/12			
Prep Date.....: 04/27/12	**Analysis Date..:** 05/02/12			
Prep Batch #...: 2118065				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW34S-041912

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D240430-004	**Work Order #...:** MR6HP1AA		**Matrix.....:** WATER	
Date Sampled...: 04/19/12	**Date Received..:** 04/24/12			
Prep Date.....: 04/27/12	**Analysis Date..:** 05/02/12			
Prep Batch #...: 2118065				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW39S-041912

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D240430-006 **Work Order #...:** MR6HR1AA **Matrix.....:** WATER
Date Sampled...: 04/19/12 **Date Received..:** 04/24/12
Prep Date.....: 04/27/12 **Analysis Date..:** 05/02/12
Prep Batch #...: 2118065
Dilution Factor: 1 **Method.....:** SW846 6850

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10391-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate and RDX Explosives analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/20/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.2 and 2.8 C.

No tests were marked on the COC for the following samples: MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7). After consultation with the client, the samples were logged and analyzed for the tests according to the bottles received.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-041912 (240-10391-2), MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/27/2012 and 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample (LCS) for batch 41857 exceeded control limits for tert-Butyl Alcohol. This has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Samples MSA-MW19I-041912 (240-10391-4)[5X] and MSA-MW34I-041912 (240-10391-6)[1.43X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 41857 exceeded control criteria for multiple compounds. The samples associated with this CCV were not detected for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is reportable per the facility Standard Operating Procedure (SOP).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/23/2012 and analyzed on 04/25/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MSA-MW34S-041912 (240-10391-5) and MSA-MW39S-041912 (240-10391-7) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/24/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-41320/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MSA-MW34S-041912 (240-10391-5) and MSA-MW39S-041912 (240-10391-7) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/25/2012 and analyzed on 04/26/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 41524.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

Several analytes were detected in method blank MB 240-41326/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10391-1	MSA-MW15S-041812	Water	04/18/2012 1140	04/20/2012 1000
240-10391-2TB	TB-041912	Water	04/19/2012 0000	04/20/2012 1000
240-10391-3	MSA-MW19D-041912	Water	04/19/2012 1107	04/20/2012 1000
240-10391-4	MSA-MW19I-041912	Water	04/19/2012 1218	04/20/2012 1000
240-10391-5	MSA-MW34S-041912	Water	04/19/2012 1005	04/20/2012 1000
240-10391-6	MSA-MW34I-041912	Water	04/19/2012 1110	04/20/2012 1000
240-10391-7	MSA-MW39S-041912	Water	04/19/2012 1310	04/20/2012 1000

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'Meara	COC No:
Address: 20251 Century Blvd	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: MSA Ground Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04021-02	Shipping/Tracking No:			Job/SDG No:
PO#				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite-C / Grab-G	VOCs	Total PPM	Diss PPM	1,4 Dioxane	Perchlorate	RDX					Sample Specific Notes / Special Instructions:
MSA-MW15s-041812	4-18-12	1140		X									2		N	G						X					
TB-041912	4-19-12	—		X						2							X										
MSA-MW19D-041912		1107		X					2	3			3				X	X	X	X	X						
MSA-MW19I-041912		1218		X					2	3			3				X	X	X	X	X						
MSA-MW34S-041912		1005		X					2	5			3														
MSA-MW34I-041912		1110		X					2	5			5														
MSA-MW39S-041912		1310		X					2	5			5														

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	4-19-12 / 1445	Paul Gayland	Test America	4/19/12/1445
Paul Gayland	Test America	4/19/12 / 1600			
			Received in Laboratory by: [signature]	TA WC	4/20/12 10:00

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TAL-0018 (1008)

05/10/2012

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10391

Client Tetra Tech Inc. Site Name _____ By: [signature] (Signature)

Cooler Received on 4/20/12 Opened on 4/20/12

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt
   - IR GUN# 1 (CF -2°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C
   - IR GUN# 4G (CF -1°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C
   - IR GUN# 5G (CF -1°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C
   - IR GUN# 6Y (CF -2°C) Observed Sample Temp._____°C Corrected Sample Temp._____°C

   ☒ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity_____ Yes No
   - -Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - -Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM PTO Date 4-20-12 by [initials] via Verbal Voice Mail Other

Concerning #14

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

No tests marked for MW34S, MW34I, MW39S.
Received volume to run all tests listed on COC except RDX.

Rec'd GRO+DRO Volume for MW34S + MW39S will log, not listed on COC

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

SOP: NC-SOP-5 Sample Receiving 05/10/2012

N:\QAQC\NARRATIVE\TestAmerica\Cooler Receipt TestAmerica\COOLER_TestAmerica_Rev 83_032612 jcs.doc

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
MW19D	<2	4/20/12	JM
MW19I	<2		
MW24S	<2		
MW34I	<2		
MW39S	<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
461	3.2	2.8	4G	Ice
Client Cooler	3.8	2.8		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Login Number: 10391
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

HOLDTIME

SDG 240-10350-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW15S-041812	240-10391-1	NM	4/18/2012	4/25/2012	4/27/2012	7	2	9
HG	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HG	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
M	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
M	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HGF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HGF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HGF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
MF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
PCL	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
OS	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/30/2012	5	5	10
OS	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
OS	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OV	UG/L	TB-042012	240-10494-1	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	TB-042012	240-10494-1	TB	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/30/2012	4/30/2012	11	0	11
OV	UG/L	TB-041812	240-10350-1	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	TB-041812	240-10350-1	TB	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	TB-041912	240-10391-2	TB	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	TB-041912	240-10391-2	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/30/2012	4/30/2012	12	0	12
OV	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/30/2012	4/30/2012	10	0	10
OV	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
TPH	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/24/2012	6	0	6
TPH	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/25/2012	4/26/2012	6	1	7
TPH	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/25/2012	4/26/2012	7	1	8
TPH	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/24/2012	6	0	6
TPH	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6
TPH	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
TPH	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/24/2012	5	0	5
TPH	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/24/2012	5	0	5
TPH	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
TPH	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6
TPH	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/25/2012	4/26/2012	7	1	8
TPH	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/25/2012	4/26/2012	6	1	7
TPH	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6

Appendix C

Support Documentation

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: BFB3643.D BFB Injection Date: 04/09/2012

Instrument ID: A3UX10 BFB Injection Time: 10:15

Analysis Batch No.: 39613

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	48.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.4	
175	5.0 - 9.0 % of mass 174	5.3	(7.1)1
176	95.0 - 101.0 % of mass 174	71.7	(96.3)1
177	5.0 - 9.0 % of mass 176	5.0	(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-39613/2	UXX0990.D	04/09/2012	10:43
	STD8260 240-39613/3	UXX0991.D	04/09/2012	11:04
	STD8260 240-39613/4	UXX0992.D	04/09/2012	11:26
	STD8260 240-39613/5	UXX0993.D	04/09/2012	11:47
	STD8260 240-39613/6	UXX0994.D	04/09/2012	12:09
	STD8260 240-39613/7	UXX0995.D	04/09/2012	12:30
	STDA9 240-39613/8	UXX0996.D	04/09/2012	12:51
	STDA9 240-39613/9	UXX0997.D	04/09/2012	13:13
	STDA9 240-39613/10	UXX0998.D	04/09/2012	13:35
	STDA9 240-39613/11	UXX0999.D	04/09/2012	13:56
	STDA9 240-39613/12	UXX1000.D	04/09/2012	14:18
	STDA9 240-39613/13	UXX1001.D	04/09/2012	14:40
	ICV 240-39613/14	UXX1002.D	04/09/2012	15:01

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-39613/7	UXX0995.D
Level 2	STD8260 240-39613/6	UXX0994.D
Level 3	STD8260 240-39613/5	UXX0993.D
Level 4	STD8260 240-39613/4	UXX0992.D
Level 5	STD8260 240-39613/3	UXX0991.D
Level 6	STD8260 240-39613/2	UXX0990.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1922 0.1920	0.1832	0.1942	0.1712	0.1791	Ave		0.1853			0.1000	4.9		15.0			
Chloromethane	0.2986 0.2893	0.3127	0.2900	0.2885	0.3062	Ave		0.2976			0.1000	3.4		15.0			
Vinyl chloride	0.2876 0.2937	0.2940	0.2946	0.2867	0.3020	Ave		0.2931			0.1000	1.9		15.0			
Bromomethane	0.1058 0.0872	0.1244	0.0954	0.1061	0.1061	Ave		0.1041			0.0500	12.0		15.0			
Chloroethane	0.1423 0.1435	0.1560	0.1496	0.1525	0.1578	Ave		0.1503				4.2		15.0			
Trichlorofluoromethane	0.2195 0.2316	0.2381	0.2442	0.2249	0.2394	Ave		0.2330			0.1000	4.0		15.0			
Acrolein	0.0270 0.0353	0.0353	0.0335	0.0353	0.0387	Ave		0.0342	NT			11.0		15.0			
1,1-Dichloroethene	0.2065 0.2066	0.2039	0.1970	0.1975	0.2117	Ave		0.2039			0.1000	2.8		15.0			
Acetone	0.0847 0.0537	0.0729	0.0526	0.0546	0.0602	Lin1	0.0298	0.0547			0.0500				0.9960		0.9950
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1545 0.1565	0.1488	0.1580	0.1391	0.1516	Ave		0.1514			0.0500	4.6		15.0			
Iodomethane	0.2922 0.3012	0.3044	0.2997	0.3038	0.3300	Ave		0.3052				4.2		15.0			
Carbon disulfide	0.7012 0.7556	0.6734	0.6914	0.7088	0.7810	Ave		0.7186			0.1000	5.7		15.0			
Acetonitrile	0.0197 0.0153	0.0213	0.0162	0.0166	0.0168	Ave		0.0176	NT			13.0		15.0			
Methyl acetate	0.1785 0.1672	0.1799	0.1553	0.1657	0.1792	Ave		0.1710			0.1000	5.8		15.0			
Methylene Chloride	0.4964 0.2337	0.3611	0.2578	0.2506	0.2588	Lin1	0.1287	0.2373			0.1000				0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0139 0.0113	0.0159	0.0121	0.0128	0.0132	Ave		0.0132				12.0		15.0			
Acrylonitrile	0.0815 0.0870	0.0882	0.0840	0.0861	0.0926	Ave		0.0866				4.4		15.0			
Methyl tert-butyl ether	0.6298 0.6761	0.6642	0.6410	0.6715	0.7312	Ave		0.6690			0.1000	5.3		15.0			
trans-1,2-Dichloroethene	0.2368 0.2297	0.2291	0.2268	0.2326	0.2486	Ave		0.2339			0.1000	3.4		15.0			
Hexane	0.0580 0.0648	0.0554	0.0620	0.0574	0.0625	Ave		0.0600				6.1		15.0			
1,1-Dichloroethane	0.4254 0.4303	0.4217	0.4250	0.4379	0.4668	Ave		0.4345			0.1000	3.9		15.0			
Vinyl acetate	0.0316 0.0484	0.0385	0.0396	0.0459	0.0502	Lin1	-0.011	0.0486							0.9980		0.9950
2-Butanone	0.1052 0.0887	0.0917	0.0897	0.0852	0.0938	Ave		0.0924			0.0500	7.5		15.0			
cis-1,2-Dichloroethene	0.2508 0.2495	0.2545	0.2464	0.2543	0.2736	Ave		0.2548			0.1000	3.8		15.0			
2,2-Dichloropropane	0.2781 0.2817	0.2747	0.2768	0.2805	0.3092	Ave		0.2835				4.5		15.0			
Bromochloromethane	0.1023 0.1073	0.1074	0.1037	0.1113	0.1197	Ave		0.1086				5.8		15.0			
Tetrahydrofuran	0.0749 0.0640	0.0739	0.0637	0.0641	0.0668	Ave		0.0679				7.6		15.0			
Chloroform	0.3657 0.3760	0.3800	0.3621	0.3800	0.4090	Ave		0.3788				4.4		15.0			
1,1,1-Trichloroethane	0.2761 0.3005	0.2886	0.2958	0.3014	0.3241	Ave		0.2977			0.1000	5.4		15.0			
Cyclohexane	0.4772 0.4869	0.4382	0.4655	0.4350	0.4781	Ave		0.4635			0.1000	4.7		15.0			
1,1-Dichloropropene	0.3213 0.3320	0.3151	0.3070	0.3141	0.3435	Ave		0.3222				4.2		15.0			
Carbon tetrachloride	0.2206 0.2597	0.2225	0.2352	0.2404	0.2675	Ave		0.2410			0.1000	8.0		15.0			
1,2-Dichloroethane	0.2598 0.2874	0.2825	0.2743	0.2849	0.3058	Ave		0.2825			0.1000	5.4		15.0			
Benzene	0.9882 0.9961	0.9621	0.9148	0.9557	1.0428	Ave		0.9766			0.5000	4.4		15.0			
Trichloroethene	0.2155 0.2336	0.2156	0.2171	0.2257	0.2465	Ave		0.2257			0.2000	5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichloropropane	0.2031 0.2332	0.2084	0.2116	0.2223	0.2432	Ave		0.2203			0.1000	7.1		15.0			
Methylcyclohexane	0.4272 0.4463	0.3866	0.4134	0.3942	0.4352	Ave		0.4171			0.1000	5.6		15.0			
Dibromomethane	0.1001 0.1127	0.1089	0.1070	0.1126	0.1211	Ave		0.1104				6.3		15.0			
1,4-Dioxane	0.0013 0.0009	0.0018	0.0014	0.0014	0.0014	Qua	-0.027	0.0018	M1 0						0.9970		0.9900
Bromodichloromethane	0.2071 0.2625	0.2125	0.2276	0.2426	0.2687	Ave		0.2368			0.1000	11.0		15.0			
2-Chloroethyl vinyl ether	0.0953 0.1154	0.1026	0.0991	0.1078	0.1132	Ave		0.1056				7.5		15.0			
cis-1,3-Dichloropropene	0.2382 0.3446	0.2773	0.2815	0.3117	0.3437	Ave		0.2995			0.1500	14.0		15.0			
4-Methyl-2-pentanone	0.1971 0.1880	0.2052	0.1814	0.1816	0.1961	Ave		0.1916			0.0500	5.0		15.0			
Toluene	1.2786 1.5136	1.3700	1.3458	1.4118	1.5315	Ave		1.4085			0.4000	7.0		15.0			
trans-1,3-Dichloropropene	0.3267 0.4617	0.3736	0.4006	0.4275	0.4637	Ave		0.4089			0.1000	13.0		15.0			
Ethyl methacrylate	0.3361 0.4221	0.3883	0.3882	0.4025	0.4314	Ave		0.3948				8.5		15.0			
1,1,2-Trichloroethane	0.2085 0.2507	0.2511	0.2385	0.2498	0.2616	Ave		0.2434			0.1000	7.6		15.0			
1,3-Dichloropropane	0.4259 0.4866	0.4555	0.4568	0.4677	0.4983	Ave		0.4651				5.5		15.0			
Tetrachloroethene	0.2410 0.2722	0.2563	0.2573	0.2544	0.2751	Ave		0.2594			0.2000	4.8		15.0			
2-Hexanone	0.2221 0.1891	0.2255	0.1950	0.1947	0.2012	Ave		0.2046			0.0500	7.5		15.0			
Dibromochloromethane	0.1763 0.2674	0.1884	0.2182	0.2426	0.2727	Lin1	-0.068	0.2661							0.9970		0.9950
1,2-Dibromoethane	0.2133 0.2476	0.2244	0.2361	0.2432	0.2575	Ave		0.2370				6.8		15.0			
Chlorobenzene	0.8320 0.8941	0.8752	0.8283	0.8641	0.9261	Ave		0.8700			0.3000	4.3		15.0			
1,1,1,2-Tetrachloroethane	0.2333 0.3032	0.2624	0.2751	0.2957	0.3260	Ave		0.2826				12.0		15.0			
Ethylbenzene	0.4292 0.5024	0.4724	0.4654	0.4836	0.5280	Ave		0.4802				7.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.5577 0.6499	0.5701	0.5874	0.6183	0.6694	Ave		0.6088				7.4		15.0			
o-Xylene	0.5549 0.6240	0.6077	0.5963	0.6172	0.6639	Ave		0.6107				5.8		15.0			
Styrene	0.8287 1.0696	0.9177	0.9680	1.0250	1.1140	Ave		0.9872			0.3000	11.0		15.0			
Bromoform	0.0939 0.1719	0.1147	0.1361	0.1517	0.1745	Lin1	-0.053	0.1705			0.1000				0.9970		0.9950
Isopropylbenzene	1.3747 1.6409	1.4124	1.4899	1.5573	1.7130	Ave		1.5314			0.1000	8.6		15.0			
1,1,2,2-Tetrachloroethane	0.5732 0.6230	0.6197	0.5912	0.6095	0.6386	Ave		0.6092			0.3000	3.9		15.0			
Bromobenzene	0.6522 0.6987	0.6857	0.6341	0.6725	0.7188	Ave		0.6770				4.6		15.0			
1,2,3-Trichloropropane	0.1810 0.1956	0.2088	0.1929	0.2013	0.2011	Ave		0.1968				4.8		15.0			
trans-1,4-Dichloro-2-butene	0.1360 0.2023	0.1580	0.1647	0.1760	0.2002	Ave		0.1729				15.0		15.0			
n-Propylbenzene	0.7694 0.8091	0.7558	0.7378	0.7624	0.8209	Ave		0.7759				4.2		15.0			
2-Chlorotoluene	0.6505 0.6734	0.6398	0.6312	0.6578	0.7023	Ave		0.6592				3.9		15.0			
1,3,5-Trimethylbenzene	2.0379 2.4370	2.1698	2.2099	2.3280	2.4921	Ave		2.2791				7.5		15.0			
4-Chlorotoluene	0.6323 0.7151	0.6892	0.6608	0.6847	0.7321	Ave		0.6857				5.3		15.0			
tert-Butylbenzene	1.9422 2.3279	2.0355	1.8591	2.0505	2.2285	Ave		2.0739				8.5		15.0			
1,2,4-Trimethylbenzene	2.1858 2.4421	2.2876	2.2306	2.3565	2.5508	Ave		2.3422				5.8		15.0			
sec-Butylbenzene	2.6755 2.9768	2.7608	2.6887	2.8219	3.0539	Ave		2.8296				5.5		15.0			
1,3-Dichlorobenzene	1.3196 1.3143	1.3142	1.2097	1.2670	1.3816	Ave		1.3010			0.6000	4.4		15.0			
p-Isopropyltoluene	2.1167 2.4358	2.2268	2.2779	2.3536	2.5285	Ave		2.3232				6.4		15.0			
1,4-Dichlorobenzene	1.4040 1.3764	1.4143	1.2899	1.3378	1.4396	Ave		1.3770			0.5000	4.0		15.0			
n-Butylbenzene	1.9086 2.1618	2.0204	1.9681	2.0761	2.2496	Ave		2.0641				6.1		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.1398 1.1675	1.1499	1.1302	1.1865	1.2579	Ave		1.1720			0.4000	4.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0615 0.0778	0.0863	0.0847	0.0841	0.0875	Ave		0.0803			0.0500	12.0		15.0			
1,3,5-Trichlorobenzene	0.7364 0.6391	0.8036	0.7375	0.7812	0.7751	Ave		0.7455				7.8		15.0			
1,2,4-Trichlorobenzene	0.6466 0.4706	0.6576	0.5934	0.6231	0.6022	Ave		0.5989			0.2000	11.0		15.0			
Hexachlorobutadiene	0.3137 0.2066	0.2926	0.2723	0.2702	0.2679	Ave		0.2705				13.0		15.0			
Naphthalene	1.4992 1.0051	1.5650	1.4010	1.4042	1.3227	Ave		1.3662				14.0		15.0			
1,2,3-Trichlorobenzene	0.4997 +++++	0.5300	0.4779	0.4705	0.4172	Ave		0.4791				8.7		15.0			
Dibromofluoromethane (Surr)	0.1864 0.1774	0.1644	0.1790	0.1914	0.1964	Ave		0.1825				6.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2221 0.2179	0.2119	0.2324	0.2502	0.2570	Ave		0.2319				7.8		15.0			
Toluene-d8 (Surr)	1.1066 1.1734	1.0100	1.1068	1.1923	1.2234	Ave		1.1354				6.8		15.0			
4-Bromofluorobenzene (Surr)	0.4485 0.4158	0.4010	0.4244	0.4564	0.4511	Ave		0.4329				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 12:51 Calibration End Date: 04/09/2012 14:40 Calibration ID: 7932

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-39613/13	UXX1001.D
Level 2	STDA9 240-39613/12	UXX1000.D
Level 3	STDA9 240-39613/11	UXX0999.D
Level 4	STDA9 240-39613/10	UXX0998.D
Level 5	STDA9 240-39613/9	UXX0997.D
Level 6	STDA9 240-39613/8	UXX0996.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.3643 0.3617	0.3526	0.3600	0.3550	0.3495	Ave		0.3572				1.6		15.0			
Ethyl ether	0.2107 0.2179	0.2024	0.2090	0.2155	0.2126	Ave		0.2114				2.6		15.0			
3-Chloro-1-propene	0.1084 0.1417	0.1204	0.1266	0.1330	0.1330	Ave		0.1272				9.2		15.0			
Diisopropyl ether	0.1932 0.2263	0.1983	0.2038	0.2131	0.2167	Ave		0.2086				5.9		15.0			
2-Chloro-1,3-butadiene	0.3480 0.4108	0.3615	0.3814	0.3852	0.3949	Ave		0.3803				6.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.7025 0.7601	0.7010	0.7140	0.7327	0.7418	Ave		0.7254				3.3		15.0			
Propionitrile	0.0228 0.0268	0.0240	0.0258	0.0264	0.0268	Ave		0.0254	NT			6.5		15.0			
Ethyl acetate	0.1895 0.1788	0.1648	0.1556	0.1742	0.1716	Ave		0.1724				6.8		15.0			
Methacrylonitrile	0.1260 0.1318	0.1402	0.1198	0.1290	0.1314	Ave		0.1297				5.2		15.0			
Isobutyl alcohol	0.0085 0.0080	0.0116	0.0080	0.0082	0.0088	Lin1	0.0237	0.0082	NT						0.9960		0.9950
Tert-amyl-methyl ether (TAME)	0.5913 0.6785	0.6204	0.6192	0.6508	0.6555	Ave		0.6360				4.9		15.0			
n-Heptane	0.0548 0.0616	0.0580	0.0581	0.0600	0.0595	Ave		0.0587				4.0		15.0			
n-Butanol	0.0066 0.0074	0.0082	0.0087	0.0085	0.0091	Ave		0.0081	NT			12.0		15.0			
2-Nitropropane	0.0284 0.0370	0.0273	0.0305	0.0325	0.0354	Ave		0.0318	NT			12.0		15.0			
Cyclohexanone	0.0483 0.0436	0.0577	0.0472	0.0494	0.0533	Ave		0.0499	NT			9.9		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 12:51 Calibration End Date: 04/09/2012 14:40 Calibration ID: 7932

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.1321 2.3697	2.1272	2.1034	2.2882	2.3575	Ave		2.2297				5.5		15.0			
2-Methylnaphthalene	0.4611 0.4017	0.4993	0.3907	0.4014	0.4716	Ave		0.4376				10.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1853	0.2035	0.1000	11.0	10.0	9.8	20.0
Chloromethane	Ave	0.2976	0.3144	0.1000	10.6	10.0	5.7	20.0
Vinyl chloride	Ave	0.2931	0.2808	0.1000	9.58	10.0	-4.2	20.0
Bromomethane	Ave	0.1041	0.1074	0.0500	10.3	10.0	3.1	20.0
Chloroethane	Ave	0.1503	0.1536	0.0500	10.2	10.0	2.2	20.0
Trichlorofluoromethane	Ave	0.2330	0.2481	0.1000	10.7	10.0	6.5	20.0
1,1-Dichloroethene	Ave	0.2039	0.2103	0.1000	10.3	10.0	3.1	20.0
Acetone	Lin1		0.0534	0.0500	19.0	20.0	-5.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1514	0.1693	0.0500	11.2	10.0	11.8	20.0
Iodomethane	Ave	0.3052	0.3042		9.97	10.0	-0.3	20.0
Carbon disulfide	Ave	0.7186	0.7032	0.1000	9.79	10.0	-2.1	20.0
Methyl acetate	Ave	0.1710	0.1780	0.1000	10.4	10.0	4.1	20.0
Methylene Chloride	Lin1		0.2327	0.1000	9.26	10.0	-7.4	20.0
tert-Butyl alcohol	Ave	0.0132	0.0116		176	200	-12.2	20.0
Methyl tert-butyl ether	Ave	0.6690	0.6335	0.1000	9.47	10.0	-5.3	20.0
trans-1,2-Dichloroethene	Ave	0.2339	0.2317	0.1000	9.91	10.0	-0.9	20.0
Hexane	Ave	0.0600	0.0692		11.5	10.0	15.3	20.0
1,1-Dichloroethane	Ave	0.4345	0.4342	0.1000	10.0	10.0	-0.0	20.0
Vinyl acetate	Lin1		0.0412		8.71	10.0	-12.9	20.0
2-Butanone	Ave	0.0924	0.0812	0.0500	17.6	20.0	-12.1	20.0
cis-1,2-Dichloroethene	Ave	0.2548	0.2462	0.1000	9.66	10.0	-3.4	20.0
2,2-Dichloropropane	Ave	0.2835	0.2698		9.52	10.0	-4.8	20.0
Bromochloromethane	Ave	0.1086	0.1042		9.60	10.0	-4.0	20.0
Tetrahydrofuran	Ave	0.0679	0.0621		9.15	10.0	-8.5	20.0
Chloroform	Ave	0.3788	0.3616	0.2000	9.55	10.0	-4.5	20.0
1,1,1-Trichloroethane	Ave	0.2977	0.2884	0.1000	9.69	10.0	-3.1	20.0
Cyclohexane	Ave	0.4635	0.4585	0.1000	9.89	10.0	-1.1	20.0
1,1-Dichloropropene	Ave	0.3222	0.3187		9.89	10.0	-1.1	20.0
Carbon tetrachloride	Ave	0.2410	0.2360	0.1000	9.79	10.0	-2.1	20.0
1,2-Dichloroethane	Ave	0.2825	0.2719	0.1000	9.63	10.0	-3.7	20.0
Benzene	Ave	0.9766	0.9299	0.5000	9.52	10.0	-4.8	20.0
Trichloroethene	Ave	0.2257	0.2189	0.2000	9.70	10.0	-3.0	20.0
1,2-Dichloropropane	Ave	0.2203	0.2134	0.1000	9.69	10.0	-3.1	20.0
Methylcyclohexane	Ave	0.4171	0.4233	0.1000	10.1	10.0	1.5	20.0
Dibromomethane	Ave	0.1104	0.1097		9.94	10.0	-0.6	20.0
Bromodichloromethane	Ave	0.2368	0.2294	0.1000	9.68	10.0	-3.2	20.0
2-Chloroethyl vinyl ether	Ave	0.1056	0.1019		9.65	10.0	-3.5	20.0
cis-1,3-Dichloropropene	Ave	0.2995	0.2767	0.1500	9.24	10.0	-7.6	20.0
4-Methyl-2-pentanone	Ave	0.1916	0.1755	0.0500	18.3	20.0	-8.4	20.0
Toluene	Ave	1.409	1.331	0.4000	9.45	10.0	-5.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Ave	0.4089	0.3861	0.1000	9.44	10.0	-5.6	20.0
1,1,2-Trichloroethane	Ave	0.2434	0.2412	0.1000	9.91	10.0	-0.9	20.0
1,3-Dichloropropane	Ave	0.4651	0.4482		9.64	10.0	-3.6	20.0
Tetrachloroethene	Ave	0.2594	0.2571	0.2000	9.91	10.0	-0.9	20.0
2-Hexanone	Ave	0.2046	0.1889	0.0500	18.5	20.0	-7.7	20.0
Dibromochloromethane	Lin1		0.2162		8.38	10.0	-16.2	20.0
1,2-Dibromoethane	Ave	0.2370	0.2321		9.79	10.0	-2.1	20.0
Chlorobenzene	Ave	0.8700	0.8349	0.3000	9.60	10.0	-4.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.2826	0.2649		9.37	10.0	-6.3	20.0
Ethylbenzene	Ave	0.4802	0.4607		9.60	10.0	-4.0	20.0
m-Xylene & p-Xylene	Ave	0.6088	0.5860		19.3	20.0	-3.7	20.0
o-Xylene	Ave	0.6107	0.5798		9.49	10.0	-5.1	20.0
Styrene	Ave	0.9872	0.9621	0.3000	9.75	10.0	-2.5	20.0
Bromoform	Lin1		0.1315	0.1000	8.02	10.0	-19.8	20.0
Isopropylbenzene	Ave	1.531	1.464	0.1000	9.56	10.0	-4.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6092	0.5847	0.3000	9.60	10.0	-4.0	20.0
Bromobenzene	Ave	0.6770	0.6581		9.72	10.0	-2.8	20.0
1,2,3-Trichloropropane	Ave	0.1968	0.1912		9.72	10.0	-2.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1624		18.8	20.0	-6.1	20.0
n-Propylbenzene	Ave	0.7759	0.7610		9.81	10.0	-1.9	20.0
2-Chlorotoluene	Ave	0.6592	0.6226		9.45	10.0	-5.5	20.0
1,3,5-Trimethylbenzene	Ave	2.279	2.210		9.70	10.0	-3.0	20.0
4-Chlorotoluene	Ave	0.6857	0.6680		9.74	10.0	-2.6	20.0
tert-Butylbenzene	Ave	2.074	1.908		9.20	10.0	-8.0	20.0
1,2,4-Trimethylbenzene	Ave	2.342	2.228		9.51	10.0	-4.9	20.0
sec-Butylbenzene	Ave	2.830	2.735		9.66	10.0	-3.4	20.0
1,3-Dichlorobenzene	Ave	1.301	1.223	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.323	2.318		9.98	10.0	-0.2	20.0
1,4-Dichlorobenzene	Ave	1.377	1.253	0.5000	9.10	10.0	-9.0	20.0
n-Butylbenzene	Ave	2.064	1.947		9.43	10.0	-5.7	20.0
1,2-Dichlorobenzene	Ave	1.172	1.093	0.4000	9.33	10.0	-6.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0803	0.0756	0.0500	9.40	10.0	-6.0	20.0
1,2,4-Trichlorobenzene	Ave	0.5989	0.4928	0.2000	8.23	10.0	-17.7	20.0
Hexachlorobutadiene	Ave	0.2705	0.2355		8.70	10.0	-13.0	20.0
Naphthalene	Ave	1.366	1.126		8.25	10.0	-17.5	20.0
1,2,3-Trichlorobenzene	Ave	0.4791	0.3787		7.90	10.0	-21.0*	20.0
Dibromofluoromethane (Surr)	Ave	0.1825	0.1722		9.43	10.0	-5.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2274		9.81	10.0	-1.9	20.0
Toluene-d8 (Surr)	Ave	1.135	1.083		9.54	10.0	-4.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3943		9.11	10.0	-8.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 12:51

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 14:40

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2114	0.2095		9.91	10.0	-0.9	20.0
Diisopropyl ether	Ave	0.2086	0.2011		9.64	10.0	-3.6	20.0
Isobutyl alcohol	Lin1		0.0085		514	500	2.8	20.0
Cyclohexanone	Ave	0.0499	0.0116		46.5	200	-76.7*	20.0
1,2,3-Trimethylbenzene	Ave	2.230	2.149		9.64	10.0	-3.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: BFB4683.D BFB Injection Date: 04/27/2012

Instrument ID: A3UX10 BFB Injection Time: 09:20

Analysis Batch No.: 41857

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.7	
75	30.0 - 60.0 % of mass 95	50.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.3	(0.3)1
174	50.0 - 120.00 % of mass 95	90.5	
175	5.0 - 9.0 % of mass 174	6.6	(7.3)1
176	95.0 - 101.0 % of mass 174	89.3	(98.7)1
177	5.0 - 9.0 % of mass 176	6.0	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-41857/2	UXX4986.D	04/27/2012	09:48
	CCV 240-41857/3	UXX4987.D	04/27/2012	10:10
	LCS 240-41857/4	UXX4988.D	04/27/2012	10:31
	MB 240-41857/6	UXX4990.D	04/27/2012	11:14
MSA-MW19I-041912	240-10391-4	UXX4995.D	04/27/2012	13:24
MSA-MW34I-041912	240-10391-6	UXX4996.D	04/27/2012	13:46
TB-041912	240-10391-2	UXX5001.D	04/27/2012	15:33
MSA-MW19D-041912	240-10391-3	UXX5002.D	04/27/2012	15:55
MSA-MW34S-041912	240-10391-5	UXX5003.D	04/27/2012	16:16
	240-10494-C-3 MS	UXX5009.D	04/27/2012	18:24
	240-10494-C-3 MSD	UXX5010.D	04/27/2012	18:46

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1853	0.1735	0.1000	9.36	10.0	-6.4	20.0
Chloromethane	Ave	0.2976	0.2414	0.1000	8.11	10.0	-18.9	20.0
Vinyl chloride	Ave	0.2931	0.2470	0.1000	8.43	10.0	-15.7	20.0
Bromomethane	Ave	0.1041	0.1078	0.0500	10.4	10.0	3.5	20.0
Chloroethane	Ave	0.1503	0.1320	0.0500	8.78	10.0	-12.2	20.0
Trichlorofluoromethane	Ave	0.2330	0.2761	0.1000	11.9	10.0	18.5	20.0
Acrolein	Ave	0.0342	0.0183 NT		53.6	100	-46.4* NT	20.0
1,1-Dichloroethene	Ave	0.2039	0.2090	0.1000	10.2	10.0	2.5	20.0
Acetone	Lin1		0.0513	0.0500	18.2	20.0	-9.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1514	0.1970	0.0500	13.0	10.0	30.1*	20.0
Iodomethane	Ave	0.3052	0.3404		11.2	10.0	11.5	20.0
Carbon disulfide	Ave	0.7186	0.6677	0.1000	9.29	10.0	-7.1	20.0
Acetonitrile	Ave	0.0176	0.0128 NT		72.6	100	-27.4* NT	20.0
Methyl acetate	Ave	0.1710	0.1380	0.1000	16.1	20.0	-19.3	20.0
Methylene Chloride	Lin1		0.2394	0.1000	9.54	10.0	-4.6	20.0
tert-Butyl alcohol	Ave	0.0132	0.0078		119	200	-40.8*	20.0
Acrylonitrile	Ave	0.0866	0.0722		16.7	20.0	-16.7	20.0
Methyl tert-butyl ether	Ave	0.6690	0.5934	0.1000	8.87	10.0	-11.3	20.0
trans-1,2-Dichloroethene	Ave	0.2339	0.2288	0.1000	9.78	10.0	-2.2	20.0
Hexane	Ave	0.0600	0.0608		10.1	10.0	1.4	20.0
1,1-Dichloroethane	Ave	0.4345	0.3886	0.1000	8.94	10.0	-10.6	20.0
Vinyl acetate	Lin1		0.0384		8.14	10.0	-18.6	20.0
2-Butanone	Ave	0.0924	0.0789	0.0500	17.1	20.0	-14.6	20.0
2,2-Dichloropropane	Ave	0.2835	0.2692		9.50	10.0	-5.0	20.0
cis-1,2-Dichloroethene	Ave	0.2548	0.2379	0.1000	9.34	10.0	-6.6	20.0
Bromochloromethane	Ave	0.1086	0.1136		10.5	10.0	4.6	20.0
Tetrahydrofuran	Ave	0.0679	0.0462		6.80	10.0	-32.0*	20.0
Chloroform	Ave	0.3788	0.3845	0.2000	10.2	10.0	1.5	20.0
1,1,1-Trichloroethane	Ave	0.2977	0.3065	0.1000	10.3	10.0	2.9	20.0
Cyclohexane	Ave	0.4635	0.4127	0.1000	8.90	10.0	-11.0	20.0
1,1-Dichloropropene	Ave	0.3222	0.3003		9.32	10.0	-6.8	20.0
Carbon tetrachloride	Ave	0.2410	0.2478	0.1000	10.3	10.0	2.9	20.0
1,2-Dichloroethane	Ave	0.2825	0.2986	0.1000	10.6	10.0	5.7	20.0
Benzene	Ave	0.9766	0.9005	0.5000	9.22	10.0	-7.8	20.0
Trichloroethene	Ave	0.2257	0.2313	0.2000	10.3	10.0	2.5	20.0
1,2-Dichloropropane	Ave	0.2203	0.2051	0.1000	9.31	10.0	-6.9	20.0
Methylcyclohexane	Ave	0.4171	0.4154	0.1000	9.96	10.0	-0.4	20.0
Dibromomethane	Ave	0.1104	0.1197		10.8	10.0	8.4	20.0
1,4-Dioxane	Qua		0.0009 NT		280	500	-44.0* NT	20.0
Bromodichloromethane	Ave	0.2368	0.2354	0.1000	9.94	10.0	-0.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1056	0.0986		18.7	20.0	-6.6	20.0
cis-1,3-Dichloropropene	Ave	0.2995	0.2825	0.1500	9.43	10.0	-5.7	20.0
4-Methyl-2-pentanone	Ave	0.1916	0.1529	0.0500	16.0	20.0	-20.2*	20.0
Toluene	Ave	1.409	1.313	0.4000	9.32	10.0	-6.8	20.0
trans-1,3-Dichloropropene	Ave	0.4089	0.3430	0.1000	8.39	10.0	-16.1	20.0
Ethyl methacrylate	Ave	0.3948	0.3154		7.99	10.0	-20.1* NT	20.0
1,1,2-Trichloroethane	Ave	0.2434	0.2426	0.1000	9.97	10.0	-0.3	20.0
1,3-Dichloropropane	Ave	0.4651	0.4300		9.24	10.0	-7.6	20.0
Tetrachloroethene	Ave	0.2594	0.2834	0.2000	10.9	10.0	9.2	20.0
2-Hexanone	Ave	0.2046	0.1436	0.0500	14.0	20.0	-29.8*	20.0
Dibromochloromethane	Lin1		0.2164		8.39	10.0	-16.1	20.0
1,2-Dibromoethane	Ave	0.2370	0.2320		9.79	10.0	-2.1	20.0
Chlorobenzene	Ave	0.8700	0.8244	0.3000	9.48	10.0	-5.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.2826	0.2624		9.28	10.0	-7.2	20.0
Ethylbenzene	Ave	0.4802	0.4457		9.28	10.0	-7.2	20.0
m-Xylene & p-Xylene	Ave	0.6088	0.5678		18.7	20.0	-6.7	20.0
o-Xylene	Ave	0.6107	0.5515		9.03	10.0	-9.7	20.0
Styrene	Ave	0.9872	0.8859	0.3000	8.97	10.0	-10.3	20.0
Bromoform	Lin1		0.1193	0.1000	7.31	10.0	-26.9*	20.0
Isopropylbenzene	Ave	1.531	1.368	0.1000	8.93	10.0	-10.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6092	0.5343	0.3000	8.77	10.0	-12.3	20.0
Bromobenzene	Ave	0.6770	0.6480		9.57	10.0	-4.3	20.0
1,2,3-Trichloropropane	Ave	0.1968	0.1836		9.33	10.0	-6.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1082		6.26	10.0	-37.4* NT	20.0
n-Propylbenzene	Ave	0.7759	0.6680		8.61	10.0	-13.9	20.0
2-Chlorotoluene	Ave	0.6592	0.5906		8.96	10.0	-10.4	20.0
1,3,5-Trimethylbenzene	Ave	2.279	1.972		8.65	10.0	-13.5	20.0
4-Chlorotoluene	Ave	0.6857	0.6286		9.17	10.0	-8.3	20.0
tert-Butylbenzene	Ave	2.074	1.723		8.31	10.0	-16.9	20.0
1,2,4-Trimethylbenzene	Ave	2.342	1.981		8.46	10.0	-15.4	20.0
sec-Butylbenzene	Ave	2.830	2.292		8.10	10.0	-19.0	20.0
1,3-Dichlorobenzene	Ave	1.301	1.145	0.6000	8.80	10.0	-12.0	20.0
p-Isopropyltoluene	Ave	2.323	1.898		8.17	10.0	-18.3	20.0
1,4-Dichlorobenzene	Ave	1.377	1.217	0.5000	8.84	10.0	-11.6	20.0
n-Butylbenzene	Ave	2.064	1.467		7.11	10.0	-28.9*	20.0
1,2-Dichlorobenzene	Ave	1.172	1.046	0.4000	8.92	10.0	-10.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0803	0.0607	0.0500	7.56	10.0	-24.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.7455	0.5821		7.81	10.0	-21.9* NT	20.0
1,2,4-Trichlorobenzene	Ave	0.5989	0.4408	0.2000	7.36	10.0	-26.4*	20.0
Hexachlorobutadiene	Ave	0.2705	0.1667		6.16	10.0	-38.4*	20.0
Naphthalene	Ave	1.366	0.9579		7.01	10.0	-29.9*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.4791	0.3776		7.77	10.0	-21.2*	20.0
Dibromofluoromethane (Surr)	Ave	0.1825	0.1945		12.8	12.0	6.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2571		13.3	12.0	10.8	20.0
Toluene-d8 (Surr)	Ave	1.135	1.122		11.9	12.0	-1.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3853		10.7	12.0	-11.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-41857/3 Calibration Date: 04/27/2012 10:10

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4987.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.1825	0.1890		12.5	12.0	3.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2351		12.2	12.0	1.4	20.0
Toluene-d8 (Surr)	Ave	1.135	1.094		11.6	12.0	-3.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3693		10.3	12.0	-14.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-41857/3 Calibration Date: 04/27/2012 10:10

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 12:51

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 14:40

Lab File ID: UXX4987.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.3572	0.4349		12.2	10.0	21.8* NT	20.0
Ethyl ether	Ave	0.2114	0.2219		10.5	10.0	5.0	20.0
3-Chloro-1-propene	Ave	0.1272	0.1239		9.74	10.0	-2.6	20.0
Diisopropyl ether	Ave	0.2086	0.2243		53.8	50.0	7.5	20.0
2-Chloro-1,3-butadiene	Ave	0.3803	0.3858		10.1	10.0	1.4	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.7254	0.6882		9.49	10.0	-5.1	20.0
Ethyl acetate	Ave	0.1724	0.1690		19.6	20.0	-2.0	20.0
Propionitrile	Ave	0.0254	0.0216		17.0	20.0	-15.0	20.0
Methacrylonitrile	Ave	0.1297	0.1154		8.89	10.0	-11.1	20.0
Isobutyl alcohol	Lin1		0.0057		138	200	-31.2* NT	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.6360	0.6204		9.75	10.0	-2.5	20.0
n-Heptane	Ave	0.0587	0.0500		8.52	10.0	-14.8	20.0
n-Butanol	Ave	0.0081	0.0047		115	200	-42.3* NT	20.0
2-Nitropropane	Ave	0.0318	0.0193		12.1	20.0	-39.6* NT	20.0
Cyclohexanone	Ave	0.0499	0.0311		62.4	100	-37.6* NT	20.0
1,2,3-Trimethylbenzene	Ave	2.230	2.273		10.2	10.0	1.9	20.0
2-Methylnaphthalene	Ave	0.4376	0.4035		18.4	20.0	-7.8	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: UXX4990.D Lab Sample ID: MB 240-41857/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX10 Date Analyzed: 04/27/2012 11:14

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-41857/4	UXX4988.D	04/27/2012 10:31
MSA-MW19I-041912	240-10391-4	UXX4995.D	04/27/2012 13:24
MSA-MW34I-041912	240-10391-6	UXX4996.D	04/27/2012 13:46
TB-041912	240-10391-2	UXX5001.D	04/27/2012 15:33
MSA-MW19D-041912	240-10391-3	UXX5002.D	04/27/2012 15:55
MSA-MW34S-041912	240-10391-5	UXX5003.D	04/27/2012 16:16
	240-10494-C-3 MS	UXX5009.D	04/27/2012 18:24
	240-10494-C-3 MSD	UXX5010.D	04/27/2012 18:46

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		63-129
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	100		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42092/2	UXM5239.D	04/29/2012	15:41
	STD8260 240-42092/3	UXM5240.D	04/29/2012	16:03
	STD8260 240-42092/4	UXM5241.D	04/29/2012	16:26
	STD8260 240-42092/5	UXM5242.D	04/29/2012	16:49
	STD8260 240-42092/6	UXM5243.D	04/29/2012	17:12
	STD8260 240-42092/7	UXM5244.D	04/29/2012	17:34
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50
	ICV 240-42092/14	UXM5251.D	04/29/2012	20:13

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.3038	0.2649	0.2905	0.2889	0.3016	Ave		0.2829			0.1000	7.8		15.0			
Chloromethane	0.4695 0.4320	0.4893	0.4830	0.4487	0.4452	Ave		0.4613			0.1000	4.9		15.0			
Vinyl chloride	0.4202 0.4041	0.4409	0.4365	0.4256	0.4202	Ave		0.4246			0.1000	3.1		15.0			
Bromomethane	0.1730 0.1493	0.1760	0.1733	0.1676	0.1710	Ave		0.1684			0.0500	5.8		15.0			
Chloroethane	0.2470 0.2229	0.2473	0.2344	0.2374	0.2336	Ave		0.2371				3.9		15.0			
Trichlorofluoromethane	0.2704 0.3132	0.3068	0.3031	0.3070	0.3204	Ave		0.3035			0.1000	5.7		15.0			
Acrolein	0.0469 0.0473	0.0483	0.0502	0.0508	0.0498	Ave		0.0489 NT				3.3		15.0			
1,1-Dichloroethene	0.2340 0.2501	0.2402	0.2424	0.2499	0.2511	Ave		0.2446			0.1000	2.8		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1512 0.1622	0.1553	0.1500	0.1479	0.1608	Ave		0.1546			0.0500	3.8		15.0			
Acetone	0.2162 0.0864	0.1595	0.1181	0.1099	0.0970	Lin1	0.2842	0.0868			0.0500				0.9960		0.9950
Iodomethane	0.3345 0.3288	0.3415	0.3505	0.3469	0.3574	Ave		0.3433				3.1		15.0			
Carbon disulfide	0.6238 0.8183	0.6509	0.6976	0.7556	0.8104	Ave		0.7261			0.1000	11.0		15.0			
Acetonitrile	0.0391 0.0299	0.0368	0.0353	0.0335	0.0333	Ave		0.0346 NT				9.2		15.0			
Methyl acetate	0.2451 0.2094	0.2377	0.2404	0.2374	0.2264	Ave		0.2327			0.1000	5.6		15.0			
Methylene Chloride	0.4532 0.2926	0.3791	0.3449	0.3188	0.3120	Lin1	0.1763	0.2950			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0187 0.0171	0.0206	0.0189	0.0189	0.0192	Ave		0.0189				6.0		15.0			
Acrylonitrile	0.1145 0.1022	0.1105	0.1139	0.1170	0.1105	Ave		0.1114				4.6		15.0			
trans-1,2-Dichloroethene	0.2839 0.2770	0.2945	0.2944	0.2851	0.2889	Ave		0.2873			0.1000	2.4		15.0			
Methyl tert-butyl ether	0.8507 0.8216	0.8205	0.8460	0.8461	0.8566	Ave		0.8402			0.1000	1.8		15.0			
Hexane	0.0529 0.0560	0.0521	0.0488	0.0501	0.0574	Ave		0.0529				6.3		15.0			
1,1-Dichloroethane	0.5478 0.5504	0.5906	0.5789	0.5698	0.5773	Ave		0.5691			0.1000	3.0		15.0			
Vinyl acetate	0.0438 0.0547	0.0420	0.0492	0.0562	0.0568	Ave		0.0505				13.0		15.0			
2-Butanone	0.1431 0.1214	0.1392	0.1413	0.1375	0.1314	Ave		0.1356			0.0500	5.9		15.0			
cis-1,2-Dichloroethene	0.3153 0.3006	0.3006	0.3107	0.3096	0.3157	Ave		0.3087			0.1000	2.2		15.0			
2,2-Dichloropropane	0.2459 0.3076	0.2799	0.2938	0.3057	0.3261	Ave		0.2932				9.5		15.0			
Bromochloromethane	0.1255 0.1262	0.1225	0.1298	0.1329	0.1330	Ave		0.1283				3.3		15.0			
Tetrahydrofuran	0.0875 0.0744	0.0826	0.0830	0.0854	0.0842	Ave		0.0828				5.4		15.0			
Chloroform	0.5169 0.5153	0.5299	0.5388	0.5290	0.5477	Ave		0.5296				2.4		15.0			
1,1,1-Trichloroethane	0.3234 0.3831	0.3500	0.3674	0.3840	0.3986	Ave		0.3678			0.1000	7.4		15.0			
Cyclohexane	0.4217 0.4832	0.4863	0.4431	0.4476	0.4809	Ave		0.4605			0.1000	5.8		15.0			
1,1-Dichloropropene	0.4359 0.4194	0.4199	0.4223	0.4252	0.4356	Ave		0.4264				1.8		15.0			
Carbon tetrachloride	0.2456 0.3072	0.2543	0.2617	0.2867	0.3066	Ave		0.2770			0.1000	9.7		15.0			
1,2-Dichloroethane	0.4838 0.4518	0.4761	0.4673	0.4667	0.4711	Ave		0.4694			0.1000	2.3		15.0			
Benzene	1.2256 1.2453	1.2535	1.2750	1.2420	1.2666	Ave		1.2513			0.5000	1.4		15.0			
Trichloroethene	0.2714 0.2655	0.2671	0.2733	0.2695	0.2719	Ave		0.2698			0.2000	1.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3056 0.3781	0.3553	0.3486	0.3331	0.3656	Ave		0.3477			0.1000	7.4		15.0			
1,2-Dichloropropane	0.2994 0.3048	0.3058	0.3148	0.3132	0.3116	Ave		0.3083			0.1000	1.9		15.0			
Dibromomethane	0.1675 0.1555	0.1521	0.1644	0.1597	0.1644	Ave		0.1606				3.7		15.0			
1,4-Dioxane	0.0023 0.0020	0.0024	0.0025	0.0025	0.0025	Ave		0.0024	NT			8.2		15.0			
Bromodichloromethane	0.2586 0.3533	0.2732	0.3036	0.3210	0.3455	Ave		0.3092			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1532 0.1582	0.1459	0.1670	0.1699	0.1653	Ave		0.1599				5.8		15.0			
cis-1,3-Dichloropropene	0.3061 0.4576	0.3249	0.3845	0.4238	0.4469	Lin1	-0.212	0.4568			0.1500				0.9990		0.9950
4-Methyl-2-pentanone	0.2451 0.2575	0.2540	0.2759	0.2780	0.2752	Ave		0.2643			0.0500	5.3		15.0			
Toluene	1.7728 1.9294	1.8880	1.8619	1.8474	1.9604	Ave		1.8766			0.4000	3.5		15.0			
trans-1,3-Dichloropropene	0.3835 0.6056	0.4211	0.4964	0.5287	0.6010	Lin1	-0.314	0.6041			0.1000				0.9980		0.9950
Ethyl methacrylate	0.4455 0.5778	0.5229	0.5765	0.5788	0.6242	Ave		0.5543				11.0		15.0			
1,1,2-Trichloroethane	0.3279 0.3212	0.3141	0.3421	0.3341	0.3447	Ave		0.3307			0.1000	3.6		15.0			
1,3-Dichloropropane	0.6891 0.6635	0.6944	0.7152	0.6928	0.7223	Ave		0.6962				3.0		15.0			
Tetrachloroethene	0.2452 0.2600	0.2630	0.2668	0.2612	0.2738	Ave		0.2617			0.2000	3.6		15.0			
2-Hexanone	0.2323 0.2576	0.2818	0.2796	0.2822	0.2852	Ave		0.2698			0.0500	7.8		15.0			
Dibromochloromethane	0.1872 0.3114	0.2160	0.2464	0.2709	0.3057	Lin1	-0.171	0.3097							0.9980		0.9950
1,2-Dibromoethane	0.2962 0.3220	0.3089	0.3344	0.3261	0.3462	Ave		0.3223				5.5		15.0			
Chlorobenzene	1.0759 1.0855	1.1279	1.1114	1.0941	1.1299	Ave		1.1041			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	0.2665 0.3469	0.2706	0.3066	0.3249	0.3538	Ave		0.3116				12.0		15.0			
Ethylbenzene	0.5227 0.5869	0.5825	0.6026	0.5858	0.6163	Ave		0.5828				5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6757 0.7551	0.7220	0.7191	0.7176	0.7638	Ave		0.7256				4.3		15.0			
o-Xylene	0.6806 0.7276	0.7176	0.7304	0.7130	0.7551	Ave		0.7207				3.4		15.0			
Styrene	1.0565 1.2902	1.1310	1.1966	1.1904	1.2870	Ave		1.1920			0.3000	7.6		15.0			
Bromoform	0.0815 0.1487	0.0938	0.1133	0.1171	0.1413	Lin1	-0.094	0.1455			0.1000				0.9950		0.9950
Isopropylbenzene	1.5492 1.8304	1.6861	1.6648	1.6944	1.8507	Ave		1.7126			0.1000	6.6		15.0			
1,1,2,2-Tetrachloroethane	0.8553 0.8338	0.9184	0.9469	0.9293	0.9310	Ave		0.9025			0.3000	5.1		15.0			
Bromobenzene	0.8074 0.7779	0.8287	0.8325	0.8084	0.8409	Ave		0.8159				2.8		15.0			
1,2,3-Trichloropropane	0.2880 0.2558	0.2803	0.2925	0.2919	0.2938	Ave		0.2837				5.1		15.0			
trans-1,4-Dichloro-2-butene	0.2181 0.2689	0.2471	0.2346	0.2535	0.2845	Ave		0.2511				9.5		15.0			
n-Propylbenzene	0.7292 0.8665	0.8823	0.8741	0.8947	0.9118	Ave		0.8598				7.7		15.0			
2-Chlorotoluene	0.8583 0.7918	0.8579	0.8258	0.8361	0.8474	Ave		0.8362				3.0		15.0			
1,3,5-Trimethylbenzene	2.5787 2.8481	2.7830	2.7962	2.7951	2.9477	Ave		2.7914				4.3		15.0			
4-Chlorotoluene	0.8421 0.8602	0.8907	0.8940	0.8564	0.9136	Ave		0.8762				3.1		15.0			
tert-Butylbenzene	2.2870 2.5025	2.5077	2.4568	2.4969	2.5752	Ave		2.4710				4.0		15.0			
1,2,4-Trimethylbenzene	2.7586 2.9544	2.8331	2.8754	2.9504	3.0668	Ave		2.9065				3.7		15.0			
sec-Butylbenzene	2.8024 3.1977	3.0238	2.9596	3.0216	3.2137	Ave		3.0365				5.1		15.0			
1,3-Dichlorobenzene	1.5037 1.4698	1.4901	1.5135	1.5069	1.5495	Ave		1.5056			0.6000	1.8		15.0			
p-Isopropyltoluene	2.2069 2.6255	2.4647	2.4703	2.4761	2.6715	Ave		2.4858				6.6		15.0			
1,4-Dichlorobenzene	1.6073 1.5308	1.6512	1.5577	1.5557	1.6211	Ave		1.5873			0.5000	2.9		15.0			
n-Butylbenzene	2.0896 2.4436	2.2004	2.2368	2.2659	2.4792	Ave		2.2859				6.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4966 1.3945	1.5126	1.5119	1.4682	1.5239	Ave		1.4846			0.4000	3.2		15.0			
1,2-Dibromo-3-Chloropropane	0.0886 0.0950	0.0916	0.0904	0.0972	0.1086	Ave		0.0952			0.0500	7.6		15.0			
1,3,5-Trichlorobenzene	0.7904 0.7093	0.7633	0.7631	0.7837	0.8038	Ave		0.7690				4.3		15.0			
1,2,4-Trichlorobenzene	0.6476 0.5852	0.7228	0.7185	0.6951	0.7215	Ave		0.6818			0.2000	8.1		15.0			
Hexachlorobutadiene	0.2814 0.2092	0.2884	0.2495	0.2645	0.2531	Ave		0.2577				11.0		15.0			
Naphthalene	1.9527 1.6802	2.0647	2.2163	2.2497	2.2115	Ave		2.0625				11.0		15.0			
1,2,3-Trichlorobenzene	0.6221 0.4278	0.6296	0.6285	0.6505	0.5938	Ave		0.5920				14.0		15.0			
Dibromofluoromethane (Surr)	0.2331 0.2366	0.2278	0.2460	0.2403	0.2499	Ave		0.2389				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4238 0.3659	0.3675	0.3946	0.3884	0.3801	Ave		0.3867				5.5		15.0			
Toluene-d8 (Surr)	1.5539 1.5702	1.4814	1.5599	1.5466	1.5977	Ave		1.5516				2.5		15.0			
4-Bromofluorobenzene (Surr)	0.5499 0.5492	0.5504	0.5556	0.5412	0.5764	Ave		0.5538				2.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386	NT			8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086	NT			8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406	NT			12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070	NT						0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	NT 0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2340	0.1000	8.27	10.0	-17.3	20.0
Chloromethane	Ave	0.4613	0.4720	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.4246	0.4443	0.1000	10.5	10.0	4.6	20.0
Bromomethane	Ave	0.1684	0.1539	0.0500	9.14	10.0	-8.6	20.0
Chloroethane	Ave	0.2371	0.2329	0.0500	9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.3035	0.3240	0.1000	10.7	10.0	6.8	20.0
Acrolein	Ave	0.0489	0.0264 NT		16.2	30.0	-46.0*	20.0
1,1-Dichloroethene	Ave	0.2446	0.2652	0.1000	10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1709	0.0500	11.1	10.0	10.6	20.0
Acetone	Lin1		0.1057	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.3433	0.3416		9.95	10.0	-0.5	20.0
Carbon disulfide	Ave	0.7261	0.7042	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0346	0.0393 NT		34.0	30.0	13.4	20.0
Methyl acetate	Ave	0.2327	0.2751	0.1000	11.8	10.0	18.2	20.0
Methylene Chloride	Lin1		0.3299	0.1000	10.6	10.0	6.0	20.0
tert-Butyl alcohol	Ave	0.0189	0.0195		207	200	3.2	20.0
Acrylonitrile	Ave	0.1114	0.1186		31.9	30.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.8405	0.1000	10.0	10.0	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2952	0.1000	10.3	10.0	2.7	20.0
Hexane	Ave	0.0529	0.0579		10.9	10.0	9.4	20.0
1,1-Dichloroethane	Ave	0.5691	0.6028	0.1000	10.6	10.0	5.9	20.0
Vinyl acetate	Ave	0.0505	0.0387		7.67	10.0	-23.3*	20.0
2-Butanone	Ave	0.1356	0.1389	0.0500	20.5	20.0	2.4	20.0
2,2-Dichloropropane	Ave	0.2932	0.2855		9.74	10.0	-2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.3186	0.1000	10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1283	0.1312		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0828	0.0852		10.3	10.0	2.9	20.0
Chloroform	Ave	0.5296	0.5462	0.2000	10.3	10.0	3.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3794	0.1000	10.3	10.0	3.2	20.0
Cyclohexane	Ave	0.4605	0.4767	0.1000	10.4	10.0	3.5	20.0
1,1-Dichloropropene	Ave	0.4264	0.4383		10.3	10.0	2.8	20.0
Carbon tetrachloride	Ave	0.2770	0.2912	0.1000	10.5	10.0	5.1	20.0
1,2-Dichloroethane	Ave	0.4694	0.4938	0.1000	10.5	10.0	5.2	20.0
Benzene	Ave	1.251	1.319	0.5000	10.5	10.0	5.4	20.0
Trichloroethene	Ave	0.2698	0.2968	0.2000	11.0	10.0	10.0	20.0
1,2-Dichloropropane	Ave	0.3083	0.3319	0.1000	10.8	10.0	7.7	20.0
Methylcyclohexane	Ave	0.3477	0.3665	0.1000	10.5	10.0	5.4	20.0
Dibromomethane	Ave	0.1606	0.1738		10.8	10.0	8.2	20.0
Bromodichloromethane	Ave	0.3092	0.3331	0.1000	10.8	10.0	7.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1599	0.1722		10.8	10.0	7.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.4089	0.1500	9.41	10.0	-5.9	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2914	0.0500	22.1	20.0	10.3	20.0
Toluene	Ave	1.877	1.918	0.4000	10.2	10.0	2.2	20.0
trans-1,3-Dichloropropene	Lin1		0.5291	0.1000	9.28	10.0	-7.2	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3442	0.1000	10.4	10.0	4.1	20.0
1,3-Dichloropropane	Ave	0.6962	0.7105		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	0.2617	0.2644	0.2000	10.1	10.0	1.0	20.0
2-Hexanone	Ave	0.2698	0.2927	0.0500	21.7	20.0	8.5	20.0
Dibromochloromethane	Lin1		0.2623		9.02	10.0	-9.8	20.0
1,2-Dibromoethane	Ave	0.3223	0.3341		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	1.104	1.136	0.3000	10.3	10.0	2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3283		10.5	10.0	5.4	20.0
Ethylbenzene	Ave	0.5828	0.6250		10.7	10.0	7.2	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7452		20.5	20.0	2.7	20.0
o-Xylene	Ave	0.7207	0.7518		10.4	10.0	4.3	20.0
Styrene	Ave	1.192	1.255	0.3000	10.5	10.0	5.3	20.0
Bromoform	Lin1		0.1220	0.1000	9.03	10.0	-9.7	20.0
Isopropylbenzene	Ave	1.713	1.779	0.1000	10.4	10.0	3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.9195	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8159	0.8010		9.82	10.0	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2982		10.5	10.0	5.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2617		20.8	20.0	4.2	20.0
n-Propylbenzene	Ave	0.8598	0.9010		10.5	10.0	4.8	20.0
2-Chlorotoluene	Ave	0.8362	0.8214		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.836		10.2	10.0	1.6	20.0
4-Chlorotoluene	Ave	0.8762	0.8813		10.1	10.0	0.6	20.0
tert-Butylbenzene	Ave	2.471	2.497		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.988		10.3	10.0	2.8	20.0
sec-Butylbenzene	Ave	3.036	3.064		10.1	10.0	0.9	20.0
1,3-Dichlorobenzene	Ave	1.506	1.484	0.6000	9.85	10.0	-1.5	20.0
p-Isopropyltoluene	Ave	2.486	2.579		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.584	0.5000	9.98	10.0	-0.2	20.0
n-Butylbenzene	Ave	2.286	2.295		10.0	10.0	0.4	20.0
1,2-Dichlorobenzene	Ave	1.485	1.504	0.4000	10.1	10.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.1049	0.0500	11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6660	0.2000	9.77	10.0	-2.3	20.0
Hexachlorobutadiene	Ave	0.2577	0.2217		8.60	10.0	-14.0	20.0
Naphthalene	Ave	2.063	2.211		10.7	10.0	7.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5920	0.6250		10.6	10.0	5.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2274		9.72	10.2	-4.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3583		9.46	10.2	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.552	1.491		9.81	10.2	-3.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5469		10.1	10.2	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3065		9.63	10.0	-3.7	20.0
Diisopropyl ether	Ave	0.2775	0.2745		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		527	500	5.4	20.0
Cyclohexanone	Lin1		0.0256		52.9	200	-73.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	3.178		10.7	10.0	6.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: BFB2916.D BFB Injection Date: 04/30/2012

Instrument ID: A3UX16 BFB Injection Time: 11:22

Analysis Batch No.: 42171

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.1	(0.2)1
174	50.0 - 120.00 % of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	4.8	(7.3)1
176	95.0 - 101.0 % of mass 174	63.9	(96.5)1
177	5.0 - 9.0 % of mass 176	4.2	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-42171/2	UXM5270.D	04/30/2012	11:50
	CCV 240-42171/3	UXM5271.D	04/30/2012	12:13
	LCS 240-42171/4	UXM5272.D	04/30/2012	12:36
	MB 240-42171/5	UXM5273.D	04/30/2012	12:59
MSA-MW39S-041912	240-10391-7	UXM5275.D	04/30/2012	14:00
	240-10350-A-5 MS	UXM5284.D	04/30/2012	17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012	17:48

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2885	0.1000	10.2	10.0	2.0	20.0
Chloromethane	Ave	0.4613	0.4195	0.1000	9.10	10.0	-9.0	20.0
Vinyl chloride	Ave	0.4246	0.4029	0.1000	9.49	10.0	-5.1	20.0
Bromomethane	Ave	0.1684	0.1518	0.0500	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2371	0.2197	0.0500	9.27	10.0	-7.3	20.0
Trichlorofluoromethane	Ave	0.3035	0.3119	0.1000	10.3	10.0	2.8	20.0
Acrolein	Ave	0.0489	0.0440 NT		89.9	100	-10.1	20.0
1,1-Dichloroethene	Ave	0.2446	0.2428	0.1000	9.93	10.0	-0.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1669	0.0500	10.8	10.0	8.0	20.0
Acetone	Lin1		0.0864	0.0500	16.6	20.0	-17.0	20.0
Iodomethane	Ave	0.3433	0.3500		10.2	10.0	1.9	20.0
Carbon disulfide	Ave	0.7261	0.7265	0.1000	10.0	10.0	0.0	20.0
Acetonitrile	Ave	0.0346	0.0292 NT		84.2	100	-15.8	20.0
Methyl acetate	Ave	0.2327	0.1967	0.1000	16.9	20.0	-15.5	20.0
Methylene Chloride	Lin1		0.3004	0.1000	9.58	10.0	-4.2	20.0
tert-Butyl alcohol	Ave	0.0189	0.0158		167	200	-16.6	20.0
Acrylonitrile	Ave	0.1114	0.0998		17.9	20.0	-10.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7869	0.1000	9.36	10.0	-6.4	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2775	0.1000	9.66	10.0	-3.4	20.0
Hexane	Ave	0.0529	0.0551		10.4	10.0	4.1	20.0
1,1-Dichloroethane	Ave	0.5691	0.5381	0.1000	9.45	10.0	-5.5	20.0
Vinyl acetate	Ave	0.0505	0.0473		9.37	10.0	-6.3	20.0
2-Butanone	Ave	0.1356	0.1228	0.0500	18.1	20.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2944	0.1000	9.54	10.0	-4.6	20.0
2,2-Dichloropropane	Ave	0.2932	0.3012		10.3	10.0	2.7	20.0
Bromochloromethane	Ave	0.1283	0.1246		9.71	10.0	-2.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		8.61	10.0	-13.9	20.0
Chloroform	Ave	0.5296	0.5127	0.2000	9.68	10.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3764	0.1000	10.2	10.0	2.3	20.0
Cyclohexane	Ave	0.4605	0.4777	0.1000	10.4	10.0	3.7	20.0
1,1-Dichloropropene	Ave	0.4264	0.4061		9.53	10.0	-4.7	20.0
Carbon tetrachloride	Ave	0.2770	0.2871	0.1000	10.4	10.0	3.7	20.0
1,2-Dichloroethane	Ave	0.4694	0.4390	0.1000	9.35	10.0	-6.5	20.0
Benzene	Ave	1.251	1.173	0.5000	9.38	10.0	-6.2	20.0
Trichloroethene	Ave	0.2698	0.2578	0.2000	9.56	10.0	-4.4	20.0
1,2-Dichloropropane	Ave	0.3083	0.2961	0.1000	9.61	10.0	-3.9	20.0
Methylcyclohexane	Ave	0.3477	0.3809	0.1000	11.0	10.0	9.5	20.0
Dibromomethane	Ave	0.1606	0.1478		9.20	10.0	-8.0	20.0
1,4-Dioxane	Ave	0.0024	0.0019 NT		403	500	-19.5	20.0
Bromodichloromethane	Ave	0.3092	0.3153	0.1000	10.2	10.0	2.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1599	0.1432		17.9	20.0	-10.4	20.0
cis-1,3-Dichloropropene	Lin1		0.3918	0.1500	9.04	10.0	-9.6	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2348	0.0500	17.8	20.0	-11.1	20.0
Toluene	Ave	1.877	1.787	0.4000	9.52	10.0	-4.8	20.0
trans-1,3-Dichloropropene	Lin1		0.5043	0.1000	8.87	10.0	-11.3	20.0
Ethyl methacrylate	Ave	0.5543	0.5335		9.62	10.0	-3.8	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3148	0.1000	9.52	10.0	-4.8	20.0
1,3-Dichloropropane	Ave	0.6962	0.6368		9.15	10.0	-8.5	20.0
Tetrachloroethene	Ave	0.2617	0.2605	0.2000	9.95	10.0	-0.5	20.0
2-Hexanone	Ave	0.2698	0.2379	0.0500	17.6	20.0	-11.8	20.0
Dibromochloromethane	Lin1		0.2633		9.05	10.0	-9.5	20.0
1,2-Dibromoethane	Ave	0.3223	0.3055		9.48	10.0	-5.2	20.0
Chlorobenzene	Ave	1.104	1.033	0.3000	9.36	10.0	-6.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3137		10.1	10.0	0.7	20.0
Ethylbenzene	Ave	0.5828	0.5604		9.61	10.0	-3.9	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7011		19.3	20.0	-3.4	20.0
o-Xylene	Ave	0.7207	0.6828		9.47	10.0	-5.3	20.0
Styrene	Ave	1.192	1.161	0.3000	9.74	10.0	-2.6	20.0
Bromoform	Lin1		0.1180	0.1000	8.76	10.0	-12.4	20.0
Isopropylbenzene	Ave	1.713	1.674	0.1000	9.78	10.0	-2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.8145	0.3000	9.03	10.0	-9.7	20.0
Bromobenzene	Ave	0.8159	0.7672		9.40	10.0	-6.0	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2411		8.50	10.0	-15.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2253		8.97	10.0	-10.3	20.0
n-Propylbenzene	Ave	0.8598	0.8408		9.78	10.0	-2.2	20.0
2-Chlorotoluene	Ave	0.8362	0.7704		9.21	10.0	-7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.685		9.62	10.0	-3.8	20.0
4-Chlorotoluene	Ave	0.8762	0.8030		9.16	10.0	-8.4	20.0
tert-Butylbenzene	Ave	2.471	2.377		9.62	10.0	-3.8	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.768		9.52	10.0	-4.8	20.0
sec-Butylbenzene	Ave	3.036	2.929		9.65	10.0	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.506	1.415	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.486	2.404		9.67	10.0	-3.3	20.0
1,4-Dichlorobenzene	Ave	1.587	1.474	0.5000	9.29	10.0	-7.1	20.0
n-Butylbenzene	Ave	2.286	2.220		9.71	10.0	-2.9	20.0
1,2-Dichlorobenzene	Ave	1.485	1.388	0.4000	9.35	10.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.0894	0.0500	9.39	10.0	-6.1	20.0
1,3,5-Trichlorobenzene	Ave	0.7690	0.7641		9.94	10.0	-0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6748	0.2000	9.90	10.0	-1.0	20.0
Hexachlorobutadiene	Ave	0.2577	0.2544		9.87	10.0	-1.3	20.0
Naphthalene	Ave	2.063	1.886		9.14	10.0	-8.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5920	0.5682		9.60	10.0	-4.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2170		9.27	10.2	-9.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3153		8.32	10.2	-18.5	20.0
Toluene-d8 (Surr)	Ave	1.552	1.338		8.81	10.2	-13.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5067		9.34	10.2	-8.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2389	0.2197		9.39	10.2	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3395		8.96	10.2	-12.2	20.0
Toluene-d8 (Surr)	Ave	1.552	1.410		9.28	10.2	-9.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5352		9.87	10.2	-3.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4967		9.39	10.0	-6.1	20.0
Ethyl ether	Ave	0.3182	0.2722		8.56	10.0	-14.4	20.0
3-Chloro-1-propene	Ave	0.1408	0.1458		10.4	10.0	3.5	20.0
Diisopropyl ether	Ave	0.2775	0.2702		48.7	50.0	-2.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.4999		9.70	10.0	-3.0	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.8664		9.74	10.0	-2.6	20.0
Propionitrile	Ave	0.0386	0.0384		19.9	20.0	-0.6	20.0
Ethyl acetate	Ave	0.2719	0.2478		18.2	20.0	-8.9	20.0
Methacrylonitrile	Ave	0.1921	0.1753		9.13	10.0	-8.7	20.0
Isobutyl alcohol	Ave	0.0086	0.0076		176	200	-12.2	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6972		9.74	10.0	-2.6	20.0
n-Heptane	Ave	0.0406	0.0438		10.8	10.0	7.7	20.0
n-Butanol	Lin1		0.0054		165	200	-17.6	20.0
2-Nitropropane	Qua		0.0379		18.5	20.0	-7.5	20.0
Cyclohexanone	Lin1		0.0798		79.4	100	-20.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.888		9.68	10.0	-3.2	20.0
2-Methylnaphthalene	Qua		0.8088		16.2	20.0	-19.0	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: UXM5273.D Lab Sample ID: MB 240-42171/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 04/30/2012 12:59

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42171/4	UXM5272.D	04/30/2012 12:36
MSA-MW39S-041912	240-10391-7	UXM5275.D	04/30/2012 14:00
	240-10350-A-5 MS	UXM5284.D	04/30/2012 17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012 17:48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.288	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	96		66-117
2037-26-5	Toluene-d8 (Surr)	92		74-115
1868-53-7	Dibromofluoromethane (Surr)	86		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 0.197

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	0.197	J

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-041912	240-10391-2	110	111	99	81
MSA-MW19D-041912	240-10391-3	108	111	96	80
MSA-MW19I-041912	240-10391-4	108	107	97	79
MSA-MW34S-041912	240-10391-5	105	105	96	80
MSA-MW34I-041912	240-10391-6	105	105	96	83
MSA-MW39S-041912	240-10391-7	83	84	85	90
	MB 240-41857/6	100	102	96	81
	MB 240-42171/5	86	87	92	96
	LCS 240-41857/4	106	110	98	89
	LCS 240-42171/4	84	80	83	90
	240-10494-C-3 MS	108	111	100	89
	240-10350-A-5 MS	86	84	90	93
	240-10494-C-3 MSD	108	110	100	89
	240-10350-C-5 MSD	86	83	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4988.D

Lab ID: LCS 240-41857/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.58	96	72-116	
1,1,1-Trichloroethane	10.0	11.0	110	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.96	90	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	14.3	143	74-151	
1,1-Dichloroethane	10.0	9.72	97	82-115	
1,1-Dichloroethene	10.0	11.1	111	78-131	
1,1-Dichloropropene	10.0	9.91	99	83-114	
1,2,3-Trichlorobenzene	10.0	8.96	90	54-126	
1,2,3-Trichloropropane	10.0	9.75	98	73-129	
1,2,3-Trimethylbenzene	10.0	9.13	91	70-130	
1,2,4-Trichlorobenzene	10.0	7.90	79	48-135	
1,2,4-Trimethylbenzene	10.0	8.94	89	76-120	
1,2-Dibromo-3-Chloropropane	10.0	7.90	79	42-136	
1,2-Dichlorobenzene	10.0	9.36	94	81-110	
1,2-Dichloroethane	10.0	11.0	110	71-127	
1,2-Dichloropropane	10.0	9.86	99	81-115	
1,3-Dichlorobenzene	10.0	9.49	95	80-110	
1,3-Dichloropropane	10.0	9.49	95	79-116	
1,4-Dichlorobenzene	10.0	9.19	92	82-110	
2,2-Dichloropropane	10.0	10.1	101	50-129	
2-Chloroethyl vinyl ether	10.0	9.05 J	91	52-131	
2-Chlorotoluene	10.0	9.40	94	76-116	
2-Hexanone	20.0	14.2	71	55-133	
Bromobenzene	10.0	9.99	100	76-115	
Bromochloromethane	10.0	10.8	108	77-120	
4-Chlorotoluene	10.0	9.67	97	77-115	
p-Isopropyltoluene	10.0	9.02	90	74-120	
Acetone	20.0	18.1	91	43-136	
Benzene	10.0	9.62	96	83-112	
Bromoform	10.0	7.33	73	40-131	
Bromomethane	10.0	12.0	120	11-185	
Carbon disulfide	10.0	9.10	91	62-142	
Carbon tetrachloride	10.0	11.0	110	66-128	
Chlorobenzene	10.0	9.83	98	85-110	
Chloroethane	10.0	9.46	95	25-153	
Chloroform	10.0	10.4	104	79-117	
Chloromethane	10.0	9.29	93	44-126	
cis-1,2-Dichloroethene	10.0	9.80	98	80-113	
cis-1,3-Dichloropropene	10.0	9.24	92	61-115	
Hexachlorobutadiene	10.0	6.58	66	36-134	
Dibromomethane	10.0	11.4	114	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4988.D

Lab ID: LCS 240-41857/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.4	104	72-121	
Dichlorodifluoromethane	10.0	10.8	108	19-129	
Ethylbenzene	10.0	9.59	96	83-112	
1,2-Dibromoethane	10.0	9.87	99	79-113	
Diisopropyl ether	10.0	9.52 J	95	77-118	
Naphthalene	10.0	7.58	76	32-141	
m-Xylene & p-Xylene	20.0	19.6	98	83-113	
n-Butylbenzene	10.0	7.80	78	66-125	
Isopropylbenzene	10.0	9.41	94	75-114	
n-Propylbenzene	10.0	9.45	95	74-121	
2-Butanone	20.0	15.7	79	60-126	
4-Methyl-2-pentanone	20.0	16.5	83	63-128	
sec-Butylbenzene	10.0	8.62	86	70-117	
Methyl tert-butyl ether	10.0	9.36	94	52-144	
Methylene Chloride	10.0	9.93	99	66-131	
o-Xylene	10.0	9.42	94	83-113	
Styrene	10.0	9.44	94	79-114	
tert-Butylbenzene	10.0	8.64	86	71-115	
Tetrachloroethene	10.0	11.2	112	79-114	
Toluene	10.0	9.87	99	84-111	
trans-1,2-Dichloroethene	10.0	10.3	103	83-117	
trans-1,3-Dichloropropene	10.0	8.77	88	58-117	
Trichloroethene	10.0	11.0	110	76-117	
Trichlorofluoromethane	10.0	14.3	143	49-157	
Vinyl acetate	10.0	7.66	77	46-161	
Vinyl chloride	10.0	9.37	94	53-127	
tert-Butyl alcohol	200	128	64	70-130	*
Xylenes, Total	30.0	29.0	97	83-112	
Dibromochloromethane	10.0	8.49	85	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.29	93	72-116	
1,1,1-Trichloroethane	10.0	9.17	92	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.61	86	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.47	95	74-151	
1,1-Dichloroethane	10.0	9.12	91	82-115	
1,1-Dichloroethene	10.0	9.37	94	78-131	
1,1-Dichloropropene	10.0	8.82	88	83-114	
1,2,3-Trichlorobenzene	10.0	9.27	93	54-126	
1,2,3-Trichloropropane	10.0	8.58	86	73-129	
1,2,3-Trimethylbenzene	10.0	9.34	93	70-130	
1,2,4-Trichlorobenzene	10.0	9.24	92	48-135	
1,2,4-Trimethylbenzene	10.0	9.09	91	76-120	
1,2-Dibromo-3-Chloropropane	10.0	8.48	85	42-136	
1,2-Dichlorobenzene	10.0	8.87	89	81-110	
1,2-Dichloroethane	10.0	9.10	91	71-127	
1,2-Dichloropropane	10.0	9.15	92	81-115	
1,3-Dichlorobenzene	10.0	9.09	91	80-110	
1,3-Dichloropropane	10.0	8.52	85	79-116	
1,4-Dichlorobenzene	10.0	8.91	89	82-110	
2,2-Dichloropropane	10.0	9.51	95	50-129	
2-Chloroethyl vinyl ether	10.0	8.76 J	88	52-131	
2-Chlorotoluene	10.0	8.59	86	76-116	
2-Hexanone	20.0	17.5	88	55-133	
Bromobenzene	10.0	9.12	91	76-115	
Bromochloromethane	10.0	9.21	92	77-120	
4-Chlorotoluene	10.0	8.82	88	77-115	
p-Isopropyltoluene	10.0	9.20	92	74-120	
Acetone	20.0	16.4	82	43-136	
Benzene	10.0	9.16	92	83-112	
Bromoform	10.0	8.16	82	40-131	
Bromomethane	10.0	7.64	76	11-185	
Carbon disulfide	10.0	8.61	86	62-142	
Carbon tetrachloride	10.0	9.19	92	66-128	
Chlorobenzene	10.0	8.95	90	85-110	
Chloroethane	10.0	8.17	82	25-153	
Chloroform	10.0	8.84	88	79-117	
Chloromethane	10.0	7.91	79	44-126	
cis-1,2-Dichloroethene	10.0	9.23	92	80-113	
cis-1,3-Dichloropropene	10.0	8.36	84	61-115	
Hexachlorobutadiene	10.0	8.77	88	36-134	
Dibromomethane	10.0	9.18	92	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	9.60	96	72-121	
Dichlorodifluoromethane	10.0	5.86	59	19-129	
Ethylbenzene	10.0	9.06	91	83-112	
1,2-Dibromoethane	10.0	8.75	88	79-113	
Diisopropyl ether	10.0	8.74 J	87	77-118	
Naphthalene	10.0	8.79	88	32-141	
m-Xylene & p-Xylene	20.0	18.0	90	83-113	
n-Butylbenzene	10.0	8.83	88	66-125	
Isopropylbenzene	10.0	9.08	91	75-114	
n-Propylbenzene	10.0	9.50	95	74-121	
2-Butanone	20.0	16.7	84	60-126	
4-Methyl-2-pentanone	20.0	17.3	87	63-128	
sec-Butylbenzene	10.0	8.78	88	70-117	
Methyl tert-butyl ether	10.0	8.66	87	52-144	
Methylene Chloride	10.0	8.84	88	66-131	
o-Xylene	10.0	9.15	92	83-113	
Styrene	10.0	9.27	93	79-114	
tert-Butylbenzene	10.0	8.95	90	71-115	
Tetrachloroethene	10.0	9.17	92	79-114	
Toluene	10.0	8.87	89	84-111	
trans-1,2-Dichloroethene	10.0	9.08	91	83-117	
trans-1,3-Dichloropropene	10.0	8.11	81	58-117	
Trichloroethene	10.0	9.17	92	76-117	
Trichlorofluoromethane	10.0	9.25	93	49-157	
Vinyl acetate	10.0	8.12	81	46-161	
Vinyl chloride	10.0	8.25	83	53-127	
tert-Butyl alcohol	200	167	84	70-130	
Xylenes, Total	30.0	27.2	91	83-112	
Dibromochloromethane	10.0	8.13	81	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5009.D

Lab ID: 240-10494-C-3 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	667	67 U	580	87	64-118	
1,1,1-Trichloroethane	667	67 U	633	95	68-121	
1,1,2,2-Tetrachloroethane	667	67 U	575	86	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	667	67 U	807	121	70-152	
1,1-Dichloroethane	667	67 U	589	88	79-116	
1,1-Dichloroethene	667	17 J	680	99	74-135	
1,1-Dichloropropene	667	67 U	584	88	80-114	
1,2,3-Trichlorobenzene	667	67 U	525	79	45-129	
1,2,3-Trichloropropane	667	67 U	637	96	67-132	
1,2,3-Trimethylbenzene	667	330 U	556	83	70-130	
1,2,4-Trichlorobenzene	667	67 U	468	70	38-138	
1,2,4-Trimethylbenzene	667	67 U	531	80	67-124	
1,2-Dibromo-3-Chloropropane	667	130 U	503	76	32-139	
1,2-Dichlorobenzene	667	67 U	576	86	75-111	
1,2-Dichloroethane	667	67 U	713	107	68-129	
1,2-Dichloropropane	667	67 U	601	90	78-115	
1,3-Dichlorobenzene	667	67 U	569	85	73-110	
1,3-Dichloropropane	667	67 U	609	91	74-118	
1,4-Dichlorobenzene	667	67 U	556	83	75-110	
2,2-Dichloropropane	667	67 U	529	79	38-127	
2-Chloroethyl vinyl ether	667	670 U	96.7 J	15	10-150	
2-Chlorotoluene	667	67 U	566	85	69-117	
2-Hexanone	1330	670 U	980	74	47-139	
Bromobenzene	667	67 U	611	92	71-116	
Bromochloromethane	667	67 U	673	101	73-121	
4-Chlorotoluene	667	67 U	589	88	71-116	
p-Isopropyltoluene	667	67 U	524	79	64-122	
Acetone	1330	670 U	1210	91	33-145	
Benzene	667	23 J	615	89	72-121	
Bromoform	667	67 U	447	67	32-128	
Bromomethane	667	67 U	587	88	10-186	
Carbon disulfide	667	67 U	505	76	57-147	
Carbon tetrachloride	667	67 U	615	92	59-129	
Chlorobenzene	667	250	873	93	80-110	
Chloroethane	667	67 U	547	82	21-165	
Chloroform	667	67 U	638	96	76-118	
Chloromethane	667	67 U	574	86	33-132	
cis-1,2-Dichloroethene	667	1700	2320	91	70-120	
cis-1,3-Dichloropropene	667	67 U	545	82	51-110	
Hexachlorobutadiene	667	67 U	367	55	27-132	
Dibromomethane	667	67 U	720	108	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5009.D

Lab ID: 240-10494-C-3 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	667	67 U	623	93	67-120	
Dichlorodifluoromethane	667	67 U	611	92	17-128	
Ethylbenzene	667	67 U	595	89	75-116	
1,2-Dibromoethane	667	67 U	638	96	74-113	
Diisopropyl ether	667	670 U	587 J	88	73-118	
Naphthalene	667	67 U	479	72	15-158	
m-Xylene & p-Xylene	1330	130 U	1190	90	75-117	
n-Butylbenzene	667	67 U	444	67	56-127	
Isopropylbenzene	667	67 U	559	84	68-116	
n-Propylbenzene	667	67 U	547	82	64-124	
2-Butanone	1330	670 U	1040	78	54-129	
4-Methyl-2-pentanone	1330	670 U	1090	82	56-131	
sec-Butylbenzene	667	67 U	493	74	60-119	
Methyl tert-butyl ether	667	330 U	583	88	46-144	
Methylene Chloride	667	67 U	606	91	63-128	
o-Xylene	667	67 U	587	88	76-116	
Styrene	667	67 U	580	87	71-117	
tert-Butylbenzene	667	67 U	521	78	61-119	
Tetrachloroethene	667	67 U	680	102	70-117	
Toluene	667	12 J	612	90	78-114	
trans-1,2-Dichloroethene	667	25 J	656	95	80-119	
trans-1,3-Dichloropropene	667	67 U	517	78	46-116	
Trichloroethene	667	510	1200	103	66-120	
Trichlorofluoromethane	667	67 U	740	111	46-157	
Vinyl acetate	667	130 U	479	72	43-157	
Vinyl chloride	667	920	1460	81	49-130	
tert-Butyl alcohol	13300	3300 U	8930	67	70-130	F
Xylenes, Total	2000	130 U	1780	89	76-116	
Dibromochloromethane	667	67 U	516	77	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	1.0 U	9.57	96	64-118	
1,1,1-Trichloroethane	10.0	1.0 U	9.42	94	68-121	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.56	96	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	11.6	116	70-152	
1,1-Dichloroethane	10.0	1.0 U	9.26	93	79-116	
1,1-Dichloroethene	10.0	1.0 U	10.0	100	74-135	
1,1-Dichloropropene	10.0	1.0 U	9.55	96	80-114	
1,2,3-Trichlorobenzene	10.0	1.0 U	9.86	99	45-129	
1,2,3-Trichloropropane	10.0	1.0 U	9.72	97	67-132	
1,2,3-Trimethylbenzene	10.0	5.0 U	9.43	94	70-130	
1,2,4-Trichlorobenzene	10.0	1.0 U	9.37	94	38-138	
1,2,4-Trimethylbenzene	10.0	1.0 U	9.37	94	67-124	
1,2-Dibromo-3-Chloropropane	10.0	2.0 U	9.54	95	32-139	
1,2-Dichlorobenzene	10.0	1.0 U	9.15	92	75-111	
1,2-Dichloroethane	10.0	1.0 U	9.37	94	68-129	
1,2-Dichloropropane	10.0	1.0 U	9.68	97	78-115	
1,3-Dichlorobenzene	10.0	1.0 U	9.16	92	73-110	
1,3-Dichloropropane	10.0	1.0 U	9.44	94	74-118	
1,4-Dichlorobenzene	10.0	1.0 U	9.01	90	75-110	
2,2-Dichloropropane	10.0	1.0 U	9.23	92	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	0 *	10-150	F
2-Chlorotoluene	10.0	1.0 U	8.96	90	69-117	
2-Hexanone	20.0	10 U	21.3	107	47-139	
Bromobenzene	10.0	1.0 U	9.39	94	71-116	
Bromochloromethane	10.0	1.0 U	9.28	93	73-121	
4-Chlorotoluene	10.0	1.0 U	8.98	90	71-116	
p-Isopropyltoluene	10.0	1.0 U	9.57	96	64-122	
Acetone	20.0	10 U	17.7	89	33-145	
Benzene	10.0	1.0 U	9.36	94	72-121	
Bromoform	10.0	1.0 U	8.55	86	32-128	
Bromomethane	10.0	1.0 U	4.44	44	10-186	
Carbon disulfide	10.0	1.0 U	8.83	88	57-147	
Carbon tetrachloride	10.0	1.0 U	9.67	97	59-129	
Chlorobenzene	10.0	1.0 U	9.37	94	80-110	
Chloroethane	10.0	1.0 U	6.84	68	21-165	
Chloroform	10.0	1.0 U	9.03	90	76-118	
Chloromethane	10.0	1.0 U	7.92	79	33-132	
cis-1,2-Dichloroethene	10.0	1.0 U	9.38	94	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	8.26	83	51-110	
Hexachlorobutadiene	10.0	1.0 U	8.51	85	27-132	
Dibromomethane	10.0	1.0 U	9.68	97	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	1.0 U	9.64	96	67-120	
Dichlorodifluoromethane	10.0	1.0 U	7.19	72	17-128	
Ethylbenzene	10.0	1.0 U	9.51	95	75-116	
1,2-Dibromoethane	10.0	1.0 U	9.96	100	74-113	
Diisopropyl ether	10.0	10 U	8.79 J	88	73-118	
Naphthalene	10.0	1.0 U	9.96	100	15-158	
m-Xylene & p-Xylene	20.0	2.0 U	19.0	95	75-117	
n-Butylbenzene	10.0	1.0 U	9.11	91	56-127	
Isopropylbenzene	10.0	1.0 U	9.45	95	68-116	
n-Propylbenzene	10.0	1.0 U	9.58	96	64-124	
2-Butanone	20.0	10 U	19.4	97	54-129	
4-Methyl-2-pentanone	20.0	10 U	20.9	105	56-131	
sec-Butylbenzene	10.0	1.0 U	9.33	93	60-119	
Methyl tert-butyl ether	10.0	5.0 U	9.03	90	46-144	
Methylene Chloride	10.0	1.0 U	8.65	87	63-128	
o-Xylene	10.0	1.0 U	9.39	94	76-116	
Styrene	10.0	1.0 U	9.60	96	71-117	
tert-Butylbenzene	10.0	1.0 U	9.33	93	61-119	
Tetrachloroethene	10.0	1.0 U	10.0	100	70-117	
Toluene	10.0	1.0 U	9.36	94	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	9.18	92	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	8.16	82	46-116	
Trichloroethene	10.0	1.0 U	9.41	94	66-120	
Trichlorofluoromethane	10.0	1.0 U	8.71	87	46-157	
Vinyl acetate	10.0	2.0 U	8.93	89	43-157	
Vinyl chloride	10.0	1.0 U	9.08	91	49-130	
tert-Butyl alcohol	200	50 U	217	109	70-130	
Xylenes, Total	30.0	2.0 U	28.4	95	76-116	
Dibromochloromethane	10.0	1.0 U	8.56	86	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5010.D

Lab ID: 240-10494-C-3 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	667	644	97	10	30	64-118	
1,1,1-Trichloroethane	667	680	102	7	30	68-121	
1,1,2,2-Tetrachloroethane	667	611	92	6	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	667	733	110	10	30	70-152	
1,1-Dichloroethane	667	625	94	6	30	79-116	
1,1-Dichloroethene	667	707	103	4	30	74-135	
1,1-Dichloropropene	667	603	90	3	30	80-114	
1,2,3-Trichlorobenzene	667	610	92	15	30	45-129	
1,2,3-Trichloropropane	667	657	99	3	30	67-132	
1,2,3-Trimethylbenzene	667	586	88	5	30	70-130	
1,2,4-Trichlorobenzene	667	525	79	11	30	38-138	
1,2,4-Trimethylbenzene	667	558	84	5	30	67-124	
1,2-Dibromo-3-Chloropropane	667	562	84	11	30	32-139	
1,2-Dichlorobenzene	667	620	93	7	30	75-111	
1,2-Dichloroethane	667	760	114	6	30	68-129	
1,2-Dichloropropane	667	654	98	8	30	78-115	
1,3-Dichlorobenzene	667	603	91	6	30	73-110	
1,3-Dichloropropane	667	644	97	6	30	74-118	
1,4-Dichlorobenzene	667	591	89	6	30	75-110	
2,2-Dichloropropane	667	565	85	7	30	38-127	
2-Chloroethyl vinyl ether	667	98.7 J	15	2	30	10-150	
2-Chlorotoluene	667	595	89	5	30	69-117	
2-Hexanone	1330	1040	78	6	30	47-139	
Bromobenzene	667	645	97	5	30	71-116	
Bromochloromethane	667	740	111	9	30	73-121	
4-Chlorotoluene	667	612	92	4	30	71-116	
p-Isopropyltoluene	667	543	82	4	30	64-122	
Acetone	1330	1360	102	12	30	33-145	
Benzene	667	667	97	8	30	72-121	
Bromoform	667	487	73	9	30	32-128	
Bromomethane	667	733	110	22	30	10-186	
Carbon disulfide	667	537	81	6	30	57-147	
Carbon tetrachloride	667	635	95	3	30	59-129	
Chlorobenzene	667	920	100	5	30	80-110	
Chloroethane	667	611	92	11	30	21-165	
Chloroform	667	687	103	7	30	76-118	
Chloromethane	667	603	91	5	30	33-132	
cis-1,2-Dichloroethene	667	2470	113	6	30	70-120	
cis-1,3-Dichloropropene	667	605	91	11	30	51-110	
Hexachlorobutadiene	667	403	60	9	30	27-132	
Dibromomethane	667	773	116	7	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5010.D

Lab ID: 240-10494-C-3 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	667	693	104	11	30	67-120	
Dichlorodifluoromethane	667	552	83	10	30	17-128	
Ethylbenzene	667	631	95	6	30	75-116	
1,2-Dibromoethane	667	680	102	6	30	74-113	
Diisopropyl ether	667	637 J	96	8	30	73-118	
Naphthalene	667	555	83	15	30	15-158	
m-Xylene & p-Xylene	1330	1250	94	5	30	75-117	
n-Butylbenzene	667	469	70	5	30	56-127	
Isopropylbenzene	667	589	88	5	30	68-116	
n-Propylbenzene	667	563	85	3	30	64-124	
2-Butanone	1330	1130	85	8	30	54-129	
4-Methyl-2-pentanone	1330	1170	88	8	30	56-131	
sec-Butylbenzene	667	505	76	2	30	60-119	
Methyl tert-butyl ether	667	639	96	9	30	46-144	
Methylene Chloride	667	654	98	8	30	63-128	
o-Xylene	667	623	93	6	30	76-116	
Styrene	667	615	92	6	30	71-117	
tert-Butylbenzene	667	512	77	2	30	61-119	
Tetrachloroethene	667	707	106	4	30	70-117	
Toluene	667	647	95	6	30	78-114	
trans-1,2-Dichloroethene	667	687	99	5	30	80-119	
trans-1,3-Dichloropropene	667	573	86	10	30	46-116	
Trichloroethene	667	1260	112	5	30	66-120	
Trichlorofluoromethane	667	740	111	0	30	46-157	
Vinyl acetate	667	522	78	9	30	43-157	
Vinyl chloride	667	1520	90	4	30	49-130	
tert-Butyl alcohol	13300	10700	80	18	30	70-130	
Xylenes, Total	2000	1870	94	5	30	76-116	
Dibromochloromethane	667	556	83	7	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.67	97	1	30	64-118	
1,1,1-Trichloroethane	10.0	9.09	91	4	30	68-121	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	5	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.92	99	16	30	70-152	
1,1-Dichloroethane	10.0	9.28	93	0	30	79-116	
1,1-Dichloroethene	10.0	9.69	97	3	30	74-135	
1,1-Dichloropropene	10.0	9.22	92	4	30	80-114	
1,2,3-Trichlorobenzene	10.0	8.21	82	18	30	45-129	
1,2,3-Trichloropropane	10.0	9.80	98	1	30	67-132	
1,2,3-Trimethylbenzene	10.0	9.03	90	4	30	70-130	
1,2,4-Trichlorobenzene	10.0	7.84	78	18	30	38-138	
1,2,4-Trimethylbenzene	10.0	9.00	90	4	30	67-124	
1,2-Dibromo-3-Chloropropane	10.0	9.69	97	2	30	32-139	
1,2-Dichlorobenzene	10.0	8.74	87	5	30	75-111	
1,2-Dichloroethane	10.0	9.04	90	4	30	68-129	
1,2-Dichloropropane	10.0	9.25	93	5	30	78-115	
1,3-Dichlorobenzene	10.0	8.99	90	2	30	73-110	
1,3-Dichloropropane	10.0	9.43	94	0	30	74-118	
1,4-Dichlorobenzene	10.0	8.88	89	1	30	75-110	
2,2-Dichloropropane	10.0	8.87	89	4	30	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
2-Chlorotoluene	10.0	9.37	94	4	30	69-117	
2-Hexanone	20.0	20.5	103	4	30	47-139	
Bromobenzene	10.0	9.57	96	2	30	71-116	
Bromochloromethane	10.0	8.92	89	4	30	73-121	
4-Chlorotoluene	10.0	9.06	91	1	30	71-116	
p-Isopropyltoluene	10.0	8.93	89	7	30	64-122	
Acetone	20.0	13.9	70	24	30	33-145	
Benzene	10.0	9.16	92	2	30	72-121	
Bromoform	10.0	8.51	85	0	30	32-128	
Bromomethane	10.0	5.19	52	16	30	10-186	
Carbon disulfide	10.0	8.03	80	9	30	57-147	
Carbon tetrachloride	10.0	9.13	91	6	30	59-129	
Chlorobenzene	10.0	9.23	92	2	30	80-110	
Chloroethane	10.0	6.73	67	2	30	21-165	
Chloroform	10.0	8.90	89	1	30	76-118	
Chloromethane	10.0	8.81	88	11	30	33-132	
cis-1,2-Dichloroethene	10.0	9.27	93	1	30	70-120	
cis-1,3-Dichloropropene	10.0	7.99	80	3	30	51-110	
Hexachlorobutadiene	10.0	6.53	65	26	30	27-132	
Dibromomethane	10.0	9.52	95	2	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	10.0	9.34	93	3	30	67-120	
Dichlorodifluoromethane	10.0	5.82	58	21	30	17-128	
Ethylbenzene	10.0	9.29	93	2	30	75-116	
1,2-Dibromoethane	10.0	9.55	96	4	30	74-113	
Diisopropyl ether	10.0	8.71 J	87	1	30	73-118	
Naphthalene	10.0	8.36	84	17	30	15-158	
m-Xylene & p-Xylene	20.0	18.3	92	4	30	75-117	
n-Butylbenzene	10.0	8.35	84	9	30	56-127	
Isopropylbenzene	10.0	9.07	91	4	30	68-116	
n-Propylbenzene	10.0	9.61	96	0	30	64-124	
2-Butanone	20.0	17.6	88	10	30	54-129	
4-Methyl-2-pentanone	20.0	20.2	101	3	30	56-131	
sec-Butylbenzene	10.0	8.71	87	7	30	60-119	
Methyl tert-butyl ether	10.0	8.88	89	2	30	46-144	
Methylene Chloride	10.0	8.38	84	3	30	63-128	
o-Xylene	10.0	9.08	91	3	30	76-116	
Styrene	10.0	9.26	93	4	30	71-117	
tert-Butylbenzene	10.0	9.04	90	3	30	61-119	
Tetrachloroethene	10.0	9.57	96	4	30	70-117	
Toluene	10.0	9.29	93	1	30	78-114	
trans-1,2-Dichloroethene	10.0	8.99	90	2	30	80-119	
trans-1,3-Dichloropropene	10.0	8.50	85	4	30	46-116	
Trichloroethene	10.0	9.19	92	2	30	66-120	
Trichlorofluoromethane	10.0	8.33	83	4	30	46-157	
Vinyl acetate	10.0	9.09	91	2	30	43-157	
Vinyl chloride	10.0	8.71	87	4	30	49-130	
tert-Butyl alcohol	200	159	79	31	30	70-130	F
Xylenes, Total	30.0	27.4	91	4	30	76-116	
Dibromochloromethane	10.0	8.69	87	2	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: STD8260 240-39613/4 Date Analyzed: 04/09/2012 11:26

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX0992.D Heated Purge: (Y/N) N

Calibration ID: 7930

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2023865	5.13	1264122	7.80	691088	10.05
UPPER LIMIT		4047730	5.63	2528244	8.30	1382176	10.55
LOWER LIMIT		1011933	4.63	632061	7.30	345544	9.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-39613/14		2014325	5.13	1243566	7.80	646887	10.04
CCVIS 240-41857/2		1657236	5.13	1149455	7.80	631644	10.05

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: CCVIS 240-41857/2 Date Analyzed: 04/27/2012 09:48

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): UXX4986.D Heated Purge: (Y/N) N

Calibration ID: 7932

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1657236	5.13	1149455	7.80	631644	10.05
UPPER LIMIT		3314472	5.63	2298910	8.30	1263288	10.55
LOWER LIMIT		828618	4.63	574728	7.30	315822	9.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-41857/3		1701441	5.13	1135876	7.80	553520	10.05
LCS 240-41857/4		1735205	5.12	1189359	7.80	645165	10.04
MB 240-41857/6		1689303	5.13	1120643	7.80	529855	10.05
240-10391-4	MSA-MW19I-041912	1578330	5.13	1062399	7.80	513357	10.05
240-10391-6	MSA-MW34I-041912	1538762	5.13	1025936	7.80	507304	10.05
240-10391-2	TB-041912	1487095	5.13	1002864	7.80	485962	10.04
240-10391-3	MSA-MW19D-041912	1545011	5.13	1074268	7.80	522977	10.04
240-10391-5	MSA-MW34S-041912	1526385	5.13	1024113	7.80	502889	10.05
240-10494-C-3 MS		1597014	5.13	1083469	7.80	602393	10.05
240-10494-C-3 MSD		1594815	5.13	1100398	7.80	619776	10.04

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: STD8260 240-42092/4 Date Analyzed: 04/29/2012 16:26

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5241.D Heated Purge: (Y/N) N

Calibration ID: 8426

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1530000	5.70	1036987	8.39	499405	10.64
UPPER LIMIT		3060000	6.20	2073974	8.89	998810	11.14
LOWER LIMIT		765000	5.20	518494	7.89	249703	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42092/14		1382789	5.70	929711	8.39	462842	10.64
CCVIS 240-42171/2		1827438	5.70	1228317	8.39	614323	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: CCVIS 240-42171/2 Date Analyzed: 04/30/2012 11:50

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5270.D Heated Purge: (Y/N) N

Calibration ID: 8428

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1827438	5.70	1228317	8.39	614323	10.64
UPPER LIMIT		3654876	6.20	2456634	8.89	1228646	11.14
LOWER LIMIT		913719	5.20	614159	7.89	307162	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42171/3		1675303	5.70	1143405	8.39	543922	10.64
LCS 240-42171/4		1858112	5.70	1240826	8.39	615173	10.64
MB 240-42171/5		1636782	5.70	1107392	8.39	536650	10.64
240-10391-7	MSA-MW39S-041912	1722814	5.70	1158977	8.39	567980	10.64
240-10350-A-5 MS		1710874	5.70	1135916	8.39	559548	10.64
240-10350-C-5 MSD		1786806	5.70	1151558	8.39	541302	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: 20419001.D DFTPP Injection Date: 04/19/2012

Instrument ID: A4HP10 DFTPP Injection Time: 11:33

Analysis Batch No.: 40849

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	36.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.6	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	25.0 - 75.0% of mass 198	50.4	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	27.2	
365	Greater than 0.75% of mass 198	2.8	
441	Present, but less than mass 443	13.1	
442	40.0 - 110.0% of mass 198	84.5	
443	15.0 - 24.0% of mass 442	16.7	(19.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-40849/2	20419002.D	04/19/2012	11:52
	STD4 240-40849/3	20419003.D	04/19/2012	12:11
	STD3 240-40849/4	20419004.D	04/19/2012	12:30
	STD2 240-40849/5	20419005.D	04/19/2012	12:49
	STD1 240-40849/6	20419006.D	04/19/2012	13:08
	STD9 240-40849/7	20419007.D	04/19/2012	13:26
	STD8 240-40849/8	20419008.D	04/19/2012	13:45
	STD7 240-40849/9	20419009.D	04/19/2012	14:04
	STD6 240-40849/10	20419010.D	04/19/2012	14:23
	ICV 240-40849/11	20419011.D	04/19/2012	14:42

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 40849

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2012 11:52 Calibration End Date: 04/19/2012 14:23 Calibration ID: 8125

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40849/6	20419006.D
Level 2	STD2 240-40849/5	20419005.D
Level 3	STD3 240-40849/4	20419004.D
Level 4	STD4 240-40849/3	20419003.D
Level 5	STD5 240-40849/2	20419002.D
Level 6	STD6 240-40849/10	20419010.D
Level 7	STD7 240-40849/9	20419009.D
Level 8	STD8 240-40849/8	20419008.D
Level 9	STD9 240-40849/7	20419007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5731	0.6075 0.5867	0.5683 0.6077	0.5957 0.5676	0.5607	Ave		0.5834				3.2		15.0			
Malononitrile	1.6818	1.7406 1.4823	1.7380 +++++	1.8486 +++++	1.7259	Ave		1.7029				7.1		15.0			
N-Nitrosodimethylamine	0.9411	0.9022 0.9488	0.9164 1.0108	0.9659 0.9528	0.9120	Ave		0.9438				3.7		15.0			
Pyridine	1.5659	1.4871 1.6026	1.5860 1.6795	1.6092 1.6099	1.5325	Ave		1.5841				3.6		15.0			
Ethyl methacrylate	1.2915	1.2143 1.2803	1.2645 1.3407	1.2944 1.2371	1.2313	Ave		1.2693				3.2		15.0			
Benzaldehyde	1.5529 0.7747	1.1409 +++++	1.2213 +++++	1.2572 +++++	1.0933	Ave		1.1734				22.0	*	15.0			
3-Chloropropionitrile	0.8218	0.8133 0.8120	0.8250 0.8588	0.8456 0.8237	0.7984	Ave		0.8248				2.3		15.0			
Phenol	1.8729	1.8122 1.8898	1.8358 2.0372	1.8865 1.9052	1.7937	Ave		1.8792				4.0		15.0			
Aniline	2.3261	2.1976 2.3325	2.2100 2.6245	2.3349 2.4154	2.1998	Ave		2.3301				6.1		15.0			
Bis(2-chloroethyl)ether	1.5088	1.4849 1.5553	1.4564 1.6334	1.5264 1.6029	1.5112	Ave		1.5349				3.9		15.0			
2-Chlorophenol	1.4909	1.3873 1.5094	1.4548 1.6506	1.5130 1.5318	1.4574	Ave		1.4994				5.1		15.0			
1,3-Dichlorobenzene	1.5900	1.4849 1.6063	1.5754 1.7123	1.6047 1.5638	1.5230	Ave		1.5825				4.2		15.0			
1,4-Dichlorobenzene	1.6305	1.5442 1.6482	1.5794 1.7500	1.6169 1.6180	1.5534	Ave		1.6176				4.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-40849/11 Calibration Date: 04/19/2012 14:42

Instrument ID: A4HP10 Calib Start Date: 04/19/2012 11:52

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/19/2012 14:23

Lab File ID: 20419011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5834	0.5492		9.41	10.0	-5.9	50.0
N-Nitrosodimethylamine	Ave	0.9438	0.9330		9.89	10.0	-1.1	50.0
Pyridine	Ave	1.584	1.570		9.91	10.0	-0.9	50.0
Ethyl methacrylate	Ave	1.269	1.249		9.84	10.0	-1.6	50.0
3-Chloropropionitrile	Ave	0.8248	0.8221		9.97	10.0	-0.3	50.0
Malononitrile	Ave	1.703	1.648		9.67	10.0	-3.2	50.0
Benzaldehyde	Ave	1.173	0.7135		6.08	10.0	-39.2	50.0
Phenol	Ave	1.879	1.864		9.92	10.0	-0.8	20.0
Aniline	Ave	2.330	2.310		9.91	10.0	-0.9	50.0
Bis(2-chloroethyl)ether	Ave	1.535	1.508		9.82	10.0	-1.8	50.0
2-Chlorophenol	Ave	1.499	1.499		10.0	10.0	-0.0	50.0
1,3-Dichlorobenzene	Ave	1.583	1.597		10.1	10.0	0.9	50.0
1,4-Dichlorobenzene	Ave	1.618	1.648		10.2	10.0	1.9	20.0
Benzyl alcohol	Ave	0.9164	0.9042		9.87	10.0	-1.3	50.0
1,2-Dichlorobenzene	Ave	1.502	1.537		10.2	10.0	2.3	50.0
2-Methylphenol	Ave	1.356	1.350		9.95	10.0	-0.5	50.0
bis (2-chloroisopropyl) ether	Ave	1.911	1.895		9.91	10.0	-0.9	50.0
3 & 4 Methylphenol	Ave	1.417	1.381		9.75	10.0	-2.5	50.0
N-Nitrosodi-n-propylamine	Ave	1.049	1.049	0.0500	10.0	10.0	-0.0	50.0
Acetophenone	Ave	1.971	1.993		10.1	10.0	1.1	50.0
Hexachloroethane	Ave	0.5599	0.5658		10.1	10.0	1.1	50.0
Nitrobenzene	Ave	0.3783	0.3808		10.1	10.0	0.7	50.0
Isophorone	Ave	0.7025	0.7179		10.2	10.0	2.2	50.0
2,4-Dimethylphenol	Ave	0.3608	0.3620		10.0	10.0	0.3	50.0
2-Nitrophenol	Ave	0.2015	0.2058		10.2	10.0	2.1	20.0
1,3,5-Trichlorobenzene	Ave	0.3253	0.3318		10.2	10.0	2.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4187	0.4268		10.2	10.0	1.9	50.0
Benzoic acid	Qua		0.1991		16.7	20.0	-16.5	50.0
2,4-Dichlorophenol	Ave	0.2784	0.2865		10.3	10.0	2.9	20.0
1,2,4-Trichlorobenzene	Ave	0.3193	0.3226		10.1	10.0	1.0	50.0
Naphthalene	Ave	1.088	1.105		10.2	10.0	1.6	50.0
4-Chloroaniline	Ave	0.4576	0.4468		9.77	10.0	-2.3	50.0
Hexachlorobutadiene	Ave	0.1651	0.1678		10.2	10.0	1.6	20.0
1,2,3-Trichlorobenzene	Ave	0.2964	0.3039		10.3	10.0	2.5	50.0
Caprolactam	Ave	0.1191	0.1243		10.4	10.0	4.4	50.0
4-Chloro-3-methylphenol	Ave	0.3031	0.2916		9.62	10.0	-3.8	20.0
2-Methylnaphthalene	Ave	0.7202	0.7114		9.88	10.0	-1.2	50.0
1-Methylnaphthalene	Ave	0.6846	0.6807		9.94	10.0	-0.6	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5229	0.5232		10.0	10.0	0.0	50.0
Hexachlorocyclopentadiene	Ave	0.3189	0.3189	0.0500	10.0	10.0	0.0	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: 20425001.D DFTPP Injection Date: 04/25/2012

Instrument ID: A4HP10 DFTPP Injection Time: 09:06

Analysis Batch No.: 41486

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	32.9	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	36.8	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	25.0 - 75.0% of mass 198	47.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	27.9	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	16.6	
442	40.0 - 110.0% of mass 198	102.6	
443	15.0 - 24.0% of mass 442	20.1	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-41486/2	20425002.D	04/25/2012	09:25
	MB 240-41139/22-A	20425003.D	04/25/2012	09:43
	LCS 240-41139/23-A	20425004.D	04/25/2012	10:02
MSA-MW19D-041912	240-10391-3	20425011.D	04/25/2012	12:12
MSA-MW19I-041912	240-10391-4	20425012.D	04/25/2012	12:30
MSA-MW34S-041912	240-10391-5	20425013.D	04/25/2012	12:49
MSA-MW34I-041912	240-10391-6	20425015.D	04/25/2012	14:21
	240-10385-W-7-A MS	20425017.D	04/25/2012	14:58
	240-10385-T-7-A MSD	20425018.D	04/25/2012	15:17
MSA-MW39S-041912	240-10391-7	20425029.D	04/25/2012	18:42

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-41486/2 Calibration Date: 04/25/2012 09:25

Instrument ID: A4HP10 Calib Start Date: 04/19/2012 11:52

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/19/2012 14:23

Lab File ID: 20425002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5834	0.5741		9.84	10.0	-1.6	50.0
N-Nitrosodimethylamine	Ave	0.9438	0.9360		9.92	10.0	-0.8	50.0
Pyridine	Ave	1.584	1.530		9.66	10.0	-3.4	50.0
Ethyl methacrylate	Ave	1.269	1.256		9.90	10.0	-1.0	50.0
3-Chloropropionitrile	Ave	0.8248	0.8080		9.80	10.0	-2.0	50.0
Malononitrile	Ave	1.703	1.633		9.59	10.0	-4.1	50.0
Benzaldehyde	Ave	1.173	0.7150		6.09	10.0	-39.1	50.0
Phenol	Ave	1.879	1.889		10.1	10.0	0.5	20.0
Aniline	Ave	2.330	2.310		9.91	10.0	-0.9	50.0
Bis(2-chloroethyl)ether	Ave	1.535	1.512		9.85	10.0	-1.5	50.0
2-Chlorophenol	Ave	1.499	1.519		10.1	10.0	1.3	50.0
1,3-Dichlorobenzene	Ave	1.583	1.596		10.1	10.0	0.9	50.0
1,4-Dichlorobenzene	Ave	1.618	1.643		10.2	10.0	1.6	50.0
Benzyl alcohol	Ave	0.9164	0.9465		10.3	10.0	3.3	50.0
1,2-Dichlorobenzene	Ave	1.502	1.536		10.2	10.0	2.3	50.0
2-Methylphenol	Ave	1.356	1.446		10.7	10.0	6.6	50.0
bis (2-chloroisopropyl) ether	Ave	1.911	1.896		9.92	10.0	-0.8	50.0
3 & 4 Methylphenol	Ave	1.417	1.485		10.5	10.0	4.8	50.0
N-Nitrosodi-n-propylamine	Ave	1.049	1.060	0.0500	10.1	10.0	1.0	50.0
Acetophenone	Ave	1.971	2.029		10.3	10.0	2.9	50.0
Hexachloroethane	Ave	0.5599	0.5719		10.2	10.0	2.1	50.0
Nitrobenzene	Ave	0.3783	0.3816		10.1	10.0	0.9	50.0
Isophorone	Ave	0.7025	0.7063		10.1	10.0	0.5	50.0
2-Nitrophenol	Ave	0.2015	0.2133		10.6	10.0	5.8	20.0
1,3,5-Trichlorobenzene	Ave	0.3253	0.3507		10.8	10.0	7.8	50.0
2,4-Dimethylphenol	Ave	0.3608	0.3819		10.6	10.0	5.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.4187	0.4208		10.1	10.0	0.5	50.0
Benzoic acid	Qua		0.1906		16.0	20.0	-20.0	50.0
2,4-Dichlorophenol	Ave	0.2784	0.2979		10.7	10.0	7.0	20.0
1,2,4-Trichlorobenzene	Ave	0.3193	0.3287		10.3	10.0	3.0	50.0
Naphthalene	Ave	1.088	1.114		10.2	10.0	2.4	50.0
4-Chloroaniline	Ave	0.4576	0.4587		10.0	10.0	0.2	50.0
Hexachlorobutadiene	Ave	0.1651	0.1689		10.2	10.0	2.3	20.0
1,2,3-Trichlorobenzene	Ave	0.2964	0.3079		10.4	10.0	3.9	50.0
Caprolactam	Ave	0.1191	0.1162		9.76	10.0	-2.4	50.0
4-Chloro-3-methylphenol	Ave	0.3031	0.3123		10.3	10.0	3.0	20.0
2-Methylnaphthalene	Ave	0.7202	0.7277		10.1	10.0	1.0	50.0
1-Methylnaphthalene	Ave	0.6846	0.6825		9.97	10.0	-0.3	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5229	0.5431		10.4	10.0	3.9	50.0
Hexachlorocyclopentadiene	Ave	0.3189	0.3470	0.0500	10.9	10.0	8.8	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab File ID: 20425003.D Lab Sample ID: MB 240-41139/22-A

Matrix: Water Date Extracted: 04/23/2012 08:50

Instrument ID: A4HP10 Date Analyzed: 04/25/2012 09:43

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-41139/23-A	20425004.D	04/25/2012 10:02
MSA-MW19D-041912	240-10391-3	20425011.D	04/25/2012 12:12
MSA-MW19I-041912	240-10391-4	20425012.D	04/25/2012 12:30
MSA-MW34S-041912	240-10391-5	20425013.D	04/25/2012 12:49
MSA-MW34I-041912	240-10391-6	20425015.D	04/25/2012 14:21
	240-10385-W-7-A MS	20425017.D	04/25/2012 14:58
	240-10385-T-7-A MSD	20425018.D	04/25/2012 15:17
MSA-MW39S-041912	240-10391-7	20425029.D	04/25/2012 18:42

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41139/22-A

Matrix: Water | Lab File ID: 20425003.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/23/2012 08:50

Sample wt/vol: 1000(mL) | Date Analyzed: 04/25/2012 09:43

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41486 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	62		28-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	56		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	58		27-111
4165-62-2	Phenol-d5 (Surr)	65		10-110
1718-51-0	Terphenyl-d14 (Surr)	80		37-119

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MSA-MW19D-041912	240-10391-3	50	52	49	50	59	70
MSA-MW19I-041912	240-10391-4	44	44	41	42	44	53
MSA-MW34S-041912	240-10391-5	58	62	59	57	62	72
MSA-MW34I-041912	240-10391-6	56	57	54	55	59	72
MSA-MW39S-041912	240-10391-7	43	48	43	49	63	58
	MB 240-41139/22-A	61	65	58	62	56	80
	LCS 240-41139/23-A	75	75	67	69	74	80
	240-10385-W-7-A MS	64	66	60	60	65	72
	240-10385-T-7-A MSD	62	63	59	60	63	70

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20425004.D

Lab ID: LCS 240-41139/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.1	61	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20425017.D

Lab ID: 240-10385-W-7-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.0	0.95 U	9.47	50	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20425018.D

Lab ID: 240-10385-T-7-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.6	9.16	47	3	30	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: STD6 240-40849/10 Date Analyzed: 04/19/2012 14:23

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): 20419010.D Heated Purge: (Y/N) N

Calibration ID: 8125

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		296542	3.44	1182212	4.33	686246	5.59
UPPER LIMIT		593084	3.94	2364424	4.83	1372492	6.09
LOWER LIMIT		148271	2.94	591106	3.83	343123	5.09
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-40849/11		284334	3.44	1118581	4.33	657532	5.59
CCV 240-41486/2 CCVIS		243292	3.28	974290	4.17	565757	5.43

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: STD6 240-40849/10 Date Analyzed: 04/19/2012 14:23

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): 20419010.D Heated Purge: (Y/N) N

Calibration ID: 8125

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1073328	6.67	1053607	8.64	882504	9.99
UPPER LIMIT		2146656	7.17	2107214	9.14	1765008	10.49
LOWER LIMIT		536664	6.17	526804	8.14	441252	9.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-40849/11		1045593	6.67	1002748	8.64	845727	9.99
CCV 240-41486/2 CCVIS		897107	6.50	885995	8.45	778086	9.70

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: CCV 240-41486/2 Date Analyzed: 04/25/2012 09:25

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20425002.D Heated Purge: (Y/N) N

Calibration ID: 8137

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		243292	3.28	974290	4.17	565757	5.43
UPPER LIMIT		486584	3.78	1948580	4.67	1131514	5.93
LOWER LIMIT		121646	2.78	487145	3.67	282879	4.93
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-41139/22-A		254501	3.28	1028884	4.16	602022	5.43
LCS 240-41139/23-A		239140	3.28	993587	4.17	581175	5.43
240-10391-3	MSA-MW19D-041912	246033	3.28	988153	4.16	588062	5.43
240-10391-4	MSA-MW19I-041912	259542	3.28	1046369	4.16	608249	5.43
240-10391-5	MSA-MW34S-041912	242629	3.28	968235	4.16	582879	5.43
240-10391-6	MSA-MW34I-041912	309535	3.28	1239684	4.16	721410	5.43
240-10385-W-7-A MS		297462	3.28	1212993	4.17	722861	5.43
240-10385-T-7-A MSD		270242	3.28	1109797	4.16	659679	5.43
240-10391-7	MSA-MW39S-041912	298371	3.28	1201613	4.17	701422	5.43

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: CCV 240-41486/2 Date Analyzed: 04/25/2012 09:25

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20425002.D Heated Purge: (Y/N) N

Calibration ID: 8137

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		897107	6.50	885995	8.45	778086	9.70
UPPER LIMIT		1794214	7.00	1771990	8.95	1556172	10.20
LOWER LIMIT		448554	6.00	442998	7.95	389043	9.20
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-41139/22-A		977691	6.50	936013	8.45	829472	9.69
LCS 240-41139/23-A		937413	6.50	930270	8.45	807819	9.70
240-10391-3	MSA-MW19D-041912	953990	6.50	921460	8.45	801436	9.70
240-10391-4	MSA-MW19I-041912	990306	6.50	972693	8.44	857280	9.68
240-10391-5	MSA-MW34S-041912	938113	6.50	928334	8.45	813056	9.70
240-10391-6	MSA-MW34I-041912	1173425	6.50	1164019	8.47	1043767	9.72
240-10385-W-7-A MS		1152882	6.50	1133914	8.46	964318	9.70
240-10385-T-7-A MSD		1073636	6.50	1035600	8.46	893092	9.70
240-10391-7	MSA-MW39S-041912	1150309	6.50	1179055	8.45	1069385	9.71

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: YPID Start Date: 04/24/2012 11:15

Analysis Batch Number: 41320 End Date: 04/24/2012 19:41

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/24/2012 11:15	1		RTX-VRX 0.45(mm)
CCV 240-41320/5 CCVRT		04/24/2012 12:31	1	YF042405.D	RTX-VRX 0.45(mm)
MB 240-41320/6		04/24/2012 14:30	1	YF042408.D	RTX-VRX 0.45(mm)
LCS 240-41320/7		04/24/2012 15:10	1	YF042409.D	RTX-VRX 0.45(mm)
ZZZZZ		04/24/2012 15:50	1		RTX-VRX 0.45(mm)
240-10350-B-2 MS		04/24/2012 16:28	1	YF042411.D	RTX-VRX 0.45(mm)
240-10350-B-2 MSD		04/24/2012 17:07	1	YF042412.D	RTX-VRX 0.45(mm)
ZZZZZ		04/24/2012 17:46	1		RTX-VRX 0.45(mm)
240-10391-5	MSA-MW34S-041912	04/24/2012 18:24	1	YF042414.D	RTX-VRX 0.45(mm)
240-10391-7	MSA-MW39S-041912	04/24/2012 19:02	1	YF042415.D	RTX-VRX 0.45(mm)
CCV 240-41320/14		04/24/2012 19:41	1	YF042416.D	RTX-VRX 0.45(mm)

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-41320/5 Calibration Date: 04/24/2012 12:31

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042405.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	316263		844	800	5.5	15.0
C6-C12	Ave	336931	361718		859	800	7.4	15.0
Trifluorotoluene (Surr)	Ave	420494	327802		7.80	10.0	-22.0*	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-41320/14 Calibration Date: 04/24/2012 19:41

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042416.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	310149		827	800	3.4	15.0
C6-C12	Ave	336931	347612		825	800	3.2	15.0
Trifluorotoluene (Surr)	Ave	420494	315664		7.51	10.0	-24.9*	15.0

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: MB 240-41320/6

Matrix: Water Date Extracted: 04/24/2012 14:30

Lab File ID:(1) YF042408.D Lab File ID:(2)

Date Analyzed:(1) 04/24/2012 14:30 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-41320/7	04/24/2012 15:10	
	240-10350-B-2 MS	04/24/2012 16:28	
	240-10350-B-2 MSD	04/24/2012 17:07	
MSA-MW34S-041912	240-10391-5	04/24/2012 18:24	
MSA-MW39S-041912	240-10391-7	04/24/2012 19:02	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41320/6

Matrix: Water Lab File ID: YF042408.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/24/2012 14:30

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41320 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	26.5	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MSA-MW34S-041912	240-10391-5	66
MSA-MW39S-041912	240-10391-7	65
	MB 240-41320/6	63
	LCS 240-41320/7	79
	240-10350-B-2 MS	76
	240-10350-B-2 MSD	80

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042409.D

Lab ID: LCS 240-41320/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	884	111	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042411.D

Lab ID: 240-10350-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	62 J	931	109	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042412.D

Lab ID: 240-10350-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	919	107	1	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: CCV 240-41320/5 Date Analyzed: 04/24/2012 12:31

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45 (mm)

Lab File ID (Standard): YF042405.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.75		
UPPER LIMIT				9.85		
LOWER LIMIT				9.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-41320/5 CCVRT		04/24/2012 12:31	YF042405.D	9.75		
MB 240-41320/6		04/24/2012 14:30	YF042408.D	9.75		
LCS 240-41320/7		04/24/2012 15:10	YF042409.D	9.75		
240-10350-B-2 MS		04/24/2012 16:28	YF042411.D	9.76		
240-10350-B-2 MSD		04/24/2012 17:07	YF042412.D	9.75		
240-10391-5	MSA-MW34S-041912	04/24/2012 18:24	YF042414.D	9.75		
240-10391-7	MSA-MW39S-041912	04/24/2012 19:02	YF042415.D	9.75		
CCV 240-41320/14		04/24/2012 19:41	YF042416.D	9.76		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: A2HP5F Start Date: 04/13/2012 10:08

Analysis Batch Number: 40180 End Date: 04/13/2012 15:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-40180/4 IC		04/13/2012 10:08	1	P5F04134.D	
STD2 240-40180/5 IC		04/13/2012 10:38	1	P5F04135.D	
STD3 240-40180/6 IC		04/13/2012 11:08	1	P5F04136.D	
STD4 240-40180/7 IC		04/13/2012 11:38	1	P5F04137.D	
STD5 240-40180/8 IC		04/13/2012 12:08	1	P5F04138.D	
ICV 240-40180/9		04/13/2012 12:38	1	P5F04139.D	
STD1 240-40180/10 IC		04/13/2012 13:08	1		
STD2 240-40180/11 IC		04/13/2012 13:38	1		
STD3 240-40180/12 IC		04/13/2012 14:08	1		
STD4 240-40180/13 IC		04/13/2012 14:37	1		
STD5 240-40180/14 IC		04/13/2012 15:06	1		
ICV 240-40180/15		04/13/2012 15:36	1		

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	197527 183497	194334	179644	186362	Ave		188272.909				4.0		20.0			
n-Nonane	222434 217668	222225	205767	214296	Ave		216478.041				3.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: A2HP5F Start Date: 04/26/2012 14:06

Analysis Batch Number: 41730 End Date: 04/26/2012 22:30

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-41730/4		04/26/2012 14:06	1	P5F04264.D	
ZZZZZ		04/26/2012 14:37	1		
ZZZZZ		04/26/2012 15:07	1		
ZZZZZ		04/26/2012 15:37	1		
ZZZZZ		04/26/2012 16:07	1		
ZZZZZ		04/26/2012 16:36	1		
ZZZZZ		04/26/2012 17:06	1		
ZZZZZ		04/26/2012 17:35	1		
240-10391-5	MSA-MW34S-041912	04/26/2012 18:05	1	P5F04272.D	
240-10391-7	MSA-MW39S-041912	04/26/2012 18:35	1	P5F04273.D	
ZZZZZ		04/26/2012 19:04	1		
ZZZZZ		04/26/2012 19:33	1		
ZZZZZ		04/26/2012 20:03	1		
ZZZZZ		04/26/2012 20:33	1		
ZZZZZ		04/26/2012 21:02	1		
MB 240-41524/15-A		04/26/2012 21:31	1	P5F04279.D	
LCS 240-41524/16-A		04/26/2012 22:01	1	P5F04280.D	
CCV 240-41730/21		04/26/2012 22:30	1	P5F04281.D	

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICV 240-40180/9 Calibration Date: 04/13/2012 12:38

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04139.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	191992		510	500	2.0	20.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCVRT 240-41730/4 Calibration Date: 04/26/2012 14:06

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04264.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	189345		503	500	0.6	15.0
n-Nonane	Ave	216478	225212		52.0	50.0	4.0	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: CCV 240-41730/21 Calibration Date: 04/26/2012 22:30

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04281.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	203215		540	500	7.9	15.0
n-Nonane	Ave	216478	240937		55.6	50.0	11.3	15.0

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: MB 240-41524/15-A

Matrix: Water Date Extracted: 04/25/2012 10:55

Lab File ID:(1) P5F04279.D Lab File ID:(2)

Date Analyzed:(1) 04/26/2012 21:31 Date Analyzed:(2)

Instrument ID:(1) A2HP5F Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MSA-MW34S-041912	240-10391-5	04/26/2012 18:05	
MSA-MW39S-041912	240-10391-7	04/26/2012 18:35	
	LCS 240-41524/16-A	04/26/2012 22:01	

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41524/15-A

Matrix: Water | Lab File ID: P5F04279.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3520C | Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1000(mL) | Date Analyzed: 04/26/2012 21:31

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	54		10-110

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C91 #
MSA-MW34S-041912	240-10391-5	64
MSA-MW39S-041912	240-10391-7	64
	MB 240-41524/15-A	54
	LCS 240-41524/16-A	78

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P5F04280.D

Lab ID: LCS 240-41524/16-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	2240	89	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Sample No.: CCVRT 240-41730/4 Date Analyzed: 04/26/2012 14:06

Instrument ID: A2HP5F GC Column: ID: ()

Lab File ID (Standard): P5F04264.D Heated Purge: (Y/N) N

Calibration ID: 8059

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				3.79		
UPPER LIMIT				3.89		
LOWER LIMIT				3.69		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-41730/4		04/26/2012 14:06	P5F04264.D	3.79		
240-10391-5	MSA-MW34S-041912	04/26/2012 18:05	P5F04272.D	3.79		
240-10391-7	MSA-MW39S-041912	04/26/2012 18:35	P5F04273.D	3.79		
MB 240-41524/15-A		04/26/2012 21:31	P5F04279.D	3.79		
LCS 240-41524/16-A		04/26/2012 22:01	P5F04280.D	3.79		
CCV 240-41730/21		04/26/2012 22:30	P5F04281.D	3.79		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

Case Narrative

TestAmerica West Sacramento Project Number G2D240430

WATER, 8330/8330A, RDX
Sample(s): 1
There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

WATER, 6850, Perchlorate
Sample(s): 2, 3, 4, 5, 6
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MR8L91AC
SMCS: MR8L91AD

There were no other anomalies associated with this project.

Sample Summary

TestAmerica West Sacramento Project Number G2D240430

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MR6HL	1	MSA-MW15S-041812	4/18/2012 11:40 AM	4/24/2012 09:00 AM
MR6HM	2	MSA-MW19D-041912	4/19/2012 11:07 AM	4/24/2012 09:00 AM
MR6HN	3	MSA-MW19I-041912	4/19/2012 12:18 PM	4/24/2012 09:00 AM
MR6HP	4	MSA-MW34S-041912	4/19/2012 10:05 AM	4/24/2012 09:00 AM
MR6HQ	5	MSA-MW34I-041912	4/19/2012 11:10 AM	4/24/2012 09:00 AM
MR6HR	6	MSA-MW39S-041912	4/19/2012 01:10 PM	4/24/2012 09:00 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

G2D240430

PARAMETER	ANALYTICAL METHOD
Nitroaromatics and Nitramines by HPLC	SW846 8330/8330A
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

QC DATA ASSOCIATION SUMMARY

G2D240430

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 8330/8330A		2116029	
002	WATER	SW846 6850		2118065	2118042
003	WATER	SW846 6850		2118065	2118042
004	WATER	SW846 6850		2118065	2118042
005	WATER	SW846 6850		2118065	2118042
006	WATER	SW846 6850		2118065	2118042

G2D240430

G2D240450

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica

Client Information (Sub Contract Lab)	Sampler	Lab PM: O'Meara, Patrick J	Carrier Tracking No(s)	COC No: 240-5341 1
Client Contact: Shipping/Receiving	Phone	E Mail: patrick omeara@testamericainc com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc				Job #: 240-10391-1
Address: 880 Riverside Parkway,	Due Date Requested: 5/8/2012			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel)	PO #			
Email	WO #			
Project Name: MSA Groundwater Sampling	Project #: 24005772			
Site	SSOW#			

Analysis Requested

Preservation Codes

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2O3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ Explosive-RDX	SUBCONTRACT/ 6850 Perchlorate-West Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code							
MSA-MW15S-041812 (240-10391-1)	4/18/12	11 40 Eastern		Water			X		2	
MSA-MW19D-041912 (240-10391-3)	4/19/12	11 07 Eastern		Water				X	1	
MSA-MW19I-041912 (240-10391-4)	4/19/12	12 18 Eastern		Water				X	1	
MSA-MW34S-041912 (240-10391-5)	4/19/12	10 05 Eastern		Water				X	1	
MSA-MW34I-041912 (240-10391-6)	4/19/12	11 10 Eastern		Water				X	1	
MSA-MW39S-041912 (240-10391-7)	4/19/12	13 10 Eastern		Water				X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment
Relinquished by	Date/Time: 4-23-12 - 1825	Company: TAL-SC	Received by	Date/Time: 4/24/12 1000	Company: TAL WS
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact: ☐ Yes ☐ No	Custody Seal No: NA	Cooler Temperature(s) °C and Other Remarks: 2.8

TestAmerica West Sacramento (916) 373 - 5600

Page 1282 of 1290

05/10/2012 251 of 254

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LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TAL CANTON PM KD

LOT# (QUANTIMS ID) G2D240430 QUOTE# 88936 LOCATION W18B

Checked (✓)

DATE RECEIVED 4/24/12 TIME RECEIVED 900 ☑

DELIVERED BY ☑ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☐ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☑ N/A ☐ ☑

CUSTODY SEAL #(S) NA

COC #(S) 240-5341.1 ☐ ☑

TEMPERATURE BLANK Observed: 3.0 Corrected: 2.2

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 2.4, 3.1, 4.1 Average 3.2 Corrected Average 2.8

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☑ #5 ☐ ☐ OTHER ☐ ☑

JS (Initials) 4/24/12 (Date)

---

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY..... JS ☑

LOGGED IN BY..... JS ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☑ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☐ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)*1 ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

JS (Initials) 4/24/12 (Date)

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 1

Inst ID: LC10 Batch ID: 04192012C Eluents: Water: M0104 2012
Test: SOP WS-LC-0009 MeOH: K18E18
Method: Method 8330 ACN: K138B4
ICAL Date: See Calibration Report 50:50 H2O:MeOH+0.4% H3PO4 4457 - 37E

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
19-APR-2012	08:43	RN	1	8330 PRIMER	A-000001	--	--	--	
19-APR-2012	09:23	RN	1	8330 PRIMER	A-000002	--	--	--	
19-APR-2012	10:27	RN	2	8330 PRIMER	A-000003	--	--	--	
19-APR-2012	11:08	RN	81	BLANK	A-000004	--	--	--	
19-APR-2012	11:48	RN	11	STD_01 HP8330L1_00001 5ng/mL	A-000005	--	--	--	
19-APR-2012	12:28	RN	12	STD_02 HP8330L2_00001 10ng/mL	A-000006	--	--	--	
19-APR-2012	13:08	RN	13	STD_03 HP8330L3_00001 20ng/mL	A-000007	--	--	--	
19-APR-2012	13:48	RN	14	STD_04 HP8330L4_00001 50ng/mL	A-000008	--	--	--	
19-APR-2012	14:28	RN	15	STD_05 HP8330L5_00001 100ng/mL	A-000009	--	--	--	
19-APR-2012	15:09	RN	16	STD_06 HP8330L6_00001200ng/mL	A-000010	--	--	--	
19-APR-2012	15:49	RN	17	STD_07 HP8330L7_00001 500ng/mL	A-000011	--	--	--	
19-APR-2012	16:29	RN	18	STD_08 HP8330L8_00001 1000ng/m	A-000012	--	--	--	
19-APR-2012	17:09	RN	81	BLANK	A-000013	--	--	--	
19-APR-2012	17:49	RN	19	STD_MRL 11GCSV0468 8330 5-50ng	A-000014	--	--	--	
19-APR-2012	18:30	RN	20	STD_ICV HPEGDNIC_000001 200ng/	A-000015	--	--	--	
19-APR-2012	19:10	RN	21	STD_ICV HP8330IC_00001 200ng/m	A-000016	--	--	--	
19-APR-2012	19:50	RN	22	EGDN LOD CHECK MB	A-000017	10 g	80 mL	1	
19-APR-2012	20:30	RN	23	EGDN LOD CHECK	A-000018	10 g	80 mL	1	
19-APR-2012	21:10	RN	31	MR0W01AA 2104025 MB	A-000019	10 g	80 mL	1	
19-APR-2012	21:50	RN	32	MR0W01AC 2104025 LCS	A-000020	10 g	80 mL	1	
19-APR-2012	22:30	RN	33	MRVL61AA 2104025 D060464-1	A-000021	9.94 g	80 mL	1	
19-APR-2012	23:10	RN	34	MRVL71AA 2104025 D060464-2	A-000022	10.3 g	80 mL	1	
19-APR-2012	23:51	RN	35	MRVL81AA 2104025 D060464-3	A-000023	9.84 g	80 mL	1	
20-APR-2012	00:31	RN	36	MRVL91AA 2104025 D060464-4	A-000024	10.28 g	80 mL	1	
20-APR-2012	01:11	RN	37	MRVMA1AA 2104025 D060464-5	A-000025	10.12 g	80 mL	1	
20-APR-2012	01:51	RN	38	MRVMC1AA 2104025 D060464-6	A-000026	9.9 g	80 mL	1	
20-APR-2012	02:31	RN	3	STD_05 HP8330L5_00001 100ng/mL	A-000027	--	--	--	
20-APR-2012	03:11	RN	39	MRVMD1AA 2104025 D060464-7	A-000028	10.19 g	80 mL	1	
20-APR-2012	03:52	RN	40	MRVME1AA 2104025 D060464-8	A-000029	10.05 g	80 mL	1	
20-APR-2012	04:32	RN	41	MRVMF1AA 2104025 D060464-9	A-000030	10.29 g	80 mL	1	
20-APR-2012	05:12	RN	42	MRVMG1AA 2104025 D060464-10	A-000031	9.91 g	80 mL	1	
20-APR-2012	05:52	RN	43	MRVMH1AA 2104025 D060464-11	A-000032	9.95 g	80 mL	1	

GC-LC Log 2011-12-14 ERS Sequence Checked: 4-20-12

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 8

Inst ID: LC10 Batch ID: 04272012 Eluents: Water: M040520 12
Test: SOP WS-LC-0009 MeOH: K18G18
Method: Method 8330 ACN: K43B04
ICAL Date: See Calibration Report 50:50 H2O:MeOH+0.4% H3PO4 4457 - 39E

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
27-APR-2012	09:36	RN	1	8330 PRIMER	A-000001	--	--	--	
27-APR-2012	10:16	RN	1	8330 PRIMER	A-000002	--	--	--	
27-APR-2012	10:57	RN	2	STD 06 HP8330L6 00001200ng/mL	A-000003	--	--	--	
27-APR-2012	11:46	RN	1	8330 PRIMER	A-000004	--	--	--	
27-APR-2012	12:27	RN	2	STD 06 HP8330L6 00001200ng/mL	A-000005	--	--	--	
27-APR-2012	13:07	RN	11	MR6711AA 2116039 MB	A-000006	10 g	80 mL	1	
27-APR-2012	13:47	RN	12	MR6711AC 2116039 LCS	A-000007	10 g	80 mL	1	
27-APR-2012	14:28	RN	13	MR4L61AA 2116039 D190492-1	A-000008	10.15 g	80 mL	1	
27-APR-2012	15:08	RN	14	MR4L81AA 2116039 D190492-2	A-000009	10.31 g	80 mL	1	
27-APR-2012	15:48	RN	15	MR4L81AC 2116039 D190492-2S	A-000010	10.08 g	80 mL	1	
27-APR-2012	16:29	RN	16	MR4L81AD 2116039 D190492-2D	A-000011	10.06 g	80 mL	1	
27-APR-2012	17:09	RN	17	MR4L91AA 2116039 D190492-3	A-000012	9.95 g	80 mL	1	
27-APR-2012	17:49	RN	18	MR4MA1AA 2116039 D190492-4	A-000013	10.24 g	80 mL	1	
27-APR-2012	18:29	RN	19	MR4MC1AA 2116039 D190492-5	A-000014	10.18 g	80 mL	1	
27-APR-2012	19:09	RN	20	MR4MD1AA 2116039 D190492-6	A-000015	10.1 g	80 mL	1	
27-APR-2012	19:49	RN	3	STD 05 HP8330L5 00001 100ng/mL	A-000016	--	--	--	
27-APR-2012	20:29	RN	21	MR6621AA 2116029 MB	A-000017	1000 mL	20 mL	1	
27-APR-2012	21:09	RN	22	MR6621AC 2116029 LCS	A-000018	1000 mL	20 mL	1	
27-APR-2012	21:49	RN	23	MR5RF1AA 2116029 D230414-1	A-000019	942.69 mL	20 mL	1	
27-APR-2012	22:29	RN	24	MR6HL1AA 2116029 D240430-1	A-000020	980.36 mL	20 mL	1	
27-APR-2012	23:09	RN	25	MR6HV1AC 2116029 D240431-2	A-000021	975.2 mL	20 mL	1	
27-APR-2012	23:49	RN	26	MR6H01AC 2116029 D240431-4	A-000022	947.89 mL	20 mL	1	
28-APR-2012	00:29	RN	27	MR6K81AC 2116029 D240447-1	A-000023	987.86 mL	20 mL	1	
28-APR-2012	01:09	RN	28	MR6LE1AC 2116029 D240447-2	A-000024	981.17 mL	20 mL	1	
28-APR-2012	01:50	RN	3	STD 05 HP8330L5 00001 100ng/mL	A-000025	--	--	--	
28-APR-2012	02:30	RN	51	8330 L LOD CHECK EGDN MB	A-000026	1000 mL	20 mL	1	
28-APR-2012	03:10	RN	52	8330 L LOD CHECK EGDN	A-000027	1000 mL	20 mL	1	
28-APR-2012	03:50	RN	31	MR7WD2AA 2117026 MB	A-000028	1000 mL	20 mL	1	
28-APR-2012	04:31	RN	32	MR7WD2AC 2117026 LCS	A-000029	1000 mL	20 mL	1	
28-APR-2012	05:11	RN	33	MR61D2AA 2117026 D240470-1	A-000030	875.25 mL	20 mL	1	
28-APR-2012	05:51	RN	34	MR61E2AA 2117026 D240470-2	A-000031	982.76 mL	20 mL	1	
28-APR-2012	06:31	RN	35	MR61F2AA 2117026 D240470-3	A-000032	976.17 mL	20 mL	1	

Sequence Checked: RN 4/30/12

TestAmerica West Sacramento
GC/LC INSTRUMENT LOG

Page# 9

Inst ID: LC10 Batch ID: 04272012 Test: SOP WS-LC-0009
Method : Method 8330
ICAL Date: See Calibration Report

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
28-APR-2012	07:12	RN	36	MR61F2AC 2117026 D240470-3S	A-000033	974.98 mL	20 mL	1	
28-APR-2012	07:52	RN	37	MR61F2AD 2117026 D240470-3D	A-000034	936.37 mL	20 mL	1	
28-APR-2012	08:32	RN	4	STD_05 HP8330L5_00001 100ng/mL	A-000035	--	--	--	

GC-LC Log 2011-12-14 ERS

Sequence Checked: MB 4/30/12

TestAmerica
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West Sacramento

GC/HPLC ICAL Checklist

Instrument ID: LC10 ICAL ID: 04192012C Method: 8330A/B

Analytes Included in curve (with dates): 8330 All + NG, PETN, 3,5DNA + EGDN

A. Included Sections of ICAL	Analyst	Reviewer	N/A
1. ICAL Summary included (for both columns if applicable).	✓	✓	
2. ICAL Runlog included.	✓	✓	
3. ICAL's are in chronological order.	✓	✓	
4. PEM meets requirements and is included for 8081.			✓
5. Alkane Marker included for 8015 TPH.			✓
6. ICAL Raw Data included for all analytes.	✓	✓	
B. ICAL Summary			
1. All analytes meet %RSD or linear regression requirements	✓	✓	
2. ICAL meets requirements stated in SOP.	✓	✓	
2. Any levels dropped are reviewed and appropriate.			✓
3. All analytes in ICAL are in the ICAL summary.	✓	✓	
4. RFs are calculated correctly. Perform Manual calculation.	✓	✓	
C. ICAL Analysis			
1. Manual Integrations reviewed and appropriate.			✓
2. All peaks correctly identified.	✓	✓	
3. No analytes have saturated peaks.	✓	✓	
4. RT windows set correctly (8015 TPH).			✓
5. ICV meets requirements and is run after the ICAL.	✓	✓	
6. Standards used in ICAL are current.	✓	✓	
7. ICAL is copied to source method.	✓	✓	

Curve Valid for:	Yes	No	Criteria
Standard SOP	✓		RSD ≤20%, r≥ 0.995 (intercept <1/2RL for 8081,8082, NQ, 8310) and (<RL for 8330) and r>0.990 (intercept <RL for 8015), ICV≤15%, PEM ≤15%
DOD QSM V3	✓		RSD ≤20%, r≥ 0.995, ICV≤20%, PEM ≤15%
AFCEE 3.1	✓		RSD ≤20%, r≥ 0.995, ICV≤15%, PEM ≤15%
AFCEE 4.0	✓		RSD ≤20%, r≥ 0.995, ICV≤20% (8081, 8082, 8015) and ICV≤25% (8330,8310), PEM ≤15%

Analyst: Robyn Thoman Date: 4/20/12

Reviewer: J Nichols Date: 4/23/12

Comments:
MRL for EGDN was analyzed after samples had already been analyzed. As CCVs were passing + S/N was greater than 5:1 on 100% and on RL limit analyzed after samples there is no further action.

TestAmerica West Sacramento

INITIAL CALIBRATION DATA

Start Cal Date : 19-APR-2012 11:48
End Cal Date : 19-APR-2012 16:29
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\terastation\share\GCdata\LC10.I\04192012C.B\8330AB.M
Last Edit : 20-Apr-2012 11:10 tap
Curve Type : Average

Calibration File Names:
Level 1: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000005.d
Level 2: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000006.d
Level 3: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000007.d
Level 4: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000008.d
Level 5: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000009.d
Level 6: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000010.d
Level 7: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000011.d
Level 8: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000012.d

Compound	5.000 Level 1	10.000 Level 2	20.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD
	500.000 Level 7	1000.000 Level 8						
2 HMX	126	128	127	127	130	128		
	121	106					124	6.361
3 RDX	114	103	95.55000	91.70000	92.85000	87.82000		
	79.85000	64.39000					91.13250	16.312
4 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
	[illegible]	[illegible]					[illegible]	[illegible]
5 [illegible]	100	89.35000	99.50000	97.00000	95.61000	90.92600		
	82.43200	68.57300					89.18627	11.173
6 1,3,5-Trinitrobenzene	178	172	168	167	171	167		
	157	136					164	7.806
7 1,3-Dinitrobenzene	177	177	172	171	176	171		
	159	136					167	8.317
8 3,5-Dinitroaniline	121	116	114	113	114	112		
	105	89.54500					111	8.747
9 TETRYL	103	104	100	99	102	102		
	99	95.04200					101	2.796

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 27-APR-2012 19:49 File ID: 04272012.B/A-000016.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.218	0.000	12982	104.7	4.7					
2	RDX	100	7.482	0.000	9294	102.0	2.0					
3	Picric ACID	200	8.545	0.000	19541	219.1	9.6	8.545	0.000	29748	215.0	7.5
4	1,3,5-Trinitrobenz	100	9.732	0.000	17130	104.2	4.2					
5	1,3-Dinitrobenzene	100	12.285	0.000	17751	106.0	6.0					
6	3,5-Dinitroaniline	100	12.995	0.000	11528	104.2	4.2					
7	TETRYL	100	13.308	0.000	10149	100.9	0.90					
8	Nitrobenzene	100	13.932	0.000	8133	106.4	6.4					
9	2,4,6-Trinitrotolu	100	15.332	0.000	10511	103.4	3.4					
10	4-AM-2,6-DNT	100	15.838	0.000	8359	102.8	2.8					
11	3,4-Dinitrotoluene	100	16.295	0.000	6075	103.4	3.4	16.295	0.000	11531	105.6	5.6
12	2-AM-4,6-DNT	100	16.775	0.000	9232	102.4	2.4					
13	2,6-Dinitrotoluene	100	18.258	0.000	6606	103.0	3.0					
14	2,4-Dinitrotoluene	100	18.892	0.000	10811	102.5	2.5					
15	2-Nitrotoluene	100	21.988	0.000	4714	100.3	0.30					
16	4-Nitrotoluene	100	23.562	0.000	5733	100.6	0.60					
17	3-Nitrotoluene	100	25.318	0.000	5632	100.3	0.30					
18	PETN	100						27.298	0.000	4047	103.2	3.2
19	Nitroglycerin	100						14.472	0.000	7297	110.0	10
20	EGDN	100						8.142	0.000	10770	114.4	14

KM 4/30/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/27/2012 20:24

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 28-APR-2012 01:50 File ID: 04272012.B/A-000025.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.215	0.000	13003	104.8	4.8					
2	RDX	100	7.471	0.000	9266	101.7	1.7					
3	Picric ACID	200	8.528	0.000	19592	219.7	9.9	8.531	0.000	29693	214.6	7.3
4	1,3,5-Trinitrobenz	100	9.718	0.000	17157	104.4	4.4					
5	1,3-Dinitrobenzene	100	12.271	0.000	17794	106.3	6.3					
6	3,5-Dinitroaniline	100	12.981	0.000	11516	104.0	4.0					
7	TETRYL	100	13.295	0.000	10100	100.4	0.40					
8	Nitrobenzene	100	13.915	0.000	7976	104.3	4.3					
9	2,4,6-Trinitrotolu	100	15.315	0.000	10516	103.5	3.5					
10	4-AM-2,6-DNT	100	15.815	0.000	8393	103.2	3.2					
11	3,4-Dinitrotoluene	100	16.278	0.000	6070	103.3	3.3	16.278	0.000	10761	98.52	-1.5
12	2-AM-4,6-DNT	100	16.755	0.000	9260	102.7	2.7					
13	2,6-Dinitrotoluene	100	18.235	0.000	6601	103.0	3.0					
14	2,4-Dinitrotoluene	100	18.868	0.000	10845	102.8	2.8					
15	2-Nitrotoluene	100	21.951	0.000	4644	98.82	-1.2					
16	4-Nitrotoluene	100	23.551	0.000	5648	99.10	-0.90					
17	3-Nitrotoluene	100	25.291	0.000	5557	98.99	-1.0					
18	PETN	100						27.261	0.000	4027	102.7	2.7
19	Nitroglycerin	100						14.451	0.000	6893	103.9	3.9
20	EGDN	100						8.134	0.000	10947	116.2	16

4/30/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/28/2012 02:25

METHOD BLANK REPORT

HPLC

Client Lot #...: G2D240430 **Work Order #...:** MR6621AA **Matrix.....:** WATER
MB Lot-Sample #: G2D250000-029

Prep Date.....: 04/25/12
Analysis Date..: 04/27/12 **Prep Batch #...:** 2116029
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
RDX	ND	0.10	ug/L	SW846 8330/8330A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	98	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: G2D240430 **Work Order #...:** MR6621AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D250000-029
Prep Date.....: 04/25/12 **Analysis Date..:** 04/27/12
Prep Batch #...: 2116029
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
RDX	**114**	**(68 - 122)**	**SW846 8330/8330A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	101	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: G2D240430 **Work Order #...:** MR6621AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D250000-029
Prep Date.....: 04/25/12 **Analysis Date..:** 04/27/12
Prep Batch #...: 2116029
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
RDX	**1.00**	**1.14**	**ug/L**	**114**	**SW846 8330/8330**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	101	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
01MAY12-perc-056.d	Blank No IS	P2-A5		Sample	5/1/2012 18:28
01MAY12-perc-057.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/1/2012 18:44
01MAY12-perc-058.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-B2	1	Calibration	5/1/2012 19:01
01MAY12-perc-059.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/1/2012 19:17
01MAY12-perc-060.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/1/2012 19:33
01MAY12-perc-061.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/1/2012 19:49
01MAY12-perc-062.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/1/2012 20:05
01MAY12-perc-063.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/1/2012 20:22
01MAY12-perc-064.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/1/2012 20:38
01MAY12-perc-065.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/1/2012 20:54
01MAY12-perc-066.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/1/2012 21:10
01MAY12-perc-067.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/1/2012 21:27
01MAY12-perc-068.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/1/2012 21:43
01MAY12-perc-069.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/1/2012 21:59
01MAY12-perc-070.d	G2D270000-MB, 2118065, 2.00mL/2.00mL, 6850-L	P1-C3		Sample	5/1/2012 22:15
01MAY12-perc-071.d	G2D270000-LCS, 2118065, 2.00mL/2.00mL	P1-C4	LCS_5	QC	5/1/2012 22:31
01MAY12-perc-072.d	G2D270000-SMCS, 2118065, 2.00mL/2.00mL	P1-C5	LCS_5	QC	5/1/2012 22:48
01MAY12-perc-073.d	G2D230413-1, 2118065, 2.00mL/2.00mL,	P1-C6		Sample	5/1/2012 23:04
01MAY12-perc-074.d	G2D230413-1MS, 2118065, 2.00mL/2.00mL,	P1-C7	MS_5	QC	5/1/2012 23:20
01MAY12-perc-075.d	G2D230413-1SD, 2118065, 2.00mL/2.00mL,	P1-C8	MS_5	QC	5/1/2012 23:36
01MAY12-perc-076.d	G2D230413-2, 2118065, 2.00mL/2.00mL,	P1-C9		Sample	5/1/2012 23:53
01MAY12-perc-077.d	G2D230413-3, 2118065, 2.00mL/2.00mL,	P1-D1		Sample	5/2/2012 00:09
01MAY12-perc-078.d	G2D230413-4, 2118065, 2.00mL/2.00mL,	P1-D2		Sample	5/2/2012 00:25
01MAY12-perc-079.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/2/2012 00:41
01MAY12-perc-080.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/2/2012 00:57
01MAY12-perc-081.d	G2D240430-2, 2118065, 2.00mL/2.00mL,	P1-D3		Sample	5/2/2012 01:14

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373 - 5600 Page 1066 of 1280
05/10/2012 35 of 254

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Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

01MAY12-perc-082.d	G2D240430-3, 2118065, 2.00mL/2.00mL,	P1-D4		Sample	5/2/2012 01:30
01MAY12-perc-083.d	G2D240430-4, 2118065, 2.00mL/2.00mL,	P1-D5		Sample	5/2/2012 01:46
01MAY12-perc-084.d	G2D240430-5, 2118065, 2.00mL/2.00mL,	P1-D6		Sample	5/2/2012 02:02
01MAY12-perc-085.d	G2D240430-6, 2118065, 2.00mL/2.00mL,	P1-D7		Sample	5/2/2012 02:19
01MAY12-perc-086.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/2/2012 02:35
01MAY12-perc-087.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/2/2012 02:51
01MAY12-perc-088.d	G2D240431-1, 2118065, 2.00mL/2.00mL,	P1-D8		Sample	5/2/2012 03:07
01MAY12-perc-089.d	G2D240431-2, 2118065, 2.00mL/2.00mL,	P1-D9		Sample	5/2/2012 03:23
01MAY12-perc-090.d	G2D240431-3, 2118065, 2.00mL/2.00mL,	P1-E1		Sample	5/2/2012 03:40
01MAY12-perc-091.d	G2D240431-4, 2118065, 2.00mL/2.00mL,	P1-E2		Sample	5/2/2012 03:56
01MAY12-perc-092.d	G2D240431-5, 2118065, 2.00mL/2.00mL,	P1-E3		Sample	5/2/2012 04:12
01MAY12-perc-093.d	G2D240431-6, 2118065, 2.00mL/2.00mL,	P1-E4		Sample	5/2/2012 04:28
01MAY12-perc-094.d	G2D260448-1, 2118065, 2.00mL/2.00mL,	P1-E5		Sample	5/2/2012 04:45
01MAY12-perc-095.d	G2D260448-2, 2118065, 2.00mL/2.00mL,	P1-E6		Sample	5/2/2012 05:01
01MAY12-perc-096.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/2/2012 05:17
01MAY12-perc-097.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/2/2012 05:33
01MAY12-perc-098.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/2/2012 05:49

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Quantitation Results

Compound *Perchlorate*

Data File	Compound	Sample Type	Exp Conc	Response	Accuracy	Final Conc.
01MAY12-perc-056.d	Perchlorate	Sample				
01MAY12-perc-057.d	Perchlorate	Sample				
01MAY12-perc-058.d	Perchlorate	Calibration	0.1500	2024	108.5	
01MAY12-perc-059.d	Perchlorate	Calibration	0.3000	3466	95.7	
01MAY12-perc-060.d	Perchlorate	Calibration	0.5000	6606	102.7	
01MAY12-perc-061.d	Perchlorate	Calibration	1.0000	12750	98.0	
01MAY12-perc-062.d	Perchlorate	Calibration	2.0000	25058	96.1	
01MAY12-perc-063.d	Perchlorate	Calibration	5.0000	60391	98.2	
01MAY12-perc-064.d	Perchlorate	Calibration	10.0000	110901	99.7	
01MAY12-perc-065.d	Perchlorate	Calibration	20.0000	203743	101.0	
01MAY12-perc-066.d	Perchlorate	Sample				
01MAY12-perc-067.d	Perchlorate	QC	5.0000	58970	100.9	
01MAY12-perc-068.d	Perchlorate	QC	5.0000	59556	96.3	
01MAY12-perc-069.d	Perchlorate	QC	0.5000	5908	95.8	
01MAY12-perc-070.d	Perchlorate	Sample				
01MAY12-perc-071.d	Perchlorate	QC	5.0000	43164	93.4	
01MAY12-perc-072.d	Perchlorate	QC	5.0000	39168	97.7	
01MAY12-perc-073.d	Perchlorate	Sample				
01MAY12-perc-074.d	Perchlorate	QC	5.0000	33667	89.1	
01MAY12-perc-075.d	Perchlorate	QC	5.0000	32053	97.3	
01MAY12-perc-076.d	Perchlorate	Sample				
01MAY12-perc-077.d	Perchlorate	Sample		1593		
01MAY12-perc-078.d	Perchlorate	Sample		5015		
01MAY12-perc-079.d	Perchlorate	QC	2.0000	17581	100.2	
01MAY12-perc-080.d	Perchlorate	Sample				
01MAY12-perc-081.d	Perchlorate	Sample		291		

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373 - 5600

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

01MAY12-perc-082.d	Perchlorate	Sample			
01MAY12-perc-083.d	Perchlorate	Sample			
01MAY12-perc-084.d	Perchlorate	Sample			
01MAY12-perc-085.d	Perchlorate	Sample			
01MAY12-perc-086.d	Perchlorate	QC	5.0000	44696	96.9
01MAY12-perc-087.d	Perchlorate	Sample			
01MAY12-perc-088.d	Perchlorate	Sample			
01MAY12-perc-089.d	Perchlorate	Sample			
01MAY12-perc-090.d	Perchlorate	Sample			
01MAY12-perc-091.d	Perchlorate	Sample			
01MAY12-perc-092.d	Perchlorate	Sample		1116	
01MAY12-perc-093.d	Perchlorate	Sample			
01MAY12-perc-094.d	Perchlorate	Sample		39819	
01MAY12-perc-094.d	Perchlorate	Sample			
01MAY12-perc-095.d	Perchlorate	Sample		46741	
01MAY12-perc-095.d	Perchlorate	Sample			
01MAY12-perc-096.d	Perchlorate	QC	2.0000	13730	99.8
01MAY12-perc-097.d	Perchlorate	QC	0.5000	4973	97.6
01MAY12-perc-098.d	Perchlorate	Sample			

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Quantitation Results

Compound *Perchlorate-(35Cl18O4)*

Data File	Compound	Sample Type	Exp Conc	Response	Accuracy	Final Conc.
01MAY12-perc-056.d	Perchlorate-(35Cl18O4)	Sample				
01MAY12-perc-057.d	Perchlorate-(35Cl18O4)	Sample		157836		
01MAY12-perc-058.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	177321		
01MAY12-perc-059.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	161838		
01MAY12-perc-060.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	166787		
01MAY12-perc-061.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	165236		
01MAY12-perc-062.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	163902		
01MAY12-perc-063.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	153583		
01MAY12-perc-064.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	138613		
01MAY12-perc-065.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	125554	156604.3	Averge ICAL IS area response
01MAY12-perc-066.d	Perchlorate-(35Cl18O4)	Sample		152657	-2.5	% Dev from average
01MAY12-perc-067.d	Perchlorate-(35Cl18O4)	QC	10.0000	145967	-6.8	
01MAY12-perc-068.d	Perchlorate-(35Cl18O4)	QC	10.0000	154478	-1.4	
01MAY12-perc-069.d	Perchlorate-(35Cl18O4)	QC	10.0000	160345	2.4	
01MAY12-perc-070.d	Perchlorate-(35Cl18O4)	Sample		136706	-12.7	
01MAY12-perc-071.d	Perchlorate-(35Cl18O4)	QC	10.0000	115418	-26.3	
01MAY12-perc-072.d	Perchlorate-(35Cl18O4)	QC	10.0000	100114	-36.1	
01MAY12-perc-073.d	Perchlorate-(35Cl18O4)	Sample		115111	-26.5	
01MAY12-perc-074.d	Perchlorate-(35Cl18O4)	QC	10.0000	94419	-39.7	
01MAY12-perc-075.d	Perchlorate-(35Cl18O4)	QC	10.0000	82277	-47.5	
01MAY12-perc-076.d	Perchlorate-(35Cl18O4)	Sample		85745	-45.2	
01MAY12-perc-077.d	Perchlorate-(35Cl18O4)	Sample		86638	-44.7	
01MAY12-perc-078.d	Perchlorate-(35Cl18O4)	Sample		89017	-43.2	
01MAY12-perc-079.d	Perchlorate-(35Cl18O4)	QC	10.0000	110225	-29.6	
01MAY12-perc-080.d	Perchlorate-(35Cl18O4)	Sample		141415	-9.7	
01MAY12-perc-081.d	Perchlorate-(35Cl18O4)	Sample		144503	-7.7	

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373 - 5600

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Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

01MAY12-perc-082.d	Perchlorate-(35Cl18O4)	Sample		98177	-37.3
01MAY12-perc-083.d	Perchlorate-(35Cl18O4)	Sample		86008	-45.1
01MAY12-perc-084.d	Perchlorate-(35Cl18O4)	Sample		85731	-45.3
01MAY12-perc-085.d	Perchlorate-(35Cl18O4)	Sample		100531	-35.8
01MAY12-perc-086.d	Perchlorate-(35Cl18O4)	QC	10.0000	115259	-26.4
01MAY12-perc-087.d	Perchlorate-(35Cl18O4)	Sample		141532	-9.6
01MAY12-perc-088.d	Perchlorate-(35Cl18O4)	Sample		130753	-16.5
01MAY12-perc-089.d	Perchlorate-(35Cl18O4)	Sample		98397	-37.2
01MAY12-perc-090.d	Perchlorate-(35Cl18O4)	Sample		90586	-42.2
01MAY12-perc-091.d	Perchlorate-(35Cl18O4)	Sample		88297	-43.6
01MAY12-perc-092.d	Perchlorate-(35Cl18O4)	Sample		83733	-46.5
01MAY12-perc-093.d	Perchlorate-(35Cl18O4)	Sample		96986	-38.1
01MAY12-perc-094.d	Perchlorate-(35Cl18O4)	Sample		82908	-47.1
01MAY12-perc-095.d	Perchlorate-(35Cl18O4)	Sample		84118	-46.3
01MAY12-perc-096.d	Perchlorate-(35Cl18O4)	QC	10.0000	86491	-44.8
01MAY12-perc-097.d	Perchlorate-(35Cl18O4)	QC	10.0000	132396	-15.5
01MAY12-perc-098.d	Perchlorate-(35Cl18O4)	Sample		139974	-10.6

TestAmerica West Sacramento (916) 373 - 5600

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

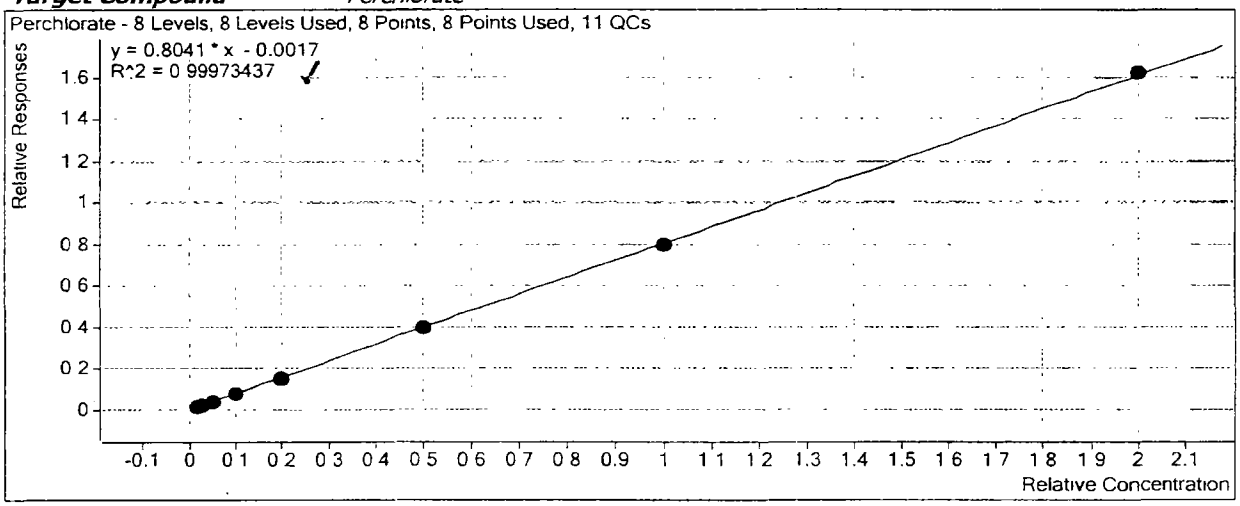
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml		
Analysis Time	5/2/2012 1:20 PM	**Analyst Name**	lores
Report Time	5/4/2012 8:43 AM	**Reporter Name**	lores
Last Calib Update	5/2/2012 1:20 PM	**Batch State**	Processed

Calibration Info **Linear fit, Origin ignored, 1/x weighting**

m 5/4/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
01MAY12-perc-058.d	1	☑	2024	0.7610	0.1500
01MAY12-perc-059.d	2	☑	3466	0.7138	0.3000
01MAY12-perc-060.d	3	☑	6606	0.7922	0.5000
01MAY12-perc-061.d	4	☑	12750	0.7716	1.0000
01MAY12-perc-062.d	5	☑	25058	0.7644	2.0000
01MAY12-perc-063.d	6	☑	60391	0.7864	5.0000
01MAY12-perc-064.d	7	☑	110901	0.8001	10.0000
01MAY12-perc-065.d	8	☑	203743	0.8114	20.0000
01MAY12-perc-069.d	CCV3	☑	5908	0.7369	0.5000
01MAY12-perc-097.d	CCV3	☑	4973	0.7512	0.5000
01MAY12-perc-079.d	CCV5	☑	17581	0.7975	2.0000
01MAY12-perc-096.d	CCV5	☑	13730	0.7938	2.0000
01MAY12-perc-068.d	CCV6	☑	59556	0.7711	5.0000
01MAY12-perc-086.d	CCV6	☑	44696	0.7756	5.0000
01MAY12-perc-067.d	ICV	☑	58970	0.8080	5.0000
01MAY12-perc-071.d	LCS_5	☑	43164	0.7480	5.0000
01MAY12-perc-072.d	LCS_5	☑	39168	0.7825	5.0000
01MAY12-perc-074.d	MS_5	☑	33667	0.7131	5.0000
01MAY12-perc-075.d	MS_5	☑	32053	0.7792	5.0000

Target Compound	*Perchlorate-(35Cl18O4)*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
01MAY12-perc-058.d	1	☑	177321	17732.1197	10.0000
01MAY12-perc-059.d	2	☑	161838	16183.8183	10.0000
01MAY12-perc-060.d	3	☑	166787	16678.6788	10.0000
01MAY12-perc-061.d	4	☑	165236	16523.6408	10.0000
01MAY12-perc-062.d	5	☑	163902	16390.1534	10.0000
01MAY12-perc-063.d	6	☑	153583	15358.3285	10.0000
01MAY12-perc-064.d	7	☑	138613	13861.3292	10.0000
01MAY12-perc-065.d	8	☑	125554	12555.3707	10.0000
01MAY12-perc-069.d	CCV3	☑	160345	16034.5472	10.0000
01MAY12-perc-097.d	CCV3	☑	132396	13239.6449	10.0000
01MAY12-perc-079.d	CCV5	☑	110225	11022.4840	10.0000
01MAY12-perc-096.d	CCV5	☑	86491	8649.0562	10.0000
01MAY12-perc-068.d	CCV6	☑	154478	15447.7901	10.0000
01MAY12-perc-086.d	CCV6	☑	115259	11525.8779	10.0000
01MAY12-perc-067.d	ICV	☑	145967	14596.6980	10.0000
01MAY12-perc-071.d	LCS_5	☑	115418	11541.7940	10.0000
01MAY12-perc-072.d	LCS_5	☑	100114	10011.3995	10.0000
01MAY12-perc-074.d	MS_5	☑	94419	9441.8545	10.0000
01MAY12-perc-075.d	MS_5	☑	82277	8227.7281	10.0000

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch.xml

Analysis Information

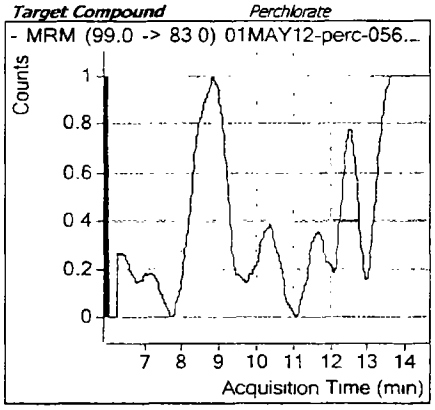
Acquisition Date - Time	5/1/2012 18 28
Analyst	lores
Data File	01MAY12-perc-056 d
Acquisition Method	PercMRM_2 m
Sample Name	Blank No IS
Sample Identification	BLANK
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-A5
Exp. Concentration	
Injection Volume	50

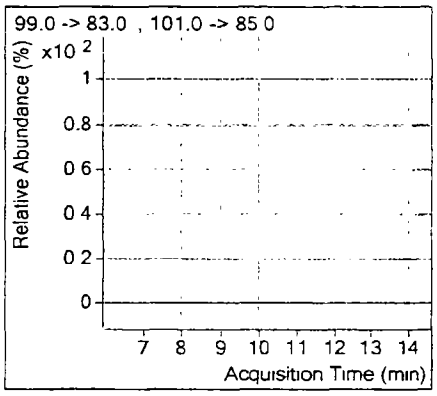
Perchlorate = ND

m 5/4/12

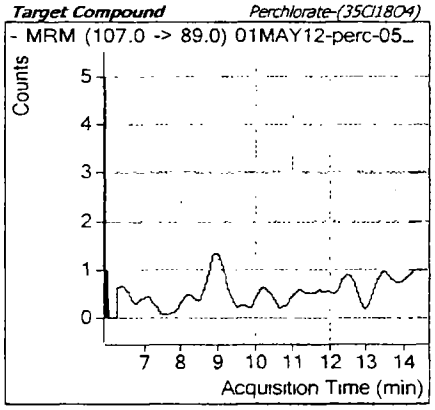
Compound Graphics

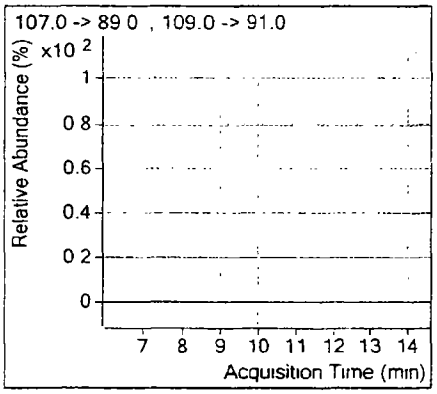
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 18.44
Analyst	lores
Data File	01MAY12-perc-057 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

Quantitation Results

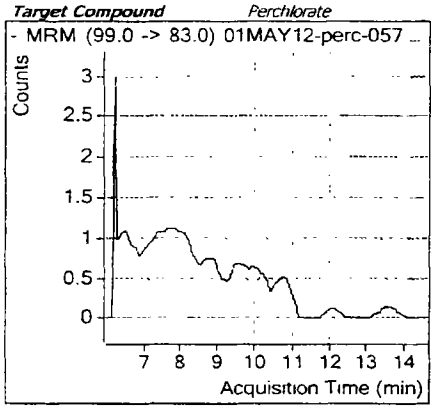
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.054	157836	107	89			1
							Perchlorate = ND	

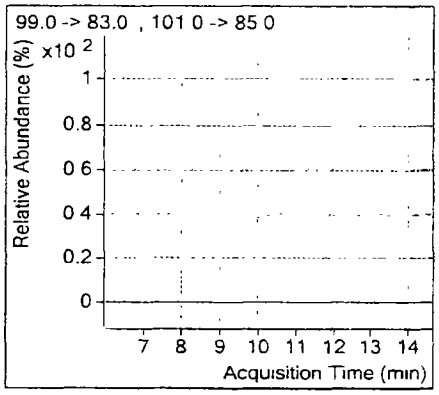
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	49302	109	91	3.20	2.30	3.80	In Control

Compound Graphics

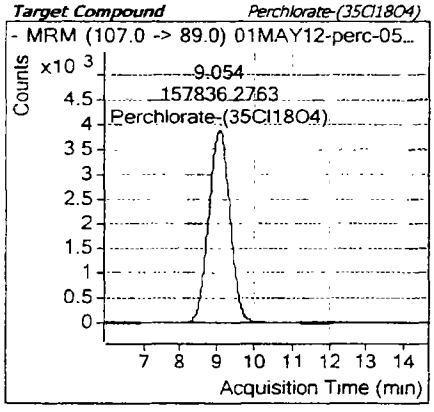
m 5/4/12

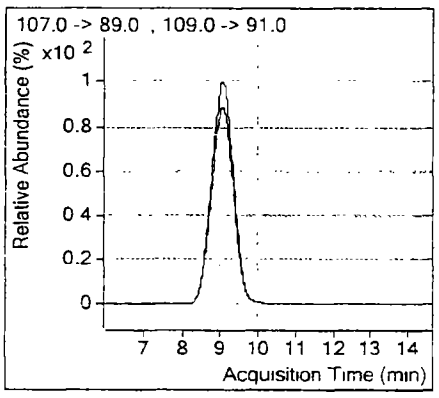
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\AS-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 19:01
Analyst	lores
Data File	01MAY12-perc-058 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L1_00001 12LCMS0064, 0.15ng/mL
Sample Identification	Std001
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B2
Exp. Concentration	0 15
Injection Volume	50

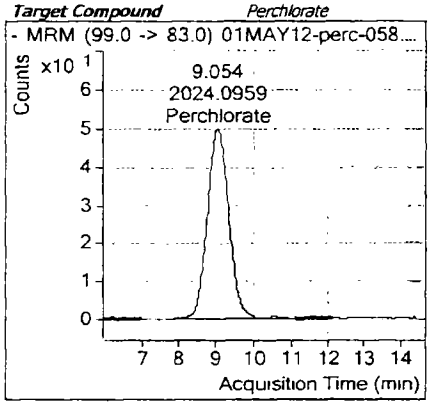
Quantitation Results

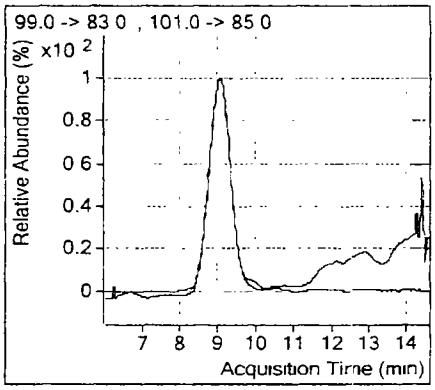
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 054	2024	99	83	**0.16278**	**0.16278**	1
Perchlorate-(35Cl18O4)	ISTD	9 055	177321	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	698	101	85	2 90	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	55144	109	91	3 22	2 30	3 80	In Control

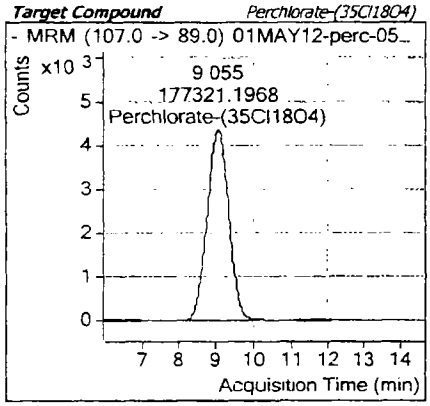
Compound Graphics

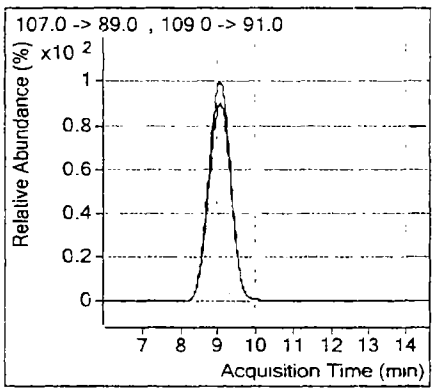
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





ms 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D.\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 19:17
Analyst	lores
Data File	01MAY12-perc-059 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L2_00001 12LCMS0065, 0 30ng/mL
Sample Identification	Std002
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B3
Exp. Concentration	0 30
Injection Volume	50

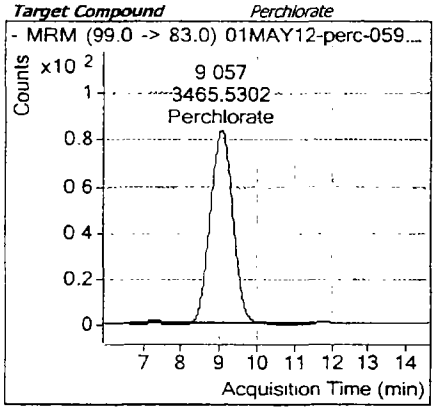
Quantitation Results

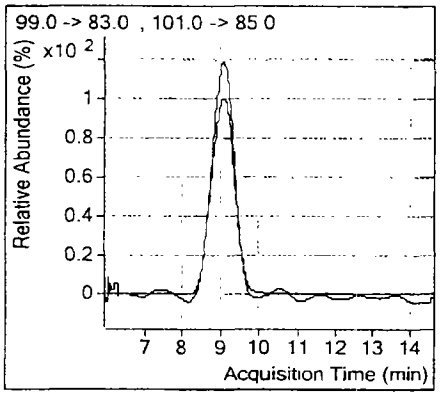
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 057	3466	99	83	**0.28712**	**0.28712**	1
Perchlorate-(35Cl18O4)	ISTD	9 050	161838	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1349	101	85	2 57	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	49807	109	91	3 25	2 30	3 80	In Control

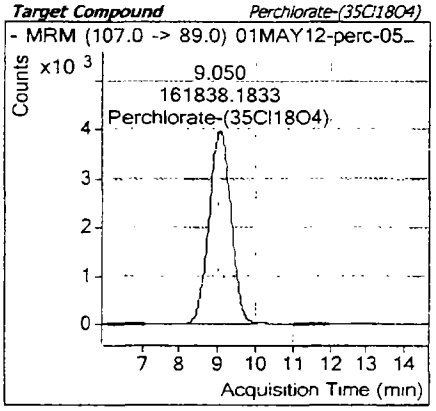
Compound Graphics

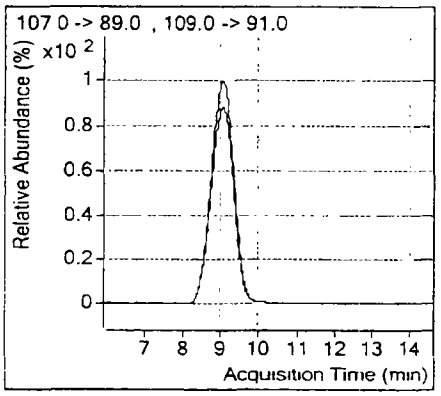
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 19:33
Analyst	lores
Data File	01MAY12-perc-060.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	Std003
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B4
Exp. Concentration	0 50
Injection Volume	50

Quantitation Results

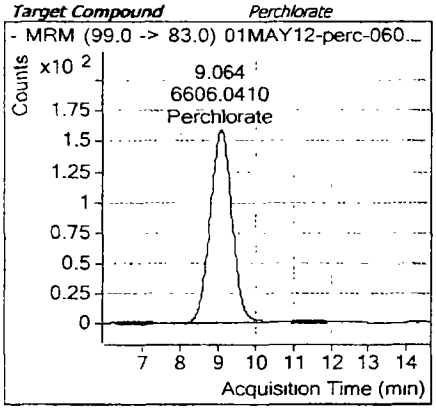
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 064	6606	99	83	**0.51340**	**0.51340**	1
Perchlorate-(35Cl18O4)	ISTD	9 048	166787	107	89			1

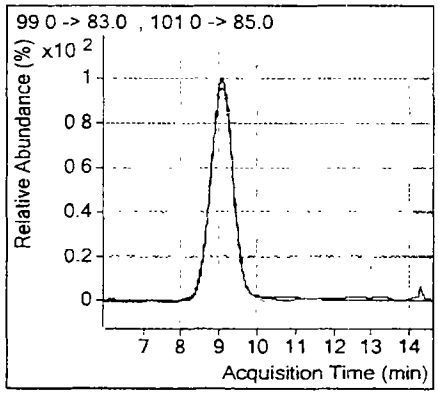
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2255	101	85	2.93	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	52722	109	91	3 16	2 30	3 80	In Control

Compound Graphics

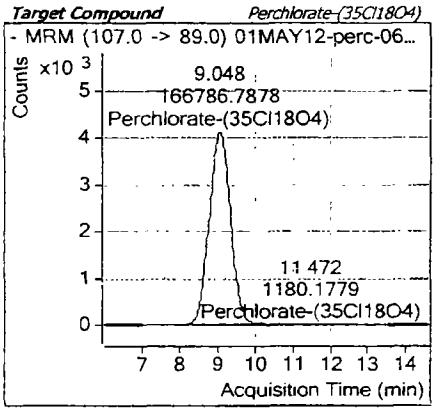
m 5/4/12

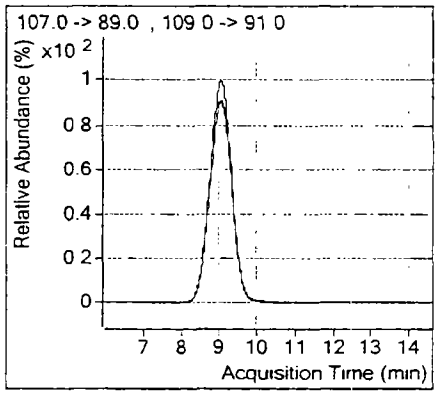
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 19:49
Analyst	lores
Data File	01MAY12-perc-061 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L4_00001 12LCMS0067, 1 0ng/mL
Sample Identification	Std004
Sample Information	IC-Pak Anion HR 75x4 6mm T=40*C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B5
Exp. Concentration	1 00
Injection Volume	50

Quantitation Results

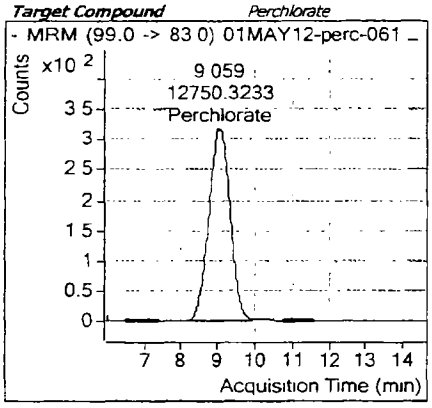
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 059	12750	99	83	**0.98046**	**0.98046**	1
Perchlorate-(35Cl18O4)	ISTD	9 049	165236	107	89			1

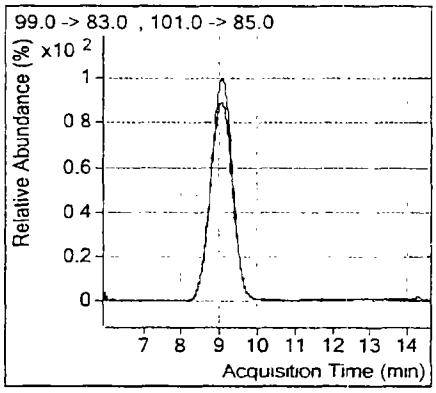
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	4067	101	85	3 14	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	51771	109	91	3 19	2 30	3 80	In Control

Compound Graphics

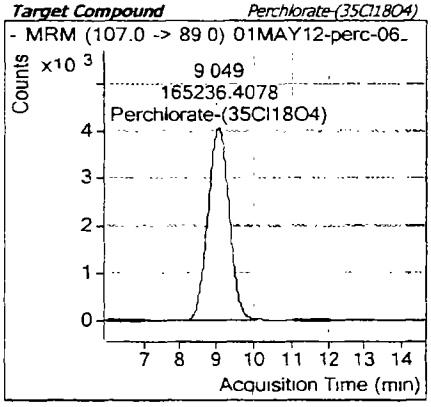
m 5/14/12

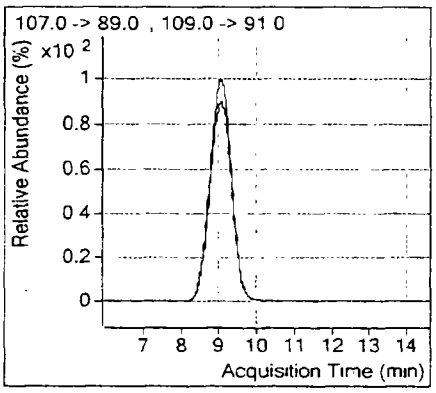
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 20.05
Analyst	lores
Data File	01MAY12-perc-062 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	Std005
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B6
Exp. Concentration	2 00
Injection Volume	50

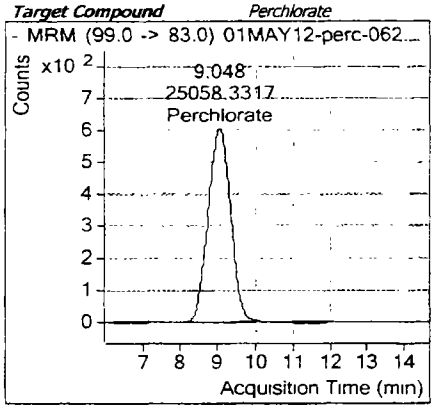
Quantitation Results

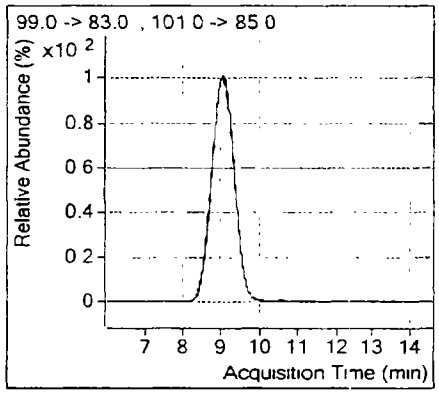
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 048	25058	99	83	1.92218	1.92218	1
Perchlorate-(35Cl18O4)	ISTD	9 046	163902	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8672	101	85	2 89	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	51351	109	91	3 19	2 30	3 80	In Control

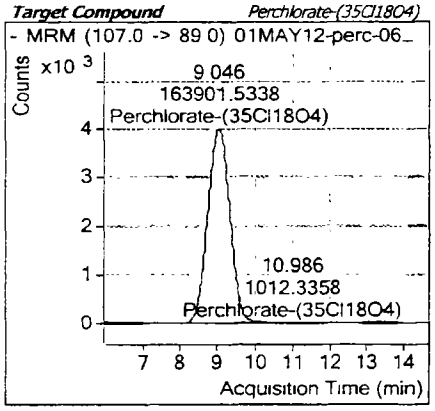
Compound Graphics

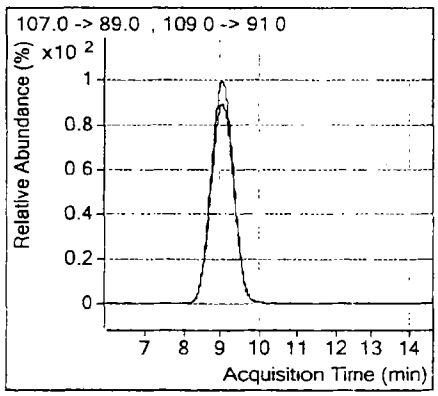
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl1804)*





MB 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D.\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 20.22
Analyst	lores
Data File	01MAY12-perc-063 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	Std006
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B7
Exp. Concentration	5 00
Injection Volume	50

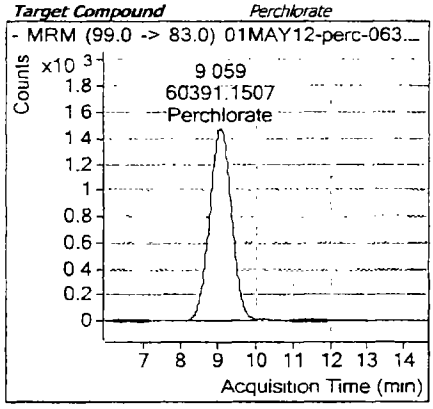
Quantitation Results

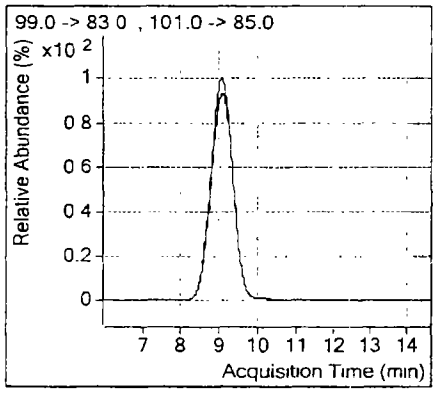
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 059	60391	99	83	**4.91101**	**4.91101**	1
Perchlorate-(35Cl18O4)	ISTD	9 052	153583	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19781	101	85	3 05	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	47836	109	91	3 21	2 30	3.80	In Control

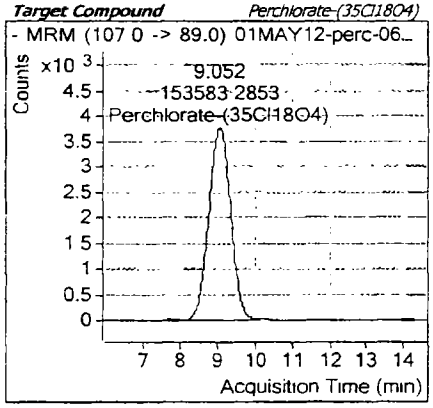
Compound Graphics

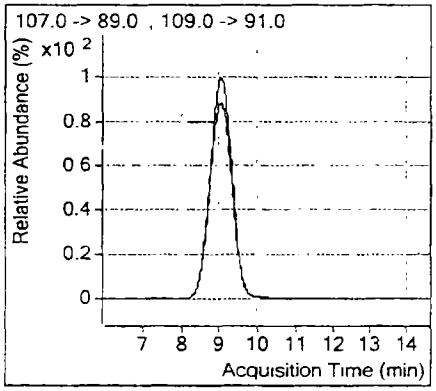
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 20 38
Analyst	lores
Data File	01MAY12-perc-064.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L7_00001 12LCMS0070, 10ng/mL
Sample Identification	Std007
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B8
Exp Concentration	10 00
Injection Volume	50

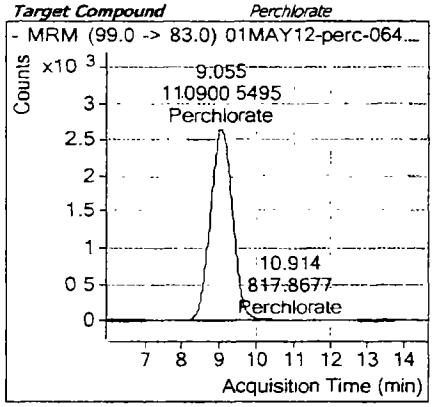
Quantitation Results

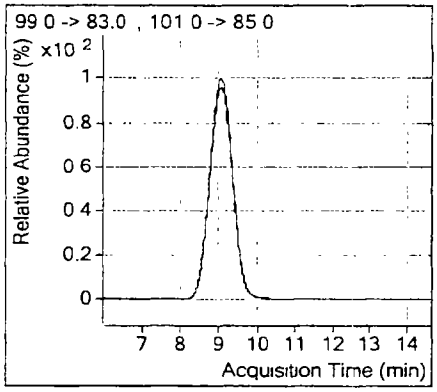
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 055	110901	99	83	**9.97088**	**9.97088**	1
Perchlorate-(35Cl18O4)	ISTD	9 044	138613	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	37032	101	85	2 99	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	43375	109	91	3 20	2 30	3 80	In Control

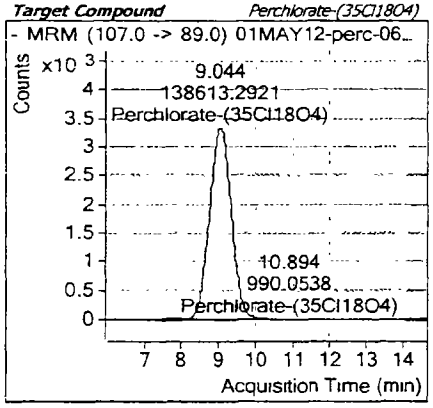
Compound Graphics

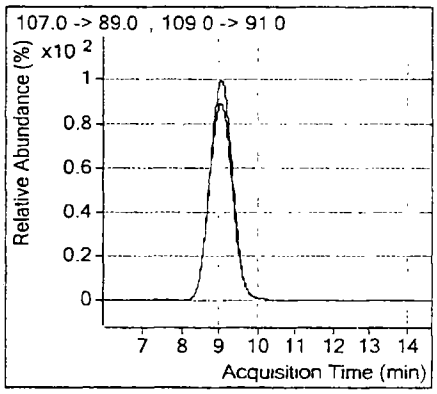
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D \Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 20:54
Analyst	lores
Data File	01MAY12-perc-065 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L8_00001 12LCMS0071, 20ng/mL
Sample Identification	Std008
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B9
Exp. Concentration	20 00
Injection Volume	50

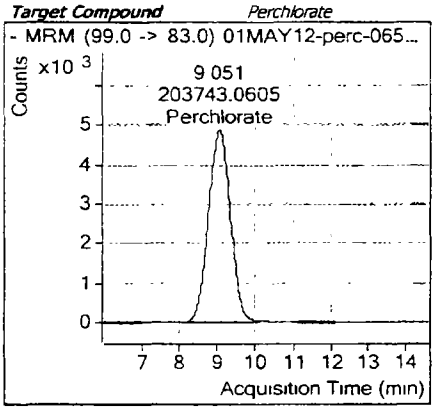
Quantitation Results

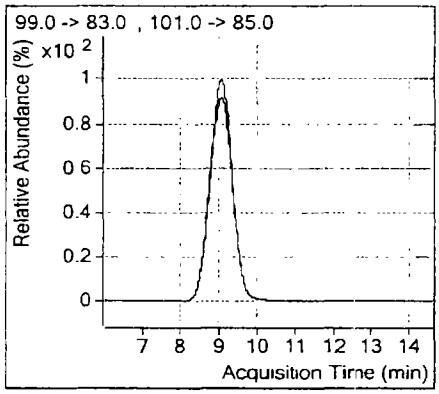
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 051	203743	99	83	**20.20217**	**20.20217**	1
Perchlorate-(35Cl18O4)	ISTD	9 045	125554	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	66241	101	85	3 08	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	38450	109	91	3 27	2 30	3 80	In Control

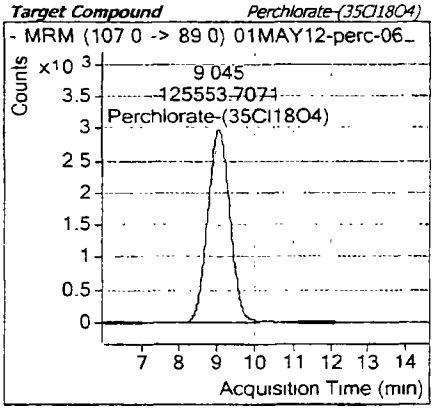
Compound Graphics

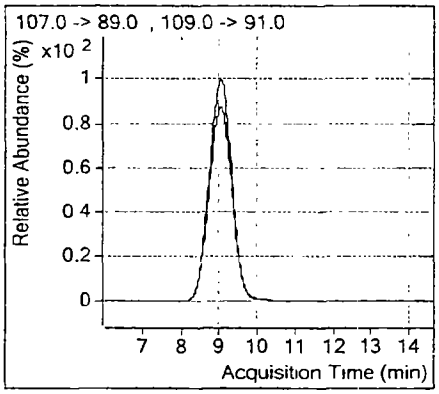
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D \Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

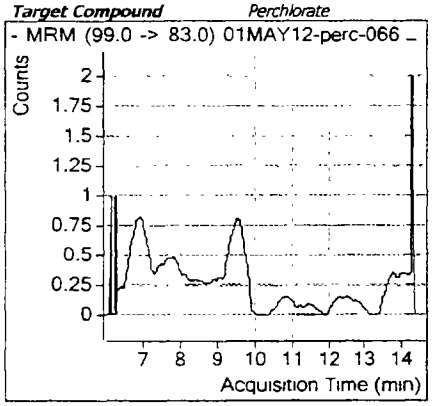
Acquisition Date - Time	5/1/2012 21 10
Analyst	lores
Data File	01MAY12-perc-066 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

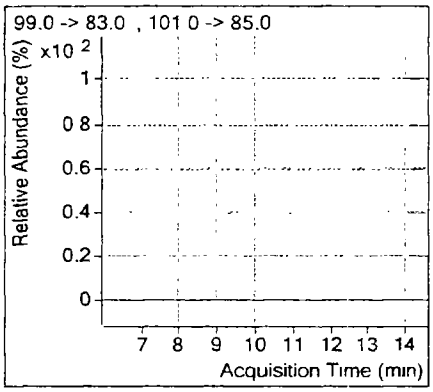
Quantitation Results

Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.041	152657	107	89			Perchlorate = ND	1
Qualifier Ion			**Area**	**Precursor**	**Product**	**Ratio**	**Min**	**Max**	
Perchlorate-(35Cl18O4)			47995	109	91	3 18	2 30	3 80	In Control

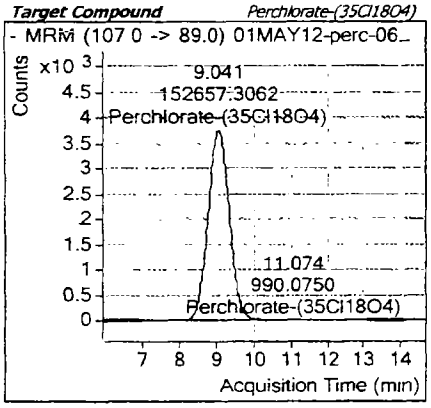
Compound Graphics

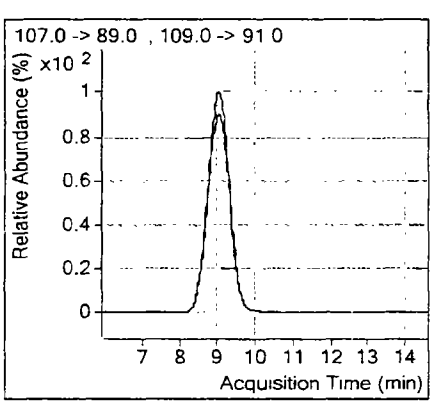
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 21.27
Analyst	lores
Data File	01MAY12-perc-067 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850IC_00001 12LCMS0073, 5 0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5 00
Injection Volume	50

Quantitation Results

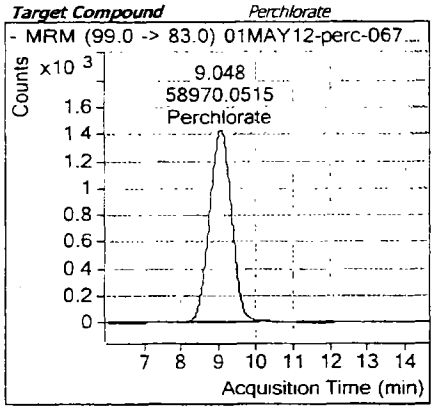
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 048	58970	99	83	**5.04510**	**5.04510**	1
Perchlorate-(35Cl18O4)	ISTD	9 040	145967	107	89			1
							0.9 % Deviation	

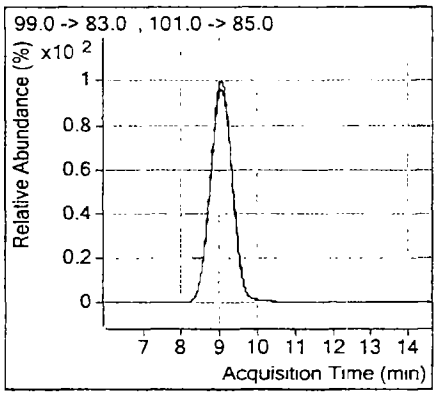
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19719	101	85	2 99	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	45637	109	91	3 20	2 30	3 80	In Control

Compound Graphics

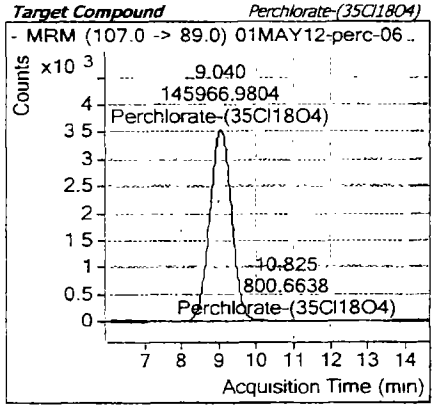
ms 5/4/12

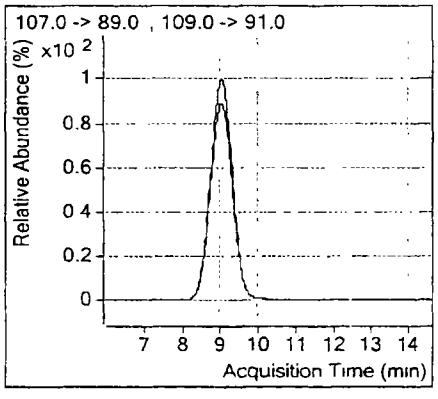
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





CCAL Data

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 21:43
Analyst	lores
Data File	01MAY12-perc-068.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5 00
Injection Volume	50

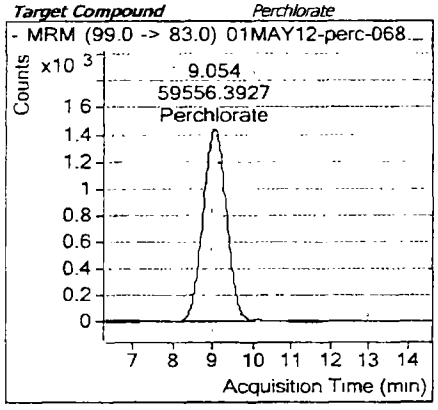
Quantitation Results

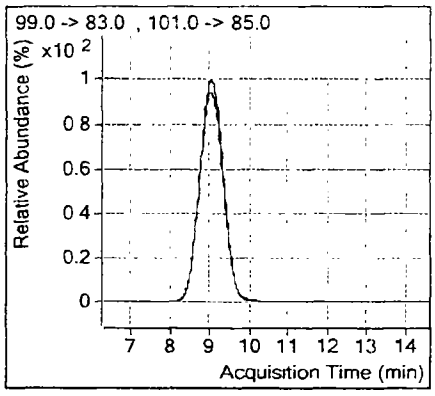
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 054	59556	99	83	**4.81549**	**4.81549**	1
Perchlorate-(35Cl18O4)	ISTD	9 042	154478	107	89			1
							-3.7 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19632	101	85	3 03	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	48483	109	91	3 19	2 30	3 80	In Control

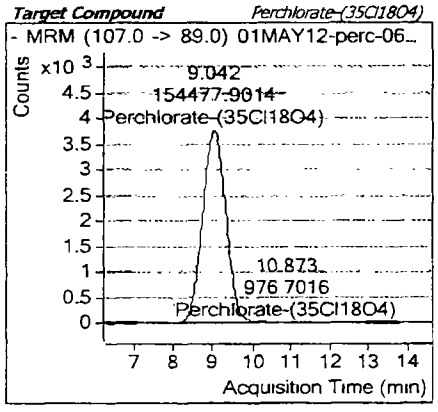
Compound Graphics

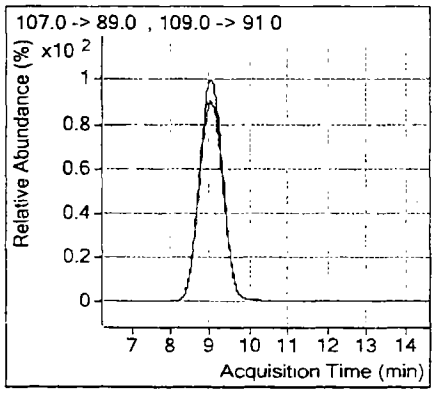
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D \Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 21:59
Analyst	lores
Data File	01MAY12-perc-069.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

Quantitation Results

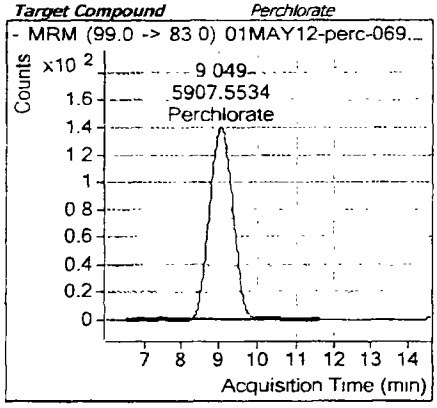
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 049	5908	99	83	**0.47901**	**0.47901**	1
Perchlorate-(35Cl18O4)	ISTD	9 045	160345	107	89			1
							-4.2 % Deviation	

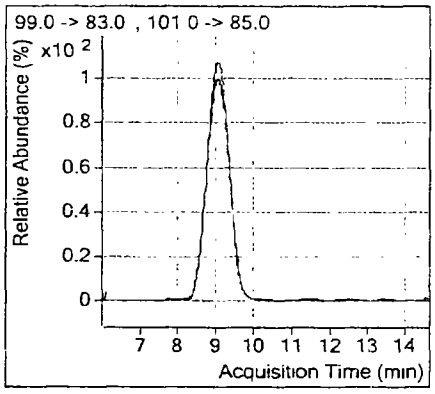
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2147	101	85	2 75	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	49139	109	91	3 26	2 30	3 80	In Control

Compound Graphics

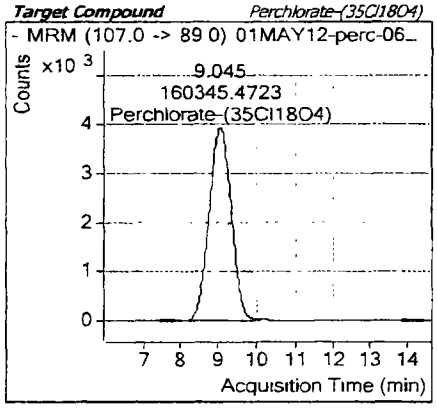
m 5/4/12

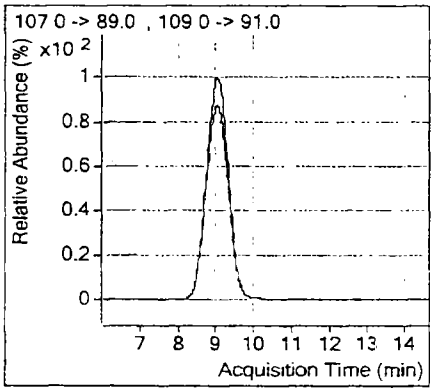
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/2/2012 00 41
Analyst	lores
Data File	01MAY12-perc-079 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2 00
Injection Volume	50

Quantitation Results

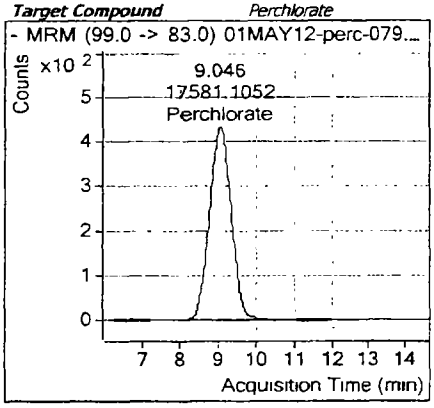
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 046	17581	99	83	**2.00446**	**2.00446**	1
Perchlorate-(35Cl18O4)	ISTD	9 038	110225	107	89			1
							0.2 % Deviation	

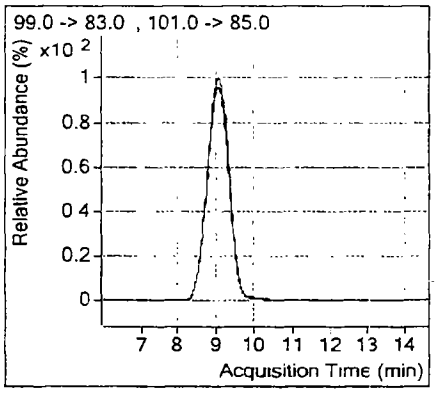
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	5728	101	85	3 07	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	34772	109	91	3 17	2 30	3 80	In Control

Compound Graphics

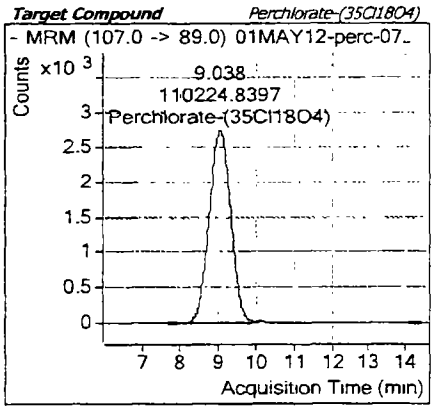
m 5/4/12

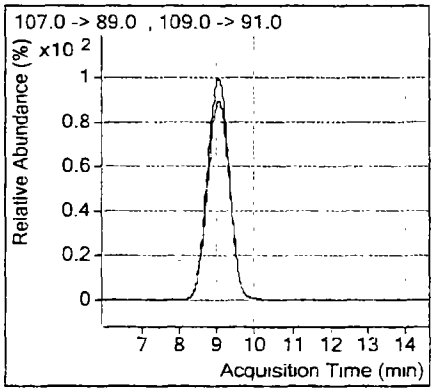
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 00 57
Analyst	lores
Data File	01MAY12-perc-080 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

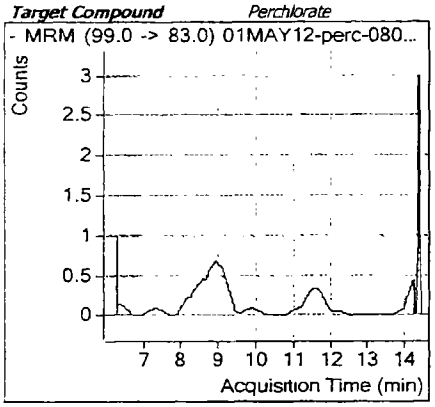
Quantitation Results

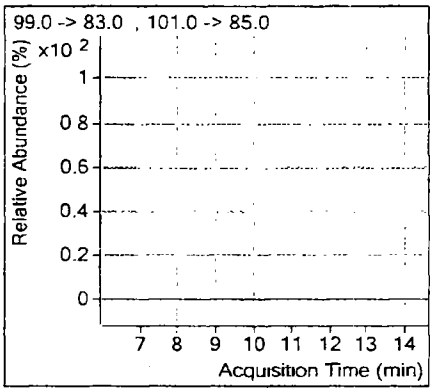
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9 038	141415	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	45217	109	91	3.13	2 30	3 80	In Control

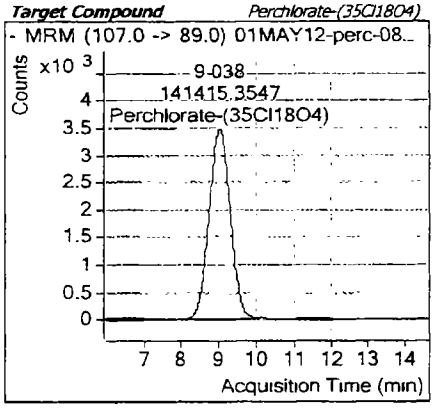
Compound Graphics

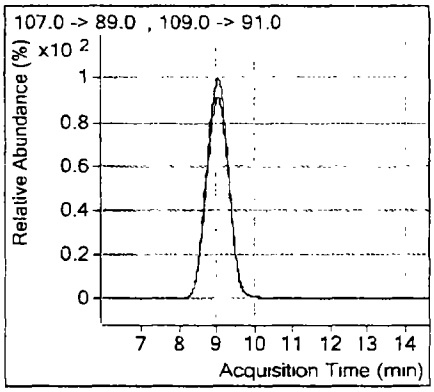
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mm 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 02:35
Analyst	lores
Data File	01MAY12-perc-086 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coli=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5.00
Injection Volume	50

Quantitation Results

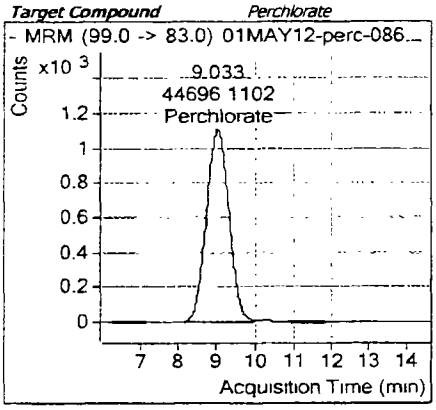
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 033	44696	99	83	**4.84354**	**4.84354**	1
Perchlorate-(35Cl18O4)	ISTD	9 036	115259	107	89			1
							-3.1 % Deviation	

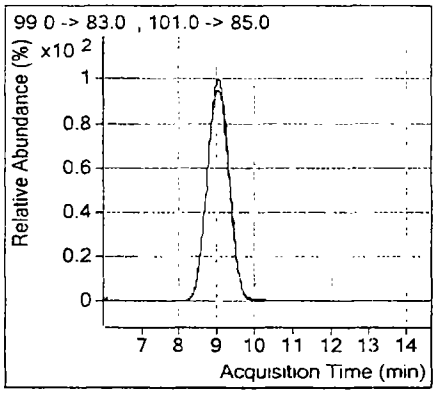
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	15095	101	85	2 96	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	36892	109	91	3 12	2 30	3 80	In Control

Compound Graphics

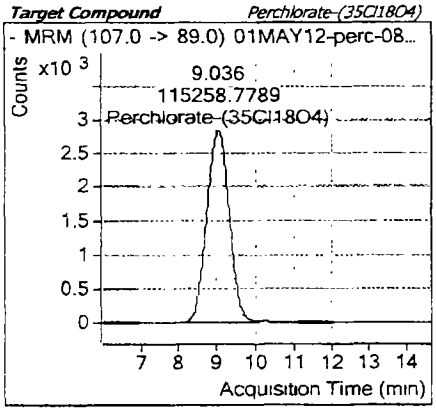
m 5/4/12

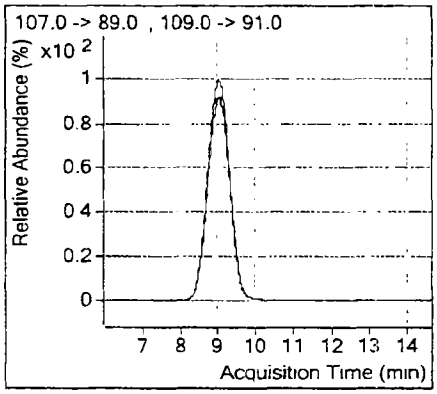
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D \Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 02:51
Analyst	lores
Data File	01MAY12-perc-087 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

Quantitation Results

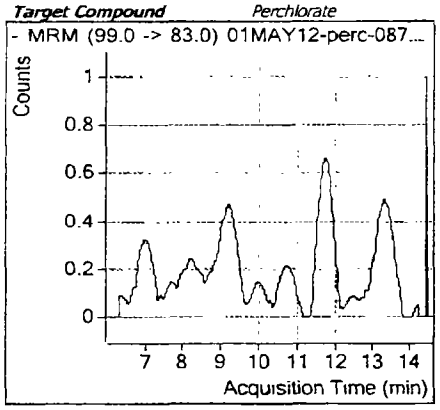
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9 051	141532	107	89			1
							Perchlorate = ND	

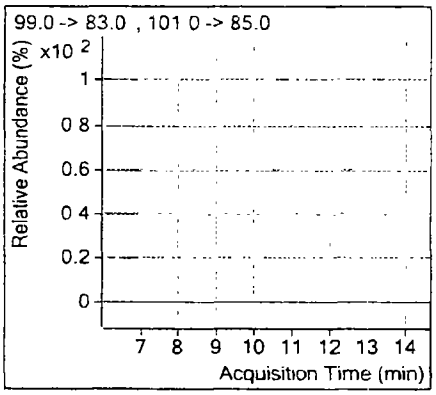
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	44265	109	91	3 20	2 30	3 80	In Control

Compound Graphics

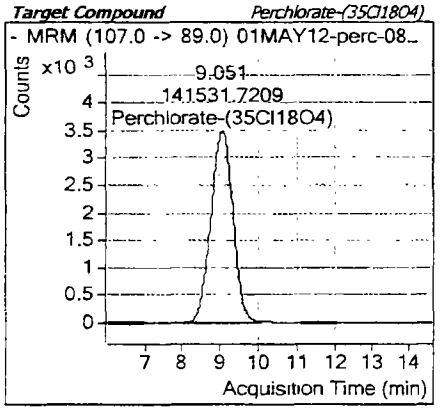
m 5/4/12

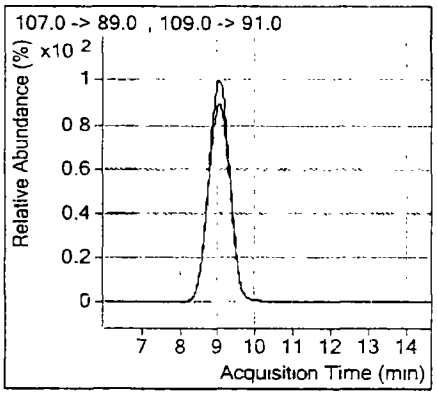
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\C1MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 05.17
Analyst	lores
Data File	01MAY12-perc-096 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2 00
Injection Volume	50

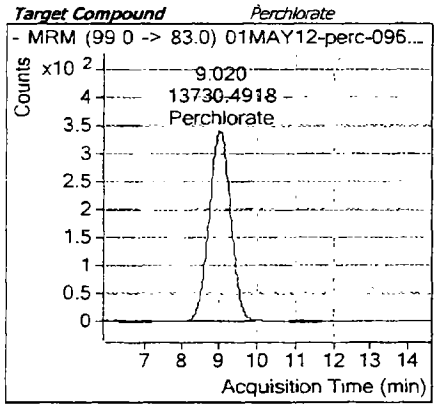
Quantitation Results

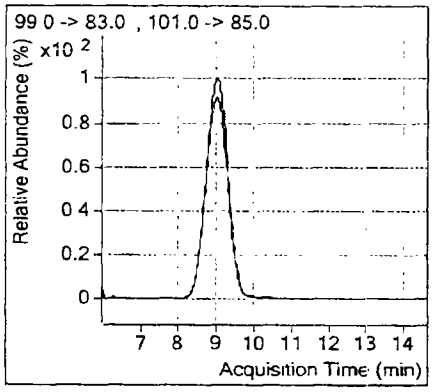
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 020	13730	99	83	**1.99512**	**1.99512**	1
Perchlorate-(35Cl18O4)	ISTD	9 015	86491	107	89			1
							-0.2 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	4357	101	85	3 15	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	28325	109	91	3 05	2 30	3 80	In Control

Compound Graphics

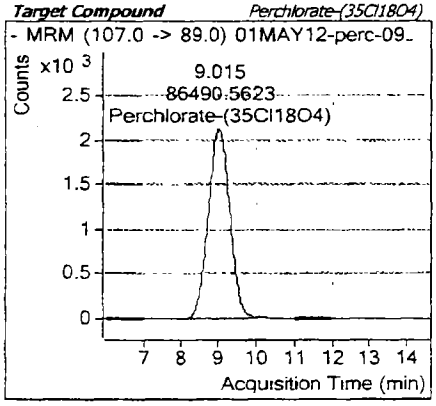
Target Compound *Perchlorate*

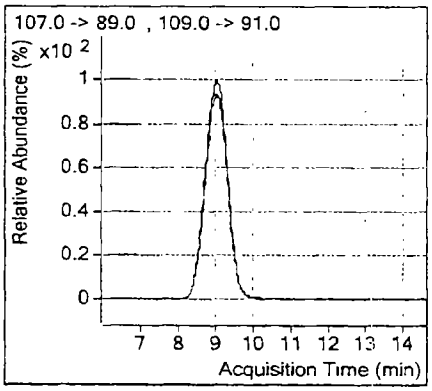




m 5/4/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 05.33
Analyst	lores
Data File	01MAY12-perc-097 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0 50
Injection Volume	50

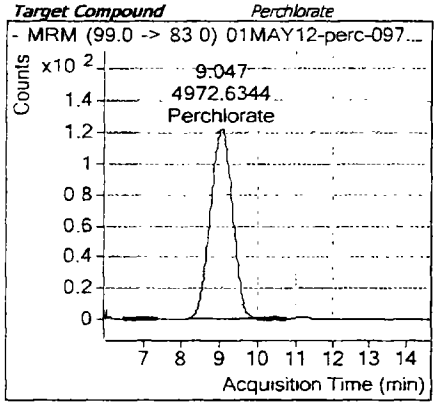
Quantitation Results

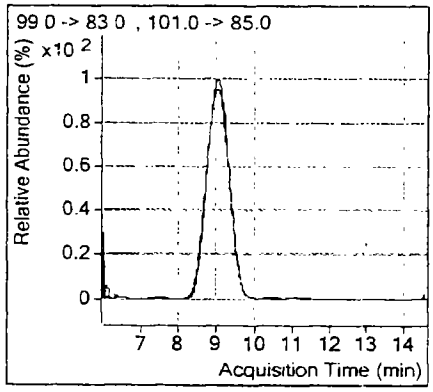
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 047	4973	99	83	**0.48791**	**0.48791**	1
Perchlorate-(35Cl18O4)	ISTD	9 041	132396	107	89			1
							-2.4 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1656	101	85	3 00	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	41873	109	91	3 16	2 30	3 80	In Control

Compound Graphics

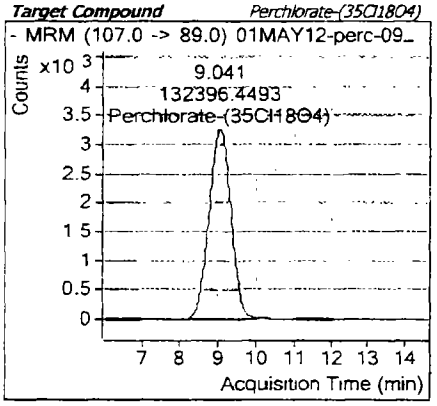
Target Compound *Perchlorate*

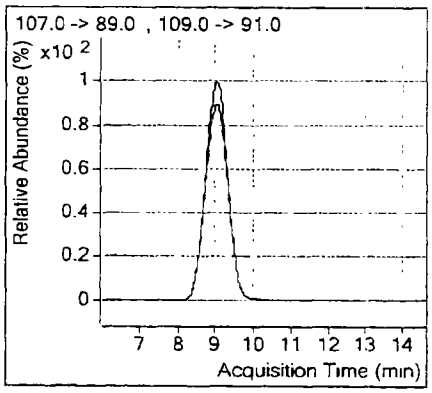




m 5/4/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D.\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 05.49
Analyst	lores
Data File	01MAY12-perc-098 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

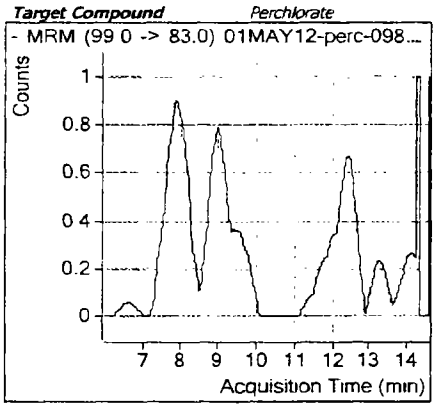
Quantitation Results

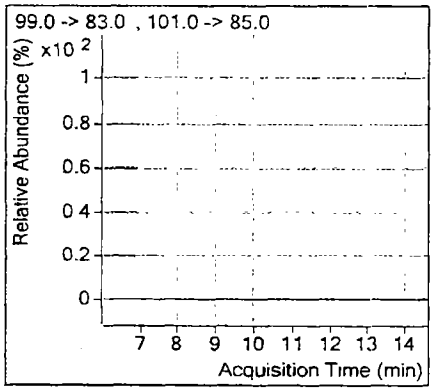
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9 039	139974	107	89				1
								Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	44549	109	91	3 14	2 30	3 80	In Control

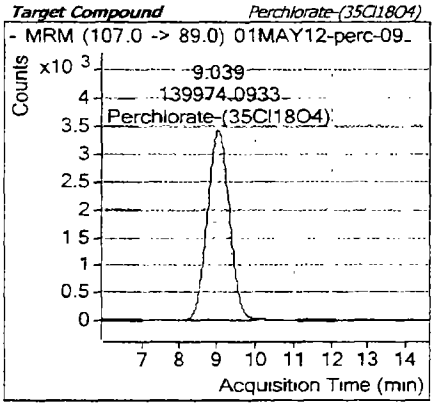
Compound Graphics

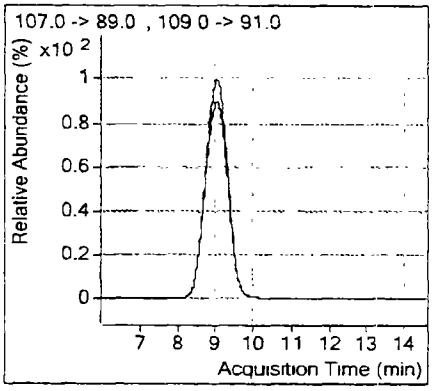
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MD 5/4/12

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-01 08:15		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.95	112.99	0.10	-0.04	Pass	0.72	0.70	0.10	0.02	Pass	52557	0	Pass
302.01	302.00	0.10	0.01	Pass	0.72	0.70	0.10	0.02	Pass	291844	0	Pass
601.96	601.98	0.10	-0.02	Pass	0.69	0.70	0.10	-0.01	Pass	655728	0	Pass
1033.94	1033.99	0.10	-0.05	Pass	0.69	0.70	0.10	-0.01	Pass	278211	0	Pass
1333.91	1333.97	0.10	-0.06	Pass	0.72	0.70	0.10	0.02	Pass	470011	0	Pass
1633.85	1633.95	0.10	-0.10	Pass	0.69	0.70	0.10	-0.01	Pass	381370	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.02	112.99	0.10	0.03	Pass	0.65	0.70	0.10	-0.05	Pass	211725	0	Pass
302.05	302.00	0.10	0.05	Pass	0.62	0.70	0.10	-0.08	Pass	273141	0	Pass
602.05	601.98	0.10	0.07	Pass	0.64	0.70	0.10	-0.06	Pass	377500	0	Pass
1034.06	1033.99	0.10	0.07	Pass	0.63	0.70	0.10	-0.07	Pass	172424	0	Pass
1334.01	1333.97	0.10	0.04	Pass	0.66	0.70	0.10	-0.04	Pass	435132	0	Pass
1633.95	1633.95	0.10	0.00	Pass	0.65	0.70	0.10	-0.05	Pass	243078	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.96	112.99	0.30	-0.03	Pass	1.24	1.20	0.60	0.04	Pass	60708	0	Pass
301.93	302.00	0.30	-0.07	Pass	1.29	1.20	0.60	0.09	Pass	417384	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.30	1.20	0.60	0.10	Pass	1011377	0	Pass
1033.86	1033.99	0.30	-0.13	Pass	1.29	1.20	0.60	0.09	Pass	483848	0	Pass
1333.89	1333.97	0.30	-0.08	Pass	1.21	1.20	0.60	0.01	Pass	952674	0	Pass
1633.88	1633.95	0.30	-0.07	Pass	1.15	1.20	0.60	-0.05	Pass	921810	0	Pass

TestAmerica West Sacramento (916) 373 - 5600

Page 1107 of 1290

05/10/2012 16:01 254

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.04	112.99	0.30	0.05	Pass	1.23	1.20	0.60	0.03	Pass	280583	0	Pass
302.05	302.00	0.30	0.05	Pass	1.26	1.20	0.60	0.06	Pass	426343	0	Pass
602.05	601.98	0.30	0.07	Pass	1.20	1.20	0.60	0.00	Pass	686770	0	Pass
1034.06	1033.99	0.30	0.07	Pass	1.20	1.20	0.60	0.00	Pass	351897	0	Pass
1334.04	1333.97	0.30	0.07	Pass	1.23	1.20	0.60	0.03	Pass	783617	0	Pass
1634.06	1633.95	0.30	0.11	Pass	1.17	1.20	0.60	-0.03	Pass	533938	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.96	112.99	0.50	-0.03	Pass	2.55	2.50	1.25	0.05	Pass	75373	0	Pass
301.95	302.00	0.50	-0.05	Pass	2.63	2.50	1.25	0.13	Pass	564495	0	Pass
601.94	601.98	0.50	-0.04	Pass	2.74	2.50	1.25	0.24	Pass	1367060	0	Pass
1033.94	1033.99	0.50	-0.05	Pass	2.82	2.50	1.25	0.32	Pass	747374	0	Pass
1333.99	1333.97	0.50	0.02	Pass	2.75	2.50	1.25	0.25	Pass	1555832	0	Pass
1634.01	1633.95	0.50	0.06	Pass	2.70	2.50	1.25	0.20	Pass	1702363	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.97	112.99	0.50	-0.02	Pass	2.51	2.50	1.25	0.01	Pass	337601	0	Pass
302.01	302.00	0.50	0.01	Pass	2.49	2.50	1.25	-0.01	Pass	589984	0	Pass
601.99	601.98	0.50	0.01	Pass	2.38	2.50	1.25	-0.12	Pass	1096477	0	Pass
1033.98	1033.99	0.50	-0.01	Pass	2.29	2.50	1.25	-0.21	Pass	706239	0	Pass
1333.89	1333.97	0.50	-0.08	Pass	2.35	2.50	1.25	-0.15	Pass	1607811	0	Pass
1633.94	1633.95	0.50	-0.01	Pass	2.18	2.50	1.25	-0.32	Pass	1336656	0	Pass

'NOTE' 1) Actual abundances depend on many factors and are instrument specific.
To change the minimum abundance, edit the values on the "Options" sheet

TestAmerica West Sacramento (916) 373 - 5600

Page 1108 of 1280

05/10/2012 17:01 254

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240430 **Work Order #...:** MR8L91AA **Matrix.....:** WATER
MB Lot-Sample #: G2D270000-065

Prep Date.....: 04/27/12
Analysis Date..: 05/01/12 **Prep Batch #...:** 2118065
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240430 **Work Order #...:** MR8I91AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	**93**	**(80 - 120)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240430 **Work Order #...:** MR8L91AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	**5.00**	**4.67**	**ug/L**	**93**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240430 **Work Order #...:** MR8L91AD **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	**98**	**(80 - 120)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240430 **Work Order #...:** MR8L91AD **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.89	ug/L	98	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240430 **Work Order #...:** MR5QT1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G2D230413-001 MR5QT1AD-MSD
Date Sampled...: 04/18/12 **Date Received..:** 04/20/12
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	**89**	**(80 - 120)**			**SW846 6850**
	97	**(80 - 120)**	**8.8**	**(0-15)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240430 **Work Order #...:** MR5QT1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G2D230413-001 MR5QT1AD-MSD
Date Sampled...: 04/18/12 **Date Received..:** 04/20/12
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	**ND**	**5.00**	**4.46**	**ug/L**	**89**		**SW846 6850**
	ND	**5.00**	**4.87**	**ug/L**	**97**	**8.8**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

TETRA TECH **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT Lockheed-MSA		JOB NUMBER SDG 240-10391-1	
SUBJECT Sample Calculations			
BASED ON		DRAWING NUMBER	
BY Ann Cognetta	CHECKED BY	APPROVED BY	DATE May 18, 2012

I. VOC; Sample MSA-MW19I-041912; cis 1,2-dichloroethene

$$\frac{853998}{1578330} * \frac{10\ ug/L}{0.2548} * 5 = 106.2\ ug/L$$

II. SVOC; Sample MSA-MW19I-041912; 1,4-dioxane

$$\frac{155121}{259542} * \frac{4\ ng/uL}{0.5834} * \frac{2\ mL}{1050\ mL} * 1000 = 7.8\ ug/L$$

III. GRO; Sample MSA-MW34S-041912

$$\frac{11238542}{299875.299} = 37.5\ ug/L$$

IV DRO; Sample MSA-MW39S-041912

$$\frac{37658326}{188272.909} * \frac{5\ mL}{1010\ mL} * 1000 = 990.2\ ug/L$$

Sample Calculation

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW19I-041912 Lab Sample ID: 240-10391-4

Matrix: Water Lab File ID: UXX4995.D

Analysis Method: 8260C Date Collected: 04/19/2012 12:18

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 13:24

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	5.0	U	5.0	0.80
74-87-3	Chloromethane	5.0	U	5.0	1.5
156-59-2	cis-1,2-Dichloroethene	110		5.0	0.85
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.70
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.5
74-95-3	Dibromomethane	5.0	U	5.0	1.4
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75
75-71-8	Dichlorodifluoromethane	5.0	U	5.0	1.6
100-41-4	Ethylbenzene	5.0	U	5.0	0.85
106-93-4	1,2-Dibromoethane	5.0	U	5.0	1.2
108-20-3	Diisopropyl ether	50	U	50	7.5
91-20-3	Naphthalene	5.0	U	5.0	1.2
179601-23-1	m-Xylene & p-Xylene	10	U	10	1.2
104-51-8	n-Butylbenzene	5.0	U	5.0	0.60
98-82-8	Isopropylbenzene	5.0	U	5.0	0.65
103-65-1	n-Propylbenzene	5.0	U	5.0	0.70
78-93-3	2-Butanone	50	U	50	2.9
108-10-1	4-Methyl-2-pentanone	50	U	50	1.6
135-98-8	sec-Butylbenzene	5.0	U	5.0	0.65
1634-04-4	Methyl tert-butyl ether	25	U	25	0.85
994-05-8	Tert-amyl-methyl ether (TAME)	25	U	25	0.34
75-09-2	Methylene Chloride	5.0	U	5.0	1.7
95-47-6	o-Xylene	5.0	U	5.0	0.70
100-42-5	Styrene	5.0	U	5.0	0.55
637-92-3	Ethyl-t-butyl ether (ETBE)	25	U	25	0.55
98-06-6	tert-Butylbenzene	5.0	U	5.0	0.65
127-18-4	Tetrachloroethene	5.0	U	5.0	1.5
108-88-3	Toluene	5.0	U	5.0	0.65
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.95
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.95
79-01-6	Trichloroethene	39		5.0	0.85
75-69-4	Trichlorofluoromethane	5.0	U	5.0	1.1
108-05-4	Vinyl acetate	10	U	10	0.95
75-01-4	Vinyl chloride	52		5.0	1.1
75-65-0	tert-Butyl alcohol	250	U *	250	20

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\NCChrom\ChromData\A3UX10\20120427-9453.b\UXX4995.D
Lims ID: 240-10391-A-4 Client ID: MSA-MW19I-041912
Inject. Date: 27-Apr-2012 13:24:30 Dil. Factor: 5.0000
Sample Type: Client
Sample ID: 240-0009453-011
Misc. Info.: P20427A,8260LLUX10,,1904 =P20427A,8260LLUX10,,1904
Operator: 1904 Instrument ID: A3UX10
Vol. Injected: 1.0000 ALS Bottle#: 10
Lims Batch ID: 41857 Lims Sample ID: 11
Detector: MS SCAN

Method: \\NCChrom\ChromData\A3UX10\20120427-9453.b\8260_10.m
Last Update: 29-Apr-2012 12:34:33 Calib Date: 09-Apr-2012 14:40:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\NCChrom\ChromData\A3UX10\20120409-8883.b\UXX1001.D
Limit Group: MSV 8260DOD ICAL
Integrator: RTE ID Type: Deconvolution ID
Process Host: CORP-CTX-18

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.126	5.126	0.0	99	1578330	10.0	
* 2 Chlorobenzene-d5	117	7.800	7.800	0.0	85	1062399	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.048	10.048	0.0	94	513357	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.546	4.546	0.0	59	373566	13.0	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.830	4.830	0.0	0	472209	12.9	
$ 7 Toluene-d8 (Surr)	98	6.487	6.487	0.0	93	1405487	11.7	
$ 131 4-Bromofluorobenzene (Surr)	95	8.912	8.912	0.0	96	438751	9.54	
134 Chlorodifluoromethane TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.492					
13 Chloromethane	50		1.622					
14 Vinyl chloride	62	1.718	1.717	0.001	99	474923	10.3	
15 Bromomethane	94		2.001					
16 Chloroethane	64		2.096					
18 Trichlorofluoromethane	101		2.309					
21 1,1-Dichloroethene	96		2.723					
22 Acetone	43		2.735					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.746					
26 Carbon disulfide	76		2.924					
30 Methylene Chloride	84		3.113					
31 2-Methyl-2-propanol	59		3.172					
34 Methyl tert-butyl ether	73		3.350					
33 trans-1,2-Dichloroethene	96	3.351	3.350	0.001	52	5419	0.1468	
36 1,1-Dichloroethane	63		3.681					
37 Vinyl acetate	86		3.717					
38 Isopropyl ether	87		3.741					
40 Tert-butyl ethyl ether	59		4.037					
41 2-Butanone (MEK)	43		4.155					
42 cis-1,2-Dichloroethene	96	4.156	4.166	-0.010	83	853998	21.2	
43 2,2-Dichloropropane	77		4.166					
47 Chlorobromomethane	128		4.356					
49 Chloroform	83		4.415					
50 1,1,1-Trichloroethane	97		4.592					

Sample calculation

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0139 0.0113	0.0159	0.0121	0.0128	0.0132	Ave		0.0132				12.0		15.0			
Acrylonitrile	0.0815 0.0870	0.0882	0.0840	0.0861	0.0926	Ave		0.0866				4.4		15.0			
Methyl tert-butyl ether	0.6298 0.6761	0.6642	0.6410	0.6715	0.7312	Ave		0.6690			0.1000	5.3		15.0			
trans-1,2-Dichloroethene	0.2368 0.2297	0.2291	0.2268	0.2326	0.2486	Ave		0.2339			0.1000	3.4		15.0			
Hexane	0.0580 0.0648	0.0554	0.0620	0.0574	0.0625	Ave		0.0600				6.1		15.0			
1,1-Dichloroethane	0.4254 0.4303	0.4217	0.4250	0.4379	0.4668	Ave		0.4345			0.1000	3.9		15.0			
Vinyl acetate	0.0316 0.0484	0.0385	0.0396	0.0459	0.0502	Lin1	-0.011	0.0486							0.9980		0.9950
2-Butanone	0.1052 0.0887	0.0917	0.0897	0.0852	0.0938	Ave		0.0924			0.0500	7.5		15.0			
cis-1,2-Dichloroethene	0.2508 0.2495	0.2545	0.2464	0.2543	0.2736	Ave		0.2548			0.1000	3.8		15.0			
2,2-Dichloropropane	0.2781 0.2817	0.2747	0.2768	0.2805	0.3092	Ave		0.2835				4.5		15.0			
Bromochloromethane	0.1023 0.1073	0.1074	0.1037	0.1113	0.1197	Ave		0.1086				5.8		15.0			
Tetrahydrofuran	0.0749 0.0640	0.0739	0.0637	0.0641	0.0668	Ave		0.0679				7.6		15.0			
Chloroform	0.3657 0.3760	0.3800	0.3621	0.3800	0.4090	Ave		0.3788				4.4		15.0			
1,1,1-Trichloroethane	0.2761 0.3005	0.2886	0.2958	0.3014	0.3241	Ave		0.2977			0.1000	5.4		15.0			
Cyclohexane	0.4772 0.4869	0.4382	0.4655	0.4350	0.4781	Ave		0.4635			0.1000	4.7		15.0			
1,1-Dichloropropene	0.3213 0.3320	0.3151	0.3070	0.3141	0.3435	Ave		0.3222				4.2		15.0			
Carbon tetrachloride	0.2206 0.2597	0.2225	0.2352	0.2404	0.2675	Ave		0.2410			0.1000	8.0		15.0			
1,2-Dichloroethane	0.2598 0.2874	0.2825	0.2743	0.2849	0.3058	Ave		0.2825			0.1000	5.4		15.0			
Benzene	0.9882 0.9961	0.9621	0.9148	0.9557	1.0428	Ave		0.9766			0.5000	4.4		15.0			
Trichloroethene	0.2155 0.2336	0.2156	0.2171	0.2257	0.2465	Ave		0.2257			0.2000	5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name:	TestAmerica Canton	Job No.:	240-10391-1
SDG No.:			
Client Sample ID:	MSA-MW19I-041912	Lab Sample ID:	240-10391-4
Matrix:	Water	Lab File ID:	20425012.D
Analysis Method:	8270C	Date Collected:	04/19/2012 12:18
Extract. Method:	3520C	Date Extracted:	04/23/2012 08:50
Sample wt/vol:	1050(mL)	Date Analyzed:	04/25/2012 12:30
Con. Extract Vol.:	2(mL)	Dilution Factor:	1
Injection Volume:	1(uL)	Level: (low/med)	Low
% Moisture:		GPC Cleanup:(Y/N)	N
Analysis Batch No.:	41486	Units:	ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	7.8		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	42		28-110
367-12-4	2-Fluorophenol (Surr)	44		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	44		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	41		27-111
4165-62-2	Phenol-d5 (Surr)	44		10-110
1718-51-0	Terphenyl-d14 (Surr)	53		37-119

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\NCChrom\ChromData\A4HP10\20120425-9367.b\20425012.D		
Lims ID:	240-10391-G-4-A	Client ID:	MSA-MW19I-041912
Inject. Date:	25-Apr-2012 12:30:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009367-012		
Misc. Info.:	240-10391-G-4-A		
Operator:	001710	Instrument ID:	A4HP10
Vol. Injected:	1.0000	ALS Bottle#:	12
Lims Batch ID:	41486	Lims Sample ID:	12
Detector:	MS SCAN		
Method:	\\NCChrom\ChromData\A4HP10\20120425-9367.b\8270_10.m		
Last Update:	26-Apr-2012 09:06:35	Calib Date:	19-Apr-2012 20:04:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\NCChrom\ChromData\A4HP10\20120419-9207.b\20419019.D		
Limit Group:	MSS 8270C ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-17		
First Level Reviewer: gruberj		Date:	25-Apr-2012 14:05:27

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	3.282	3.283	-0.001	97	259542	4.00	
* 2 Naphthalene-d8	136	4.164	4.169	-0.005	99	1046369	4.00	
* 3 Acenaphthene-d10	164	5.425	5.425	0.0	93	608249	4.00	
* 4 Phenanthrene-d10	188	6.498	6.499	-0.001	99	990306	4.00	
* 5 Chrysene-d12	240	8.443	8.454	-0.011	80	972693	4.00	
* 6 Perylene-d12	264	9.682	9.699	-0.017	92	857280	4.00	
$ 7 2-Fluorophenol	112	2.433	2.433	0.0	91	572831	6.55	
$ 8 Phenol-d5	99	3.010	3.015	-0.005	91	752327	6.67	
$ 9 Nitrobenzene-d5	82	3.656	3.657	-0.001	85	425946	4.07	
$ 10 2-Fluorobiphenyl (Surr)	172	4.922	4.923	-0.001	100	865353	4.22	
$ 11 2,4,6-Tribromophenol	330	5.991	5.996	-0.005	89	160660	6.66	
$ 12 Terphenyl-d14	244	7.631	7.636	-0.005	99	1083329	5.30	
25 1,4-Dioxane	88	1.493	1.493	0.0	95	155121	4.10	M

QC Flag Legend

Review Flags
M - Manually Integrated

Sample Calculation

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 40849

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/19/2012 11:52 Calibration End Date: 04/19/2012 14:23 Calibration ID: 8125

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40849/6	20419006.D
Level 2	STD2 240-40849/5	20419005.D
Level 3	STD3 240-40849/4	20419004.D
Level 4	STD4 240-40849/3	20419003.D
Level 5	STD5 240-40849/2	20419002.D
Level 6	STD6 240-40849/10	20419010.D
Level 7	STD7 240-40849/9	20419009.D
Level 8	STD8 240-40849/8	20419008.D
Level 9	STD9 240-40849/7	20419007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5731	0.6075 0.5867	0.5683 0.6077	0.5957 0.5676	0.5607	Ave		0.5834				3.2		15.0			
Malononitrile	1.6818	1.7406 1.4823	1.7380 +++++	1.8486 +++++	1.7259	Ave		1.7029				7.1		15.0			
N-Nitrosodimethylamine	0.9411	0.9022 0.9488	0.9164 1.0108	0.9659 0.9528	0.9120	Ave		0.9438				3.7		15.0			
Pyridine	1.5659	1.4871 1.6026	1.5860 1.6795	1.6092 1.6099	1.5325	Ave		1.5841				3.6		15.0			
Ethyl methacrylate	1.2915	1.2143 1.2803	1.2645 1.3407	1.2944 1.2371	1.2313	Ave		1.2693				3.2		15.0			
Benzaldehyde	1.5529 0.7747	1.1409 +++++	1.2213 +++++	1.2572 +++++	1.0933	Ave		1.1734				22.0	*	15.0			
3-Chloropropionitrile	0.8218	0.8133 0.8120	0.8250 0.8588	0.8456 0.8237	0.7984	Ave		0.8248				2.3		15.0			
Phenol	1.8729	1.8122 1.8898	1.8358 2.0372	1.8865 1.9052	1.7937	Ave		1.8792				4.0		15.0			
Aniline	2.3261	2.1976 2.3325	2.2100 2.6245	2.3349 2.4154	2.1998	Ave		2.3301				6.1		15.0			
Bis(2-chloroethyl)ether	1.5088	1.4849 1.5553	1.4564 1.6334	1.5264 1.6029	1.5112	Ave		1.5349				3.9		15.0			
2-Chlorophenol	1.4909	1.3873 1.5094	1.4548 1.6506	1.5130 1.5318	1.4574	Ave		1.4994				5.1		15.0			
1,3-Dichlorobenzene	1.5900	1.4849 1.6063	1.5754 1.7123	1.6047 1.5638	1.5230	Ave		1.5825				4.2		15.0			
1,4-Dichlorobenzene	1.6305	1.5442 1.6482	1.5794 1.7500	1.6169 1.6180	1.5534	Ave		1.6176				4.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW34S-041912 | Lab Sample ID: 240-10391-5

Matrix: Water | Lab File ID: YF042414.D

Analysis Method: 8015B | Date Collected: 04/19/2012 10:05

Sample wt/vol: 5(mL) | Date Analyzed: 04/24/2012 18:24

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41320 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	38	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	66		10-150

Report Date: 25-Apr-2012 09:26:49 Chrom Revision: 2.0 08-Feb-2012 11:07:54

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File:	\\Ncchrom\ChromData\YPID\20120424-9330.b\YF042414.D		
Lims ID:	240-10391-B-5	Client ID:	MSA-MW34S-041912
Inject. Date:	24-Apr-2012 18:24:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009330-012		
Misc. Info.:			
Operator:	4275	Instrument ID:	YPID
Vol. Injected:	1.0000	ALS Bottle#:	1
Lims Batch ID:	41320	Lims Sample ID:	12
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\YPID\20120424-9330.b\Y80158021.m		
Last Update:	25-Apr-2012 09:26:30	Calib Date:	21-Feb-2012 16:37:39
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\YPID\20120221-7767.b\YF022110.D		
Limit Group:	GCV 8015B GRO ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-15		

First Level Reviewer: bolgrind Date: 25-Apr-2012 09:25:30

Compound	Det	RT	ADJ RT	DLT RT	Response	On-Col Amt ug/l	Flags
* 15 Fluorobenzene	1	0.000	8.477	-8.477	0	0	
$ 16 Trifluorotoluene (Surr)	2	9.749	9.753	-0.004	2769002	6.59	
A 5 C6-C10	2	11.797	4.817 - 18.778		11238542	37.5	

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Sample Calculation

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10391-1

SDG No.:

Client Sample ID: MSA-MW39S-041912 | Lab Sample ID: 240-10391-7

Matrix: Water | Lab File ID: P5F04273.D

Analysis Method: 8015B | Date Collected: 04/19/2012 13:10

Extraction Method: 3520C | Date Extracted: 04/25/2012 10:55

Sample wt/vol: 1010(mL) | Date Analyzed: 04/26/2012 18:35

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41730 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	990		500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	64		10-110

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File:	\\Ncchrom\ChromData\A2HP5F\20120426-9423.b\P5F04273.D		
Lims ID:	240-10391-L-7-A	Client ID:	MSA-MW39S-041912
Inject. Date:	26-Apr-2012 18:35:02	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009423-013		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP5F
Vol. Injected:	1.0000	ALS Bottle#:	13
Lims Batch ID:	41730	Lims Sample ID:	13
Detector:	GC FID1A		
Method:	\\Ncchrom\ChromData\A2HP5F\20120426-9423.b\TPH5F.m		
Last Update:	27-Apr-2012 13:25:37	Calib Date:	13-Apr-2012 15:06:59
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP5F\20120413-9029.b\P5F04144.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
3.793	3.794	-0.001	13892476	64.2	
A 15 Diesel					
9.247	4.909 -	13.586	29895633	158.8	
A 17 C10-C32					
9.946	4.909 -	14.984	37658326	200.0	

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Sample calculation

Lab Name: TestAmerica Canton Job No.: 240-10391-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	197527 183497	194334	179644	186362	Ave		188272.909				4.0		20.0			
n-Nonane	222434 217668	222225	205767	214296	Ave		216478.041				3.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **June 15, 2012**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- SELECT TOTAL AND DISSOLVED METALS**
LOCKHEED-MSA
SDG 240-10391-1

SAMPLES: 5/Waters/

MSA-MW19D-041912	MSA-MW19I-041912
MSA-MW34I-041912	MSA-MW34S-041912
MSA-MW39S-041912	

Overview

The sample set for Lockheed MSA, SDG 240-10391-1, consists of five (5) aqueous environmental samples. This SDG contained no field duplicate pairs.

All samples were analyzed for total and dissolved metals. The samples were collected by Tetra Tech on April 19th, 2012 and analyzed by TestAmerica. Metals analyses were conducted using method 6020A. Mercury analyses were conducted using method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, laboratory control sample recoveries, matrix spike recoveries, laboratory duplicate results, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Barium [1]	0.71 ug/L	3.55 ug/L
Copper [1]	0.57 ug/L	2.85 ug/L
Lead [1]	0.29 ug/L	1.45 ug/L
Zinc [1]	2.83 ug/L	14.15 ug/L
Antimony [2]	0.16 ug/L	0.8 ug/L
Cobalt [2]	0.059 ug/L	0.29 ug/L
Molybdenum [2]	0.51 ug/L	2.55 ug/L
Thallium [2]	0.83 ug/L	4.15 ug/L
Tungsten [2]	0.74 ug/L	3.7 ug/L

(1) Maximum concentration found in a preparation blank affecting sample in 41326.
(2) Maximum concentration found in a calibration blank affecting samples analyzed on 4/25/12.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The CRDL standard analyzed on 4/25/12 had a percent recovery > 110% for copper, nickel, silver, and thallium. All samples were affected. Positive nickel results < 2X CRDL were qualified as either biased high (K).

Notes

Positive results greater than MDL but less than the RL were qualified as estimated (J).

COCs omitted instructions to analyze the following samples for metals: MSA-MW34I-041912, MSA-MW34S-041912, and MSA-MW39S-041912. Samples were collected and were properly preserved. No action was required.

Executive Summary

Laboratory Performance: CRDL standard non-compliances resulted in the qualification of sample results. Preparation and calibration blank contamination resulted on the qualification of sample results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993).

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: MF	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.13	U		0.13	U	
ARSENIC		2.5	J	P	3	J	P	1.1	J	P	1.7	J	P
BARIUM		61			70			55			65		
BERYLLIUM		1.7			0.63	J	P	2.5			0.72	J	P
CADMIUM		1.1			0.13	U		0.13	U		0.13	U	
CHROMIUM		9.1			3			0.71	U		0.73	J	P
COBALT		230			52			210			99		
COPPER		0.85	B	A	0.33	B	A	2.5	B	A	0.6	B	A
LEAD		0.18	U		0.18	U		0.18	U		0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.17	B	A	0.33	B	A	0.093	U		0.093	U	
NICKEL		100			40			310			140		
SELENIUM		1.4	J	P	0.87	J	P	0.57	U		0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.23	B	A	0.14	B	A	0.19	B	A	0.18	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U		0.37	U	
VANADIUM		4.3	J	P	1.7	J	P	0.44	U		7	J	P
ZINC		270			110			450			200		

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7		
FRACTION: MF	SAMP_DATE	4/19/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.14	B	A
ARSENIC		31		
BARIUM		22		
BERYLLIUM		0.2	U	
CADMIUM		0.13	U	
CHROMIUM		0.95	J	P
COBALT		5.3		
COPPER		0.29	U	
LEAD		0.18	U	
MERCURY		0.12	U	
MOLYBDENUM		0.2	B	A
NICKEL		3.8	K	C
SELENIUM		0.64	J	P
SILVER		0.08	U	
THALLIUM		0.24	B	A
TUNGSTEN		0.37	U	
VANADIUM		0.51	J	P
ZINC		3.5	B	A

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: M	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.13	U		0.13	U	
ARSENIC		2.4	J	P	3.2	J	P	1.3	J	P	2.5	J	P
BARIUM		61			71			56			63		
BERYLLIUM		1.8			0.64	J	P	2.5			0.73	J	P
CADMIUM		1.5			0.13	U		0.2	J	P	0.28	J	P
CHROMIUM		9.6			3.5			0.71	U		0.98	J	P
COBALT		230			51			220			97		
COPPER		0.77	B	A	0.8	B	A	11			8.4		
LEAD		0.18	U		0.25	B	A	0.29	B	A	0.23	B	A
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.41	B	A	0.44	B	A	0.093	U		0.12	B	A
NICKEL		100			40			310			140		
SELENIUM		1.5	J	P	0.89	J	P	0.57	U		0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.26	B	A	0.16	B	A	0.2	B	A	0.25	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U		0.37	U	
VANADIUM		4.5	J	P	2.3	J	P	0.83	J	P	23		
ZINC		280			130			500			290		

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7		
FRACTION: M	SAMP_DATE	4/19/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.13	U	
ARSENIC		41		
BARIUM		23		
BERYLLIUM		0.2	U	
CADMIUM		0.13	U	
CHROMIUM		1.2	J	P
COBALT		5.5		
COPPER		0.65	B	A
LEAD		0.24	B	A
MERCURY		0.12	U	
MOLYBDENUM		0.27	B	A
NICKEL		3.7	K	C
SELENIUM		0.8	J	P
SILVER		0.08	U	
THALLIUM		0.34	B	A
TUNGSTEN		0.37	U	
VANADIUM		1.9	J	P
ZINC		4	B	A

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-3			240-10391-4			240-10391-6			240-10391-5		
FRACTION: MISC	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U		0.082	U		0.082	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912		
SDG: 240-10391-1	LAB_ID	240-10391-7		
FRACTION: MISC	SAMP_DATE	4/19/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
PERCHLORATE		0.082	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW19D-041912**

Lab Sample ID: 240-10391-3
Client Matrix: Water

Date Sampled: 04/19/2012 1107
Date Received: 04/20/2012 1000

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0907			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	2.4	J	0.40	5.0
Barium	61	B	0.19	5.0
Beryllium	1.8		0.20	1.0
Cadmium	1.5		0.13	1.0
Chromium	9.6		0.71	2.0
Cobalt	230		0.058	1.0
Copper	0.77	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.41	J B	0.093	10
Nickel	100		0.20	2.0
Selenium	1.5	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.26	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	4.5	J	0.44	20
Zinc	280	B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0912			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	2.5	J	0.40	5.0
Barium	61	B	0.19	5.0
Beryllium	1.7		0.20	1.0
Cadmium	1.1		0.13	1.0
Chromium	9.1		0.71	2.0
Cobalt	230		0.058	1.0
Copper	0.85	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.17	J B	0.093	10
Nickel	100		0.20	2.0
Selenium	1.4	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.23	J B	0.14	2.0
Vanadium	4.3	J	0.44	20
Zinc	270	B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW19D-041912**

Lab Sample ID: 240-10391-3
Client Matrix: Water

Date Sampled: 04/19/2012 1107
Date Received: 04/20/2012 1000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41694	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41339	Lab File ID:	042512A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/25/2012 1731			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1150				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41694	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41339	Lab File ID:	042512A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/25/2012 1733			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1150				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW19I-041912**

Lab Sample ID: 240-10391-4
Client Matrix: Water

Date Sampled: 04/19/2012 1218
Date Received: 04/20/2012 1000

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0918			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	3.2	J	0.40	5.0
Barium	71	B	0.19	5.0
Beryllium	0.64	J	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	3.5		0.71	2.0
Cobalt	51		0.058	1.0
Copper	0.80	J B	0.29	2.0
Lead	0.25	J B	0.18	1.0
Molybdenum	0.44	J B	0.093	10
Nickel	40		0.20	2.0
Selenium	0.89	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.16	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	2.3	J	0.44	20
Zinc	130	B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0923			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	3.0	J	0.40	5.0
Barium	70	B	0.19	5.0
Beryllium	0.63	J	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	3.0		0.71	2.0
Cobalt	52		0.058	1.0
Copper	0.33	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.33	J B	0.093	10
Nickel	40		0.20	2.0
Selenium	0.87	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.14	J B	0.14	2.0
Vanadium	1.7	J	0.44	20
Zinc	110	B	2.3	20
Tungsten	10	U	0.37	10

Client Sample ID: **MSA-MW19I-041912**

Lab Sample ID: 240-10391-4
Client Matrix: Water

Date Sampled: 04/19/2012 1218
Date Received: 04/20/2012 1000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41694	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41339	Lab File ID:	042512A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/25/2012 1736			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1150				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1342			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW34I-041912**

Lab Sample ID: 240-10391-6
Client Matrix: Water

Date Sampled: 04/19/2012 1110
Date Received: 04/20/2012 1000

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0939			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	1.3	J	0.40	5.0
Barium	56	B	0.19	5.0
Beryllium	2.5		0.20	1.0
Cadmium	0.20	J	0.13	1.0
Chromium	2.0	U	0.71	2.0
Cobalt	220		0.058	1.0
Copper	11	B	0.29	2.0
Lead	0.29	J B	0.18	1.0
Molybdenum	10	U	0.093	10
Nickel	310		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.20	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	0.83	J	0.44	20
Zinc	500	B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0945			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	1.1	J	0.40	5.0
Barium	55	B	0.19	5.0
Beryllium	2.5		0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	2.0	U	0.71	2.0
Cobalt	210		0.058	1.0
Copper	2.5	B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	10	U	0.093	10
Nickel	310		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.19	J B	0.14	2.0
Vanadium	20	U	0.44	20
Zinc	450	B	2.3	20
Tungsten	10	U	0.37	10

Client Sample ID: **MSA-MW34I-041912**

Lab Sample ID: 240-10391-6
Client Matrix: Water

Date Sampled: 04/19/2012 1110
Date Received: 04/20/2012 1000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1353			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1355			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW34S-041912**

Lab Sample ID: 240-10391-5
Client Matrix: Water

Date Sampled: 04/19/2012 1005
Date Received: 04/20/2012 1000

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0929			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	2.5	J	0.40	5.0
Barium	63	B	0.19	5.0
Beryllium	0.73	J	0.20	1.0
Cadmium	0.28	J	0.13	1.0
Chromium	0.98	J	0.71	2.0
Cobalt	97		0.058	1.0
Copper	8.4	B	0.29	2.0
Lead	0.23	J B	0.18	1.0
Molybdenum	0.12	J B	0.093	10
Nickel	140		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.25	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	23		0.44	20
Zinc	290	B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 0934			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	1.7	J	0.40	5.0
Barium	65	B	0.19	5.0
Beryllium	0.72	J	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	0.73	J	0.71	2.0
Cobalt	99		0.058	1.0
Copper	0.60	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	10	U	0.093	10
Nickel	140		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.18	J B	0.14	2.0
Vanadium	7.0	J	0.44	20
Zinc	200	B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW34S-041912**

Lab Sample ID: 240-10391-5
Client Matrix: Water

Date Sampled: 04/19/2012 1005
Date Received: 04/20/2012 1000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1348			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1350			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW39S-041912**

Lab Sample ID: 240-10391-7
Client Matrix: Water

Date Sampled: 04/19/2012 1310
Date Received: 04/20/2012 1000

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1003			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	41		0.40	5.0
Barium	23	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	1.2	J	0.71	2.0
Cobalt	5.5		0.058	1.0
Copper	0.65	J B	0.29	2.0
Lead	0.24	J B	0.18	1.0
Molybdenum	0.27	J B	0.093	10
Nickel	3.7		0.20	2.0
Selenium	0.80	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.34	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	1.9	J	0.44	20
Zinc	4.0	J B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1008			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.14	J	0.13	2.0
Arsenic	31		0.40	5.0
Barium	22	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	0.95	J	0.71	2.0
Cobalt	5.3		0.058	1.0
Copper	2.0	U	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.20	J B	0.093	10
Nickel	3.8		0.20	2.0
Selenium	0.64	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.24	J B	0.14	2.0
Vanadium	0.51	J	0.44	20
Zinc	3.5	J B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Client Sample ID: **MSA-MW39S-041912**

Lab Sample ID: 240-10391-7
Client Matrix: Water

Date Sampled: 04/19/2012 1310
Date Received: 04/20/2012 1000

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1357			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1359			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

APPENDIX C

SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10391-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate and RDX Explosives analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/20/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.2 and 2.8 C.

No tests were marked on the COC for the following samples: MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7). After consultation with the client, the samples were logged and analyzed for the tests according to the bottles received.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-041912 (240-10391-2), MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/27/2012 and 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample (LCS) for batch 41857 exceeded control limits for tert-Butyl Alcohol. This has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Samples MSA-MW19I-041912 (240-10391-4)[5X] and MSA-MW34I-041912 (240-10391-6)[1.43X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 41857 exceeded control criteria for multiple compounds. The samples associated with this CCV were not detected for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is reportable per the facility Standard Operating Procedure (SOP).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/23/2012 and analyzed on 04/25/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MSA-MW34S-041912 (240-10391-5) and MSA-MW39S-041912 (240-10391-7) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/24/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-41320/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MSA-MW34S-041912 (240-10391-5) and MSA-MW39S-041912 (240-10391-7) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/25/2012 and analyzed on 04/26/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 41524.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

Several analytes were detected in method blank MB 240-41326/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW19D-041912 (240-10391-3), MSA-MW19I-041912 (240-10391-4), MSA-MW34S-041912 (240-10391-5), MSA-MW34I-041912 (240-10391-6) and MSA-MW39S-041912 (240-10391-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012 and 04/26/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

MSA-MW34I-041912

240-10391-f-6-a, 4/25/2012 09:39:56 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		90.080%	2.545	21.000
%RSD		1.434	1.218	1.557
Run	**Time**	**23Na**	**25Mg**	**27Al**
		ppb	ppb	ppb
x		15300.000	2404.000	275.700
%RSD		1.758	0.595	1.529
Run	**Time**	**35Cl**	**39K**	**43Ca**
		ppb	ppb	ppb
x		T 0.000	T 601.400	5242.000
%RSD		T 0.000	T 1.606	0.604
Run	**Time**	**45Sc**	**45Sc**	**47Ti**
		ppb	ppb	ppb
x		T 93.698%	89.984%	2.088
%RSD		T 1.893	0.379	31.080
Run	**Time**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb
x		0.829	0.577	1.131
%RSD		17.090	3.634	25.700
Run	**Time**	**55Mn**	**56Fe**	**59Co**
		ppb	ppb	ppb
x		T 144.800	1354.000	M 215.600
%RSD		T 1.773	0.973	M 0.686
Run	**Time**	**60Ni**	**65Cu**	**66Zn**
		ppb	ppb	ppb
x		M 308.500	11.460	M 495.800
%RSD		M 0.116	3.801	M 0.344
Run	**Time**	**72Ge**	**75As**	**77Se Cl**
		ppb	ppb	ppb
x		89.705%	1.325	0.264
%RSD		0.646	3.782	13.000
Run	**Time**	**78Se**	**88Sr**	**95Mo**
		ppb	ppb	ppb
x		0.164	36.540	0.032
%RSD		41.910	0.592	18.100
Run	**Time**	**105Pd**	**107Ag**	**108Mo O**
		ppb	ppb	ppb
x		0.000	0.003	-1.919
%RSD		0.000	30.360	181.900
Run	**Time**	**111Cd**	**115In**	**118Sn**
		ppb	ppb	ppb
x		0.198	90.913%	0.144
%RSD		12.540	0.649	6.044
Run	**Time**	**121Sb**	**137Ba**	**159Tb**
		ppb	ppb	ppb
x		0.038	56.210	0.000
%RSD		27.930	0.356	0.000
Run	**Time**	**165Ho**	**182W**	**205Tl**
		ppb	ppb	ppb
x		92.620%	0.042	0.204
%RSD		0.462	21.580	5.442
Run	**Time**	**208Pb**	**209Bi**	
		ppb	ppb	
x		0.288	0.000	
%RSD		2.564	0.000	

Reported as 500 ug/L

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'Meara	COC No:
Address: 20251 Century Blvd	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: MSA Ground water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04021-02	Shipping/Tracking No:			Job/SDG No:
PO #				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C / Grab G	VOCs	Total ppm	Diss ppm	1,4 Dioxane	Perchlorate	RDX					Sample Specific Notes / Special Instructions:
MSA-MW15s-041812	4-18-12	1140		X									2		N	G						X					
TB-041912	4-19-12	—		X						2							X										
MSA-MW19D-041912		1107		X					2	3			3				X	X	X	X	X						
MSA-MW19I-041912		1218		X					2	3			3				X	X	X	X	X						
MSA-MW34S-041912		1005		X					2	5			3					X	X								
MSA-MW34I-041912		1110		X					2	5			5					X	X								
MSA-MW39S-041912		1310		X					2	5			5					X	X								

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	4-19-12 / 1445	Paul Gayland	Test America	4/19/12/1445
Paul Gayland	Test America	4/19/12 / 1600			
			Received in Laboratory by: [signature]	TA NC	4/20/12 10:00

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TAL-0018 (1008)

05/10/2012

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10391

Client Tetra Tech Inc. Site Name _____ By: _____ (Signature)

Cooler Received on 4/20/12 Opened on 4/20/12

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C
IR GUN# 4G	(CF -1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C
IR GUN# 5G	(CF -1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C

(X) Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____	Yes	(No)
-Were custody seals on the outside of the cooler(s) signed & dated?	Yes No	(NA)
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM PTO Date 4-20-12 by _____ via (Verbal) Voice Mail Other

Concerning #14

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

No tests marked for MW34S, MW34I, MW39S.
Received volume to run all tests listed on COC except RDX.

Rec'd GRO+DRO Volume for MW34S + MW39S will log, not listed on COC

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
MW19D	<2<2	4/20/12	JM
MW19I	<2<2		
MW24S	<2<2		
MW34I	<2<2		
MW39S	<2<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
461	3.2	3.2	4G	Ice
Client Cooler	3.8	2.8	1	1

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10391-1

Login Number: 10391

List Number: 1

Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-10350-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW15S-041812	240-10391-1	NM	4/18/2012	4/25/2012	4/27/2012	7	2	9
HG	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HG	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
M	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
M	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HGF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HGF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HGF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
MF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
PCL	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
OS	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/30/2012	5	5	10
OS	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10391-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10391-1

SDG No.:

Instrument ID: I8 Date: 07/05/2011 09:44

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Antimony		1000	6020
Arsenic		10000	6020
Barium		10000	6020
Beryllium		10000	6020
Cadmium		10000	6020
Chromium		10000	6020
Cobalt		10000	6020
Copper		10000	6020
Lead		10000	6020
Molybdenum		2000	6020
Nickel		10000	6020
Selenium		10000	6020
Silver		1000	6020
Thallium		10000	6020
Vanadium		10000	6020
Tungsten		2000	6020
Zinc		10000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10391-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41339/1-A	04/24/2012 11:50	41339		100	100
LCS 240-41339/2-A	04/24/2012 11:50	41339		100	100
240-10487-S-12-B MS	04/24/2012 11:50	41339		100	100
240-10487-S-12-C MSD	04/24/2012 11:50	41339		100	100
240-10391-3	04/24/2012 11:50	41339		100	100
240-10391-3	04/24/2012 11:50	41339		100	100
240-10391-4	04/24/2012 11:50	41339		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41362/1-A

Instrument Code: H4 Batch No.: 41861

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-10487-S-12-B MS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.928		0.20	U	1.00	93	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-10487-S-12-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.910		1.00	91	69-134	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41339/2-A

Lab Name: TestAmerica Canton Job No.: 240-10391-1

Sample Matrix: Water LCS Source: MTHGICVW_00281

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.99		100	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41362/1-A	04/24/2012 14:00	41362		100	100
LCS 240-41362/2-A	04/24/2012 14:00	41362		100	100
240-10391-4	04/24/2012 14:00	41362		100	100
240-10391-4 MS	04/24/2012 14:00	41362		100	100
240-10391-4 MSD	04/24/2012 14:00	41362		100	100
240-10391-5	04/24/2012 14:00	41362		100	100
240-10391-5	04/24/2012 14:00	41362		100	100
240-10391-6	04/24/2012 14:00	41362		100	100
240-10391-6	04/24/2012 14:00	41362		100	100
240-10391-7	04/24/2012 14:00	41362		100	100
240-10391-7	04/24/2012 14:00	41362		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41339/1-A

Instrument Code: H4 Batch No.: 41694

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: MSA-MW19I-041912 MS
Lab ID: 240-10391-4 MS
Lab Name: TestAmerica Canton
Job No.: 240-10391-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.01		0.20	U	1.00	101	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: MSA-MW19I-041912 MSD
Lab ID: 240-10391-4 MSD
Lab Name: TestAmerica Canton
Job No.: 240-10391-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.988		1.00	99	69-134	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41362/2-A

Lab Name: TestAmerica Canton Job No.: 240-10391-1

Sample Matrix: Water LCS Source: MTHGICVW_00281

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.13		103	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41326/1-A	04/24/2012 09:46	41326		50	50
LCS 240-41326/2-A	04/24/2012 09:46	41326		50	50
240-10387-K-5-B MS	04/24/2012 09:46	41326		50	50
240-10387-K-5-C MSD	04/24/2012 09:46	41326		50	50
240-10391-3	04/24/2012 09:46	41326		50	50
240-10391-3	04/24/2012 09:46	41326		50	50
240-10391-4	04/24/2012 09:46	41326		50	50
240-10391-4	04/24/2012 09:46	41326		50	50
240-10391-5	04/24/2012 09:46	41326		50	50
240-10391-5	04/24/2012 09:46	41326		50	50
240-10391-6	04/24/2012 09:46	41326		50	50
240-10391-6	04/24/2012 09:46	41326		50	50
240-10391-7	04/24/2012 09:46	41326		50	50
240-10391-7	04/24/2012 09:46	41326		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41326/1-A

Instrument Code: I8 Batch No.: 41639

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.717	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.575	J		6020
7439-92-1	Lead	0.292	J		6020
7439-98-7	Molybdenum	0.295	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.385	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	2.83	J		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10387-K-5-B MS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	98.2		0.20	J	100	98	44-153		6020
Arsenic	990		1.9	J	1000	99	82-123		6020
Barium	1100		96		1000	101	45-144		6020
Beryllium	941		0.34	J	1000	94	77-124		6020
Cadmium	988		0.20	J	1000	99	78-117		6020
Chromium	1000		2.0	U	1000	100	72-110		6020
Cobalt	1000		0.85	J	1000	100	67-114		6020
Copper	994		0.34	J	1000	99	60-123		6020
Lead	1030		1.0	U	1000	103	73-115		6020
Molybdenum	103		3.4	J	100	100	80-110		6020
Nickel	1030		28		1000	100	72-111		6020
Selenium	993		0.65	J	1000	99	72-148		6020
Silver	99.9		1.0	U	100	100	10-139		6020
Thallium	254		0.92	J	250	101	69-117		6020
Vanadium	991		20	U	1000	99	70-112		6020
Tungsten	99.0		0.93	J	100	98	43-133		6020
Zinc	991		2.8	J	1000	99	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10387-K-5-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	97.0		100	97	44-153	1	20		6020
Arsenic	987		1000	98	82-123	0	20		6020
Barium	1100		1000	101	45-144	0	20		6020
Beryllium	918		1000	92	77-124	2	20		6020
Cadmium	991		1000	99	78-117	0	20		6020
Chromium	992		1000	99	72-110	1	20		6020
Cobalt	988		1000	99	67-114	2	20		6020
Copper	985		1000	98	60-123	1	20		6020
Lead	1040		1000	104	73-115	0	20		6020
Molybdenum	102		100	99	80-110	1	20		6020
Nickel	1030		1000	100	72-111	1	20		6020
Selenium	993		1000	99	72-148	0	20		6020
Silver	99.5		100	99	10-139	0	20		6020
Thallium	256		250	102	69-117	1	20		6020
Vanadium	990		1000	99	70-112	0	20		6020
Tungsten	98.9		100	98	43-133	0	20		6020
Zinc	985		1000	98	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41326/2-A

Lab Name: TestAmerica Canton Job No.: 240-10391-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	95.1		95	80	120		6020
Arsenic	1000	943		94	80	120		6020
Barium	1000	962		96	80	120		6020
Beryllium	1000	886		89	80	120		6020
Cadmium	1000	968		97	80	120		6020
Chromium	1000	949		95	80	120		6020
Cobalt	1000	960		96	80	120		6020
Copper	1000	986		99	80	120		6020
Lead	1000	1000		100	80	120		6020
Molybdenum	100	94.7		95	80	120		6020
Nickel	1000	979		98	80	120		6020
Selenium	1000	964		96	80	120		6020
Silver	100	101		101	80	120		6020
Thallium	250	245		98	80	120		6020
Vanadium	1000	936		94	80	120		6020
Tungsten	100	93.0		93	80	120		6020
Zinc	1000	976		98	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 240-10387-K-5-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10391-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.20	J	10	U	NC		6020
Arsenic	1.9	J	2.28	J	NC		6020
Barium	96		93.8		NC		6020
Beryllium	0.34	J	5.0	U	NC		6020
Cadmium	0.20	J	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	0.85	J	0.845	J	NC		6020
Copper	0.34	J	10	U	NC		6020
Lead	1.0	U	5.0	U	NC		6020
Molybdenum	3.4	J	3.48	J	NC		6020
Nickel	28		28.7		NC		6020
Selenium	0.65	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.92	J	2.33	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	0.93	J	50	U	NC		6020
Zinc	2.8	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-41478/1-A			11:48	X																				
IC 240-41478/2-A			11:50	X																				
IC 240-41478/3-A			11:52	X																				
IC 240-41478/4-A			11:55	X																				
IC 240-41478/5-A			11:57	X																				
IC 240-41478/6-A			12:00	X																				
ICV 240-41478/7-A	1		12:07	X																				
ICB 240-41478/8-A	1		12:09	X																				
CRA 240-41478/9-A	1		12:11	X																				
CCVL 240-41478/12-A	1		12:17	X																				
CCB 240-41478/11-A			12:19																					
ZZZZZZ			12:21																					
ZZZZZZ			12:23																					
ZZZZZZ			12:26																					
ZZZZZZ			12:28																					
ZZZZZZ			12:30																					
ZZZZZZ			12:32																					
ZZZZZZ			12:34																					
ZZZZZZ			12:36																					
ZZZZZZ			12:38																					
ZZZZZZ			12:40																					
CCV 240-41478/10-A			12:42																					
CCB 240-41478/11-A			12:44																					
ZZZZZZ			12:46																					
ZZZZZZ			12:48																					
ZZZZZZ			12:50																					
ZZZZZZ			12:52																					
ZZZZZZ			12:54																					
ZZZZZZ			12:56																					
ZZZZZZ			12:58																					
ZZZZZZ			13:00																					
ZZZZZZ			13:02																					
ZZZZZZ			13:05																					
CCV 240-41478/10-A			13:07																					
CCB 240-41478/11-A			13:09																					
ZZZZZZ			13:10																					
ZZZZZZ			13:13																					
ZZZZZZ			13:15																					
ZZZZZZ			13:17																					
ZZZZZZ			13:19																					
ZZZZZZ			13:21																					
ZZZZZZ			13:23																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			13:25	
ZZZZZZ			13:27	
ZZZZZZ			13:30	
CCV 240-41478/10-A			13:32	
CCB 240-41478/11-A			13:34	
ZZZZZZ			13:36	
ZZZZZZ			13:38	
ZZZZZZ			13:40	
ZZZZZZ			13:42	
ZZZZZZ			13:44	
ZZZZZZ			13:46	
ZZZZZZ			13:48	
ZZZZZZ			13:50	
ZZZZZZ			13:51	
ZZZZZZ			13:53	
CCV 240-41478/10-A			13:55	
CCB 240-41478/11-A			13:58	
ZZZZZZ			14:00	
ZZZZZZ			14:02	
ZZZZZZ			14:04	
ZZZZZZ			14:05	
CCV 240-41478/10-A			14:07	
CCB 240-41478/11-A			14:09	
CCV 240-41478/10-A			14:28	
CCB 240-41478/11-A			14:30	
ZZZZZZ			14:32	
ZZZZZZ			14:34	
ZZZZZZ			14:36	
ZZZZZZ			14:38	
ZZZZZZ			14:40	
ZZZZZZ			14:42	
ZZZZZZ			14:44	
ZZZZZZ			14:46	
ZZZZZZ			14:48	
ZZZZZZ			14:50	
CCV 240-41478/10-A			14:53	
CCB 240-41478/11-A			14:55	
ZZZZZZ			14:57	
ZZZZZZ			15:00	
ZZZZZZ			15:02	
ZZZZZZ			15:04	
ZZZZZZ			15:06	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			15:07	
ZZZZZZ			15:09	
ZZZZZZ			15:11	
ZZZZZZ			15:13	
ZZZZZZ			15:15	
CCV 240-41478/10-A			15:17	
CCB 240-41478/11-A			15:19	
ZZZZZZ			15:21	
ZZZZZZ			15:24	
ZZZZZZ			15:26	
ZZZZZZ			15:28	
ZZZZZZ			15:31	
ZZZZZZ			15:33	
ZZZZZZ			15:35	
ZZZZZZ			15:36	
ZZZZZZ			15:39	
ZZZZZZ			15:41	
CCV 240-41478/10-A			15:43	
CCB 240-41478/11-A			15:46	
ZZZZZZ			15:49	
ZZZZZZ			15:51	
ZZZZZZ			15:53	
ZZZZZZ			15:55	
ZZZZZZ			15:57	
ZZZZZZ			15:59	
ZZZZZZ			16:01	
ZZZZZZ			16:04	
ZZZZZZ			16:06	
ZZZZZZ			16:08	
CCV 240-41478/10-A			16:10	
CCB 240-41478/11-A			16:12	
ZZZZZZ			16:13	
ZZZZZZ			16:15	
ZZZZZZ			16:18	
ZZZZZZ			16:20	
ZZZZZZ			16:23	
ZZZZZZ			16:24	
ZZZZZZ			16:26	
ZZZZZZ			16:28	
ZZZZZZ			16:30	
ZZZZZZ			16:32	
CCV 240-41478/10-A			16:34	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
CCB 240-41478/11-A			16:36																					
ZZZZZZ			16:38																					
ZZZZZZ			16:40																					
ZZZZZZ			16:42																					
ZZZZZZ			16:44																					
ZZZZZZ			16:46																					
ZZZZZZ			16:48																					
ZZZZZZ			16:50																					
ZZZZZZ			16:52																					
ZZZZZZ			16:55																					
ZZZZZZ			16:57																					
CCV 240-41478/10-A	1		16:59	X																				
CCB 240-41478/11-A	1		17:00	X																				
ZZZZZZ			17:02																					
ZZZZZZ			17:04																					
MB 240-41339/1-A	1	T	17:06	X																				
LCS 240-41339/2-A	1	T	17:08	X																				
ZZZZZZ			17:10																					
240-10487-S-12-B MS	1	T	17:13	X																				
240-10487-S-12-C MSD	1	T	17:15	X																				
ZZZZZZ			17:17																					
ZZZZZZ			17:19																					
ZZZZZZ			17:21																					
CCV 240-41478/10-A	1		17:23	X																				
CCB 240-41478/11-A	1		17:25	X																				
ZZZZZZ			17:27																					
ZZZZZZ			17:29																					
240-10391-3	1	T	17:31	X																				
240-10391-3	1	D	17:33	X																				
240-10391-4	1	T	17:36	X																				
ZZZZZZ			17:37																					
ZZZZZZ			17:39																					
ZZZZZZ			17:41																					
ZZZZZZ			17:43																					
ZZZZZZ			17:45																					
CCV 240-41478/10-A	1		17:47	X																				
CCB 240-41478/11-A	1		17:49	X																				
ZZZZZZ			17:51																					
ZZZZZZ			17:53																					
ZZZZZZ			17:55																					
ZZZZZZ			17:57																					
ZZZZZZ			17:59																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/25/2012 11:48 End Date: 04/25/2012 18:05

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			18:01																					
CCV 240-41478/10-A			18:03																					
CCB 240-41478/11-A			18:05																					

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	ICV 240-41478/7-A 04/25/2012 12:07				CCVL 240-41478/12-A 04/25/2012 12:17				CCV 240-41478/10-A 04/25/2012 16:59			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.53		2.50	101	5.03		5.00	101	4.81		5.00	96

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	CCV 240-41478/10-A 04/25/2012 17:23				CCV 240-41478/10-A 04/25/2012 17:47							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	4.85		5.00	97	4.80		5.00	96				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-41478/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00183

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.184	J	92	50-150

Lab Sample ID: CRA 240-41478/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00183

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.218		109	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41478/8-A 04/25/2012 12:09		CCB 240-41478/11-A 04/25/2012 17:00		CCB 240-41478/11-A 04/25/2012 17:25		CCB 240-41478/11-A 04/25/2012 17:49	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-41478/1-A			10:23	X																				
IC 240-41478/2-A			10:25	X																				
IC 240-41478/3-A			10:27	X																				
IC 240-41478/4-A			10:29	X																				
IC 240-41478/5-A			10:32	X																				
IC 240-41478/6-A			10:35	X																				
ICV 240-41478/7-A	1		10:37	X																				
ICB 240-41478/8-A	1		10:39	X																				
CRA 240-41478/9-A	1		10:41	X																				
CCV 240-41478/10-A			10:43																					
CCB 240-41478/11-A			10:45																					
ZZZZZZ			10:47																					
ZZZZZZ			10:49																					
ZZZZZZ			10:51																					
ZZZZZZ			10:53																					
ZZZZZZ			10:55																					
ZZZZZZ			10:57																					
ZZZZZZ			10:59																					
ZZZZZZ			11:00																					
ZZZZZZ			11:02																					
ZZZZZZ			11:04																					
CCV 240-41478/10-A			11:09																					
CCB 240-41478/11-A			11:12																					
ZZZZZZ			11:14																					
ZZZZZZ			11:16																					
ZZZZZZ			11:18																					
ZZZZZZ			11:20																					
ZZZZZZ			11:22																					
ZZZZZZ			11:24																					
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
ZZZZZZ			11:31																					
ZZZZZZ			11:33																					
CCV 240-41478/10-A			11:35																					
CCB 240-41478/11-A			11:37																					
ZZZZZZ			11:39																					
ZZZZZZ			11:42																					
ZZZZZZ			11:43																					
ZZZZZZ			11:45																					
ZZZZZZ			11:47																					
ZZZZZZ			11:49																					
ZZZZZZ			11:51																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			11:53	
ZZZZZZ			11:55	
ZZZZZZ			11:58	
CCV 240-41478/10-A			11:59	
CCB 240-41478/11-A			12:01	
ZZZZZZ			12:03	
ZZZZZZ			12:05	
ZZZZZZ			12:07	
ZZZZZZ			12:09	
ZZZZZZ			12:11	
ZZZZZZ			12:13	
ZZZZZZ			12:15	
ZZZZZZ			12:18	
ZZZZZZ			12:20	
ZZZZZZ			12:22	
CCV 240-41478/10-A			12:23	
CCB 240-41478/11-A			12:25	
ZZZZZZ			12:28	
ZZZZZZ			12:29	
ZZZZZZ			12:31	
ZZZZZZ			12:33	
ZZZZZZ			12:35	
ZZZZZZ			12:37	
ZZZZZZ			12:39	
ZZZZZZ			12:42	
ZZZZZZ			12:43	
ZZZZZZ			12:45	
CCV 240-41478/10-A			12:47	
CCB 240-41478/11-A			12:49	
ZZZZZZ			12:51	
ZZZZZZ			12:53	
ZZZZZZ			12:55	
ZZZZZZ			12:57	
ZZZZZZ			13:00	
ZZZZZZ			13:02	
ZZZZZZ			13:04	
ZZZZZZ			13:06	
ZZZZZZ			13:08	
ZZZZZZ			13:09	
CCV 240-41478/10-A	1		13:12	X
CCB 240-41478/11-A	1		13:14	X
ZZZZZZ			13:16	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			13:19	
ZZZZZZ			13:21	
ZZZZZZ			13:24	
ZZZZZZ			13:26	
ZZZZZZ			13:28	
ZZZZZZ			13:31	
ZZZZZZ			13:33	
MB 240-41362/1-A	1	T	13:34	X
LCS 240-41362/2-A	1	T	13:36	X
CCV 240-41478/10-A	1		13:38	X
CCB 240-41478/11-A	1		13:40	X
240-10391-4	1	D	13:42	X
240-10391-4 MS	1	D	13:44	X
240-10391-4 MSD	1	D	13:46	X
240-10391-5	1	T	13:48	X
240-10391-5	1	D	13:50	X
240-10391-6	1	T	13:53	X
240-10391-6	1	D	13:55	X
240-10391-7	1	T	13:57	X
240-10391-7	1	D	13:59	X
ZZZZZZ			14:01	
CCV 240-41478/10-A	1		14:03	X
CCB 240-41478/11-A	1		14:05	X
ZZZZZZ			14:08	
ZZZZZZ			14:10	
ZZZZZZ			14:12	
ZZZZZZ			14:14	
ZZZZZZ			14:16	
ZZZZZZ			14:18	
ZZZZZZ			14:20	
ZZZZZZ			14:22	
CCV 240-41478/10-A			14:25	
CCB 240-41478/11-A			14:27	

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	ICV 240-41478/7-A 04/26/2012 10:37				CCV 240-41478/10-A 04/26/2012 13:12				CCV 240-41478/10-A 04/26/2012 13:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.43		2.50	97	5.00		5.00	100	5.02		5.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	CCV 240-41478/10-A 04/26/2012 14:03											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.12		5.00	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41478/8-A 04/26/2012 10:39		CCB 240-41478/11-A 04/26/2012 13:14		CCB 240-41478/11-A 04/26/2012 13:40		CCB 240-41478/11-A 04/26/2012 14:05	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-41639/1			06:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-41639/2 IC	1		06:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-41639/3 IC	1		06:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-41639/4 IC	1		06:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-41639/5	1		06:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-41639/6	1		06:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-41639/7	1		06:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-41639/8	1		06:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-41639/9	1		06:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41639/10			07:01																				
CCB 240-41639/11			07:08																				
ZZZZZZ			07:13																				
ZZZZZZ			07:19																				
ZZZZZZ			07:26																				
CCV 240-41639/15	1		07:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/16	1		07:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-41326/1-A	1	R	07:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-41326/2-A	1	R	07:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			07:57																				
240-10387-K-5-A SD ^5	5	D	08:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10387-K-5-B MS	1	D	08:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10387-K-5-C MSD	1	D	08:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:22																				
ZZZZZZ			08:27																				
ZZZZZZ			08:33																				
ZZZZZZ			08:38																				
CCV 240-41639/27	1		08:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/28	1		08:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:56																				
ZZZZZZ			09:02																				
240-10391-3	1	R	09:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-3	1	D	09:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-4	1	R	09:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-4	1	D	09:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-5	1	R	09:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-5	1	D	09:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-6	1	R	09:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-6	1	D	09:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41639/39	1		09:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/40	1		09:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-7	1	R	10:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10391-7	1	D	10:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			10:14																			
ZZZZZZ			10:19																			
ZZZZZZ			10:24																			
ZZZZZZ			10:30																			
ZZZZZZ			10:35																			
ZZZZZZ			10:42																			
ZZZZZZ			10:48																			
ZZZZZZ			10:53																			
CCV 240-41639/51	1		11:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-41639/52	1		11:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			11:13																			
ZZZZZZ			11:20																			
ZZZZZZ			11:26																			
ZZZZZZ			11:31																			
ZZZZZZ			11:37																			
ZZZZZZ			11:42																			
ZZZZZZ			11:47																			
ZZZZZZ			11:53																			
ZZZZZZ			11:58																			
ZZZZZZ			12:04																			
CCV 240-41639/63			12:09																			
CCB 240-41639/64			12:16																			
ZZZZZZ			12:22																			
ZZZZZZ			12:27																			
ZZZZZZ			12:32																			
ZZZZZZ			12:38																			
ZZZZZZ			12:43																			
ZZZZZZ			12:49																			
ZZZZZZ			12:54																			
ZZZZZZ			13:00																			
ZZZZZZ			13:05																			
ZZZZZZ			13:11																			
CCV 240-41639/75			13:16																			
CCB 240-41639/76			13:23																			
ZZZZZZ			13:29																			
ZZZZZZ			13:34																			
ZZZZZZ			13:41																			
ZZZZZZ			13:46																			
ZZZZZZ			13:52																			
ZZZZZZ			13:59																			
ZZZZZZ			14:06																			
ZZZZZZ			14:12																			

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D/F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			14:17																				
ZZZZZZ			14:23																				
CCV 240-41639/87			14:28																				
CCB 240-41639/88			14:35																				
ZZZZZZ			14:41																				
ZZZZZZ			14:46																				
ZZZZZZ			14:51																				
ZZZZZZ			14:57																				
ZZZZZZ			15:02																				
ZZZZZZ			15:08																				
ZZZZZZ			15:13																				
ZZZZZZ			15:19																				
ZZZZZZ			15:24																				
ZZZZZZ			15:30																				
CCV 240-41639/99			15:35																				
CCB 240-41639/100			15:42																				
ZZZZZZ			15:48																				
ZZZZZZ			15:53																				
ZZZZZZ			16:00																				
ZZZZZZ			16:05																				
ZZZZZZ			16:11																				
ZZZZZZ			16:18																				
ZZZZZZ			16:25																				
ZZZZZZ			16:31																				
ZZZZZZ			16:36																				
ZZZZZZ			16:42																				
CCV 240-41639/111			16:47																				
CCB 240-41639/112			16:54																				
ZZZZZZ			17:00																				
ZZZZZZ			17:05																				
ZZZZZZ			17:10																				
ZZZZZZ			17:16																				
ZZZZZZ			17:21																				
ZZZZZZ			17:27																				
ZZZZZZ			17:32																				
ZZZZZZ			17:38																				
ZZZZZZ			17:43																				
ZZZZZZ			17:49																				
CCV 240-41639/123			17:54																				
CCB 240-41639/124			18:01																				
ICSA 240-41639/125			18:07																				
ICSAB 240-41639/126			18:12																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
CCV 240-41639/127			18:19																					
CCB 240-41639/128			18:26																					
ZZZZZZ			18:32																					
ZZZZZZ			18:37																					
ZZZZZZ			18:43																					
ZZZZZZ			18:48																					
ZZZZZZ			18:54																					
ZZZZZZ			18:59																					
ZZZZZZ			19:05																					
ZZZZZZ			19:12																					
ZZZZZZ			19:17																					
ZZZZZZ			19:23																					
CCV 240-41639/139			19:30																					
CCB 240-41639/140			19:37																					
ZZZZZZ			19:42																					
ZZZZZZ			19:50																					
ZZZZZZ			19:55																					
ZZZZZZ			20:01																					
ZZZZZZ			20:06																					
ZZZZZZ			20:11																					
ZZZZZZ			20:17																					
ZZZZZZ			20:22																					
ZZZZZZ			20:28																					
ZZZZZZ			20:33																					
CCV 240-41639/151			20:39																					
CCB 240-41639/152			20:46																					
ZZZZZZ			20:52																					
ZZZZZZ			20:57																					
ZZZZZZ			21:03																					
ZZZZZZ			21:08																					
CCV 240-41639/157			21:14																					
CCB 240-41639/158			21:21																					
ZZZZZZ			21:26																					

Prep Types

D = Dissolved

R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-41639/5 04/25/2012 06:30				CCV 240-41639/15 04/25/2012 07:32				CCV 240-41639/27 04/25/2012 08:44			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.8		80.0	103	99.7		100	100	99.8		100	100
Arsenic	81.2		80.0	102	100		100	100	101		100	101
Barium	80.5		80.0	101	100		100	100	99.9		100	100
Beryllium	78.8		80.0	99	95.0		100	95	95.0		100	95
Cadmium	81.0		80.0	101	101		100	101	102		100	102
Chromium	80.3		80.0	100	100		100	100	100		100	100
Cobalt	81.0		80.0	101	101		100	101	101		100	101
Copper	82.8		80.0	103	102		100	102	103		100	103
Lead	82.1		80.0	103	102		100	102	102		100	102
Molybdenum	83.7		80.0	105	103		100	103	103		100	103
Nickel	82.5		80.0	103	102		100	102	102		100	102
Selenium	82.6		80.0	103	102		100	102	101		100	101
Silver	83.1		80.0	104	102		100	102	102		100	102
Thallium	80.4		80.0	101	100		100	100	99.9		100	100
Tungsten	81.2		80.0	101	102		100	102	102		100	102
Vanadium	79.8		80.0	100	99.9		100	100	99.3		100	99
Zinc	81.7		80.0	102	103		100	103	103		100	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-41639/39 04/25/2012 09:50				CCV 240-41639/51 04/25/2012 11:01							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	99.3		100	99	100		100	100				
Arsenic	101		100	101	101		100	101				
Barium	98.9		100	99	99.5		100	100				
Beryllium	95.6		100	96	91.5		100	92				
Cadmium	101		100	101	102		100	102				
Chromium	101		100	101	101		100	101				
Cobalt	101		100	101	100		100	100				
Copper	103		100	103	102		100	102				
Lead	102		100	102	102		100	102				
Molybdenum	102		100	102	104		100	104				
Nickel	102		100	102	102		100	102				
Selenium	103		100	103	102		100	102				
Silver	102		100	102	102		100	102				
Thallium	99.4		100	99	101		100	101				
Tungsten	102		100	102	103		100	103				
Vanadium	100		100	100	101		100	101				
Zinc	103		100	103	103		100	103				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-41639/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.04		102	50-150
Arsenic	2.00	2.07	J	104	50-150
Barium	1.00	1.04	J	104	50-150
Beryllium	1.00	0.941	J	94	50-150
Cadmium	0.500	0.498	J	100	50-150
Chromium	2.00	2.11		106	50-150
Cobalt	1.00	1.02		102	50-150
Copper	2.00	2.49		124	50-150
Lead	1.00	1.02		102	50-150
Molybdenum	10.0	10.2		102	50-150
Nickel	2.00	2.82		141	50-150
Selenium	2.00	2.19	J	110	50-150
Silver	0.500	0.565	J	113	50-150
Thallium	1.00	1.24	J	124	50-150
Vanadium	5.00	4.77	J	95	50-150
Tungsten	10.0	9.83	J	98	50-150
Zinc	10.0	10.7	J	107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41639/6 04/25/2012 06:38		CCB 240-41639/16 04/25/2012 07:39		CCB 240-41639/28 04/25/2012 08:51		CCB 240-41639/40 04/25/2012 09:57	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	0.0780	J	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.439	J	0.712	J	0.506	J	0.428	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.438	J	0.693	J	0.625	J	0.509	J
Tungsten	10	0.634	J	0.744	J	0.589	J	0.553	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-41639/52 04/25/2012 11:08							
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.160	J						
Arsenic	5.0	5.0	U						
Barium	5.0	5.0	U						
Beryllium	1.0	1.0	U						
Cadmium	1.0	1.0	U						
Chromium	2.0	2.0	U						
Cobalt	1.0	0.0590	J						
Copper	2.0	2.0	U						
Lead	1.0	0.232	J						
Molybdenum	10	0.474	J						
Nickel	2.0	2.0	U						
Selenium	5.0	5.0	U						
Silver	1.0	1.0	U						
Thallium	2.0	0.825	J						
Tungsten	10	0.687	J						
Vanadium	20	20	U						
Zinc	20	20	U						

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICSA 240-41639/8 Instrument ID: I8

Lab File ID: I8042512A.csv ICS Source: MTMSICSAW_00013

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.188**	
Arsenic		**0.313**	
Barium		**0.107**	
Beryllium		**0.0210**	
Cadmium		**-0.452**	
Chromium		**0.684**	
Cobalt		**0.102**	
Copper		**0.369**	
Lead		**0.0360**	
Molybdenum	**1000**	**1051**	**105**
Nickel		**0.800**	
Selenium		**0.134**	
Silver		**0.0450**	
Thallium		**0.237**	
Tungsten		**0.384**	
Vanadium		**-0.0270**	
Zinc		**1.89**	
Aluminum	*50000*	*50070*	*100*
Boron		*0.389*	
Calcium	*50000*	*52450*	*105*
Iron	*50000*	*52270*	*105*
Magnesium	*50000*	*52030*	*104*
Manganese		*0.589*	
Potassium	*50000*	*52290*	*105*
Sodium	*50000*	*52170*	*104*
Strontium		*0.193*	
Tin		*0.124*	
Titanium	*1000*	*1079*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

Lab Sample ID: ICSAB 240-41639/9 Instrument ID: I8

Lab File ID: I8042512A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**100**	**100**
Barium	**100**	**103**	**103**
Beryllium	**100**	**99.7**	**100**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**109**	**109**
Cobalt	**100**	**103**	**103**
Copper	**100**	**101**	**101**
Lead	**100**	**109**	**109**
Molybdenum	**1100**	**1157**	**105**
Nickel	**100**	**106**	**106**
Selenium	**100**	**102**	**102**
Silver	**100**	**103**	**103**
Thallium	**100**	**107**	**107**
Tungsten	**100**	**104**	**104**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**104**	**104**
Aluminum	*50000*	*50810*	*102*
Boron	*100*	*101*	*101*
Calcium	*50000*	*52820*	*106*
Iron	*50000*	*52370*	*105*
Magnesium	*50000*	*52070*	*104*
Manganese	*100*	*112*	*112*
Potassium	*50000*	*51910*	*104*
Sodium	*50000*	*52180*	*104*
Strontium	*100*	*98.1*	*98*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1183*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-41639/2 IC	06:11	91		94		96		95		96	
STD3 240-41639/3 IC	06:18	91		96		94		91		93	
STD4 240-41639/4 IC	06:25	110		116		106		106		105	
ICV 240-41639/5	06:30	99		105		102		98		100	
ICB 240-41639/6	06:38	112		117		107		106		104	
CRI 240-41639/7	06:43	111		116		106		104		104	
ICSA 240-41639/8	06:48	86		96		88		90		92	
ICSAB 240-41639/9	06:54	74		85		83		84		89	
CCV 240-41639/15	07:32	87		93		91		87		90	
CCB 240-41639/16	07:39	107		106		97		95		96	
MB 240-41326/1-A	07:45	103		103		96		94		95	
LCS 240-41326/2-A	07:50	97		100		97		95		97	
240-10387-K-5-A SD	08:02	101		98		92		90		91	
240-10387-K-5-B MS	08:08	88		96		90		89		92	
240-10387-K-5-C MSD	08:15	92		97		91		89		92	
CCV 240-41639/27	08:44	84		92		89		86		88	
CCB 240-41639/28	08:51	107		106		96		95		94	
240-10391-3	09:07	91		96		89		87		87	
240-10391-3	09:12	87		93		88		86		87	
240-10391-4	09:18	82		93		89		87		89	
240-10391-4	09:23	80		91		89		87		88	
240-10391-5	09:29	88		94		91		90		92	
240-10391-5	09:34	90		94		90		90		91	
240-10391-6	09:39	90		94		90		90		91	
240-10391-6	09:45	90		94		90		90		90	
CCV 240-41639/39	09:50	80		90		88		85		88	
CCB 240-41639/40	09:57	103		104		96		94		94	
240-10391-7	10:03	88		96		91		89		90	
240-10391-7	10:08	87		96		91		90		90	
CCV 240-41639/51	11:01	86		92		88		85		88	
CCB 240-41639/52	11:08	103		102		94		91		92	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10391-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-41639/2 IC	06:11			98							
STD3 240-41639/3 IC	06:18			94							
STD4 240-41639/4 IC	06:25			103							
ICV 240-41639/5	06:30			100							
ICB 240-41639/6	06:38			102							
CRI 240-41639/7	06:43			102							
ICSA 240-41639/8	06:48			93							
ICSAB 240-41639/9	06:54			91							
CCV 240-41639/15	07:32			92							
CCB 240-41639/16	07:39			94							
MB 240-41326/1-A	07:45			95							
LCS 240-41326/2-A	07:50			97							
240-10387-K-5-A SD	08:02			91							
240-10387-K-5-B MS	08:08			92							
240-10387-K-5-C MSD	08:15			91							
CCV 240-41639/27	08:44			90							
CCB 240-41639/28	08:51			93							
240-10391-3	09:07			94							
240-10391-3	09:12			94							
240-10391-4	09:18			94							
240-10391-4	09:23			94							
240-10391-5	09:29			94							
240-10391-5	09:34			93							
240-10391-6	09:39			93							
240-10391-6	09:45			93							
CCV 240-41639/39	09:50			90							
CCB 240-41639/40	09:57			93							
240-10391-7	10:03			93							
240-10391-7	10:08			94							
CCV 240-41639/51	11:01			89							
CCB 240-41639/52	11:08			93							

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **JUNE 14, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION-**
VOLATILE ORGANIC COMPOUNDS/SVOC SIM/GRO/DRO/EXP/PERCHLORATE
MARTIN STATE AIRPORT GROUNDWATER SAMPLING – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-10494-1

SAMPLES: 7/Aqueous/VOC

MSA-MW17I-042012	MSA-MW17S-042012	MSA-MW20D-042012
MSA-MW20I-042012	MSA-MW20S-042012	MSA-MW35S-042012
TB-042012		

6/Aqueous/SVOC SIM/Perchlorate

MSA-MW17I-042012	MSA-MW17S-042012	MSA-MW20D-042012
MSA-MW20I-042012	MSA-MW20S-042012	MSA-MW35S-042012

3/Aqueous/GRO/DRO

MSA-MW17S-042012	MSA-MW20S-042012	MSA-MW35S-042012

2/Aqueous/EXP

MSA-MW17S-042012	MSA-MW20S-042012

Overview

The sample set for Martin State Airport Groundwater Sampling, SDG 240-10494-1 consists of six (6) aqueous environmental samples and one trip blank. All samples were analyzed for volatile organic compounds (VOCs). Six (6) aqueous environmental samples were analyzed for 1,4-dioxane in the semivolatile organic compound (SVOC) SIM fraction and perchlorate. Three (3) aqueous environmental samples; MSA-MW17S-042012, MSA-MW20S-042012 and MSA-MW35S-042012 were analyzed for gasoline range organics (GRO) and diesel range organics (DRO). GRO is listed on the form 1s and EDD as total petroleum hydrocarbons (TPH) (C6-C10) and DRO as TPH (C10-C32). Two (2) aqueous environmental samples, MSA-MW17S-042012 and MSA-MW20S-042012, were also analyzed for the explosive (EXP), RDX. There are no field duplicate pairs included in this SDG.

The samples were collected on April 20, 2012 and analyzed by Test America Laboratories, Inc. Volatile organic compound analyses were conducted in accordance to SW-846 Method 8260B. The analyses for 1,4-dioxane followed SW-846 Method 8270C in Selective Ion Monitoring SIM mode. GRO and DRO analyses followed SW-846 Method 8015B. The analyses for RDX followed SW-846 Method 8330 and perchlorate Method 6850 reporting protocol.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, matrix spike/matrix spike duplicate results, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- In the volatile initial calibration of instrument A3UX10 on April 9, 2012 and the continuing calibrations on April 27, 2012 @ 9:48, tert-butyl alcohol and vinyl acetate had relative retention factors (RRFs) less than the 0.05 quality control limit. The nondetected tert-butyl alcohol and vinyl acetate results were qualified as rejected (UR) in the affected samples MSA-MW17I-042012, MSA-MW17S-042012, MSA-MW20I-042012, MSA-MW20S-042012, MSA-MW35S-042012 and TB-042012.

- In the volatile initial calibration of instrument A3UX16 on April 29, 2012 and the continuing calibration on April 30, 2012 @ 11:50, tert-butyl alcohol had a RRF less than the 0.05 quality control limit. In addition, the continuing calibration on April 30, 2012 had a RF for vinyl acetate less than the 0.05 quality control limit. The nondetected vinyl acetate and tert-butyl alcohol results were qualified as rejected (UR) in the affected sample MSA-MW20D-042012.

- The tentatively identified compound (TIC), silanol, was qualified as rejected (R) in sample MSA-MW20D-042012.This compound is indicative of column bleed.

Minor Problems

- GRO was detected in the laboratory method blank 240-41736/6 affecting all samples.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
GRO	35.8	179.0

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Positive results less than the action level were qualified (B) as a result of blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data.

- TICs were qualified as presumptively present (NJ) in samples MSA-MW20D-040212, MSA-MW35S-042012 and MSA-MW20S-042012.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

The continuing calibration percent differences (%Ds) for several target analytes were greater than the 20% quality control limit but less than 50% on April 27, 2012 @ 9:48 on instrument A3UX10. The analytes were 1,1,2-trichlorotrifluoroethane, tert-butyl alcohol, 4-methyl-2-pentanone, 2-hexanone, bromoform, n-butylbenzene, 1,2-dibromo-3-chloropropane, 1,2,4-trichlorobenzene, hexachlorobutadiene, naphthalene and 1,2,3-trichlorobenzene. No action was taken on the nondetected results of the aforementioned analytes in the affected samples MSA-MW17I-042012, MSA-MW17S-042012, MSA-MW20D-042012, MSA-MW20I-042012, MSA-MW20S-042012, MSA-MW35S-042012 and TB-042012.

Contamination was detected in the VOC laboratory method blank associated with batch 240-42171/5 analyzed on April 30, 2012 @ 12:59 on instrument A3UX16.

Contaminant	Maximum Concentration (ug/L)
1,2,3-trichlorobenzene	0.288

No action was taken on the nondetecetd 1,2,3-trichlorobenzene result in sample MSA-MW20D-042012.

The laboratory control sample (LCS) percent recovery (%R) of tert-butyl alcohol was less than the lower quality control limit in batch 240-41857/4. No action was taken on the nondetected tert-butyl alcohol results in the affected samples which were qualified as rejected due to a more severe noncompliance.

The matrix spike (MS) %R of tert-butyl alcohol was less than the lower quality control limit in sample MSA-MW20S-042012. The matrix spike duplicate (MSD) %R and relative percent difference (RPD) were within quality control limits. No action was taken.

The following samples were diluted in the VOC and SVOC SIM fractions resulting in elevated reporting limits.

Sample	Dilution Factor
MSA-MW17I-042012	33.33X
MSA-MW20I-042012	20X
MSA-MW20S-042012	66.66X (VOC), 5x (SVOC, GRO)

Nondetected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Tert-butyl alcohol and vinyl acetate had RRFs less than quality control limits in the initial and continuing calibrations. GRO was detected in the laboratory method blank.

Other Factors Affecting Data Quality: TICs were qualified as either rejected or estimated in several samples.

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (9/94).

The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042012			MSA-MW17S-042012			MSA-MW20D-042012			MSA-MW20I-042012		
SDG: 240-10494-1	LAB_ID	240-10494-6			240-10494-5			240-10494-7			240-10494-4		
FRACTION: OV	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	7.7	U		0.23	U		0.23	U		4.6	U	
1,1,1-TRICHLOROETHANE	7.3	U		0.22	U		0.22	U		4.4	U	
1,1,2,2-TETRACHLOROETHANE	6	U		0.18	U		0.18	U		3.6	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	9.3	U		0.28	U		0.28	U		5.6	U	
1,1-DICHLOROETHANE	5	U		0.15	U		0.15	U		3	U	
1,1-DICHLOROETHENE	6.3	U		0.19	U		0.19	U		4.5	J	P
1,1-DICHLOROPROPENE	4.3	U		0.13	U		0.13	U		2.6	U	
1,2,3-TRICHLOROBENZENE	5.7	U		0.17	U		0.17	U		3.4	U	
1,2,3-TRICHLOROPROPANE	14	U		0.43	U		0.43	U		8.6	U	
1,2,3-TRIMETHYLBENZENE	0.2	U		0.0059	U		0.0059	U		0.12	U	
1,2,4-TRICHLOROBENZENE	5	U		0.15	U		0.15	U		3	U	
1,2,4-TRIMETHYLBENZENE	4	U		0.12	U		0.12	U		2.4	U	
1,2-DIBROMO-3-CHLOROPROPANE	22	U		0.67	U		0.67	U		13	U	
1,2-DIBROMOETHANE	8	U		0.24	U		0.24	U		4.8	U	
1,2-DICHLOROBENZENE	4.3	U		0.13	U		0.13	U		2.6	U	
1,2-DICHLOROETHANE	7.3	U		0.22	U		0.43	J	P	4.4	U	
1,2-DICHLOROPROPANE	6	U		0.18	U		0.18	U		3.6	U	
1,3-DICHLOROBENZENE	4.7	U		0.14	U		0.14	U		2.8	U	
1,3-DICHLOROPROPANE	5.3	U		0.16	U		0.16	U		3.2	U	
1,4-DICHLOROBENZENE	4.3	U		0.13	U		0.13	U		2.6	U	
2,2-DICHLOROPROPANE	4.3	U		0.13	U		0.13	U		2.6	U	
2-BUTANONE	19	U		0.57	U		0.57	U		11	U	
2-CHLOROETHYL VINYL ETHER	33	U		0.99	U		0.99	U		20	U	
2-CHLOROTOLUENE	3.7	U		0.11	U		0.11	U		2.2	U	
2-HEXANONE	14	U		0.41	U		0.41	U		8.2	U	
4-CHLOROTOLUENE	6	U		0.18	U		0.18	U		3.6	U	
4-ISOPROPYLTOLUENE	4	U		0.12	U		0.12	U		2.4	U	
4-METHYL-2-PENTANONE	11	U		0.32	U		0.32	U		6.4	U	
ACETONE	37	U		1.1	U		1.1	U		22	U	
BENZENE	4.3	U		0.22	J	P	0.13	U		2.6	U	
BROMOBENZENE	4.3	U		0.13	U		0.13	U		2.6	U	
BROMOCHLOROMETHANE	9.7	U		0.29	U		0.29	U		5.8	U	
BROMODICHLOROMETHANE	5	U		0.15	U		0.15	U		3	U	
BROMOFORM	21	U		0.64	U		0.64	U		13	U	
BROMOMETHANE	14	U		0.41	U		0.41	U		8.2	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042012			MSA-MW35S-042012			TB-042012		
SDG: 240-10494-1	LAB_ID	240-10494-3			240-10494-2			240-10494-1		
FRACTION: OV	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		15	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		15	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		12	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		19	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		10	U		0.84	J	P	0.15	U	
1,1-DICHLOROETHENE		17	J	P	0.19	U		0.19	U	
1,1-DICHLOROPROPENE		8.7	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		11	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		29	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.39	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		10	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		8	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		45	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		16	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		8.7	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		15	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		12	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		9.3	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		11	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		8.7	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		8.7	U		0.13	U		0.13	U	
2-BUTANONE		38	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		66	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		7.3	U		0.11	U		0.11	U	
2-HEXANONE		27	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		12	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		8	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		21	U		0.32	U		0.32	U	
ACETONE		73	U		1.2	J	P	1.1	U	
BENZENE		23	J	P	0.13	J	P	0.13	U	
BROMOBENZENE		8.7	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		19	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		10	U		0.15	U		0.15	U	
BROMOFORM		43	U		0.64	U		0.64	U	
BROMOMETHANE		27	U		0.41	U		0.41	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042012			MSA-MW17S-042012			MSA-MW20D-042012			MSA-MW20I-042012		
SDG: 240-10494-1	LAB_ID	240-10494-6			240-10494-5			240-10494-7			240-10494-4		
FRACTION: OV	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		4.3	U		0.13	U		0.13	U		2.6	U	
CARBON TETRACHLORIDE		4.3	U		0.13	U		0.13	U		2.6	U	
CHLOROBENZENE		5	U		0.15	U		0.15	U		27		
CHLORODIBROMOMETHANE		6	U		0.18	U		0.18	U		3.6	U	
CHLOROETHANE		9.7	U		0.29	U		0.29	U		5.8	U	
CHLOROFORM		5.3	U		0.16	U		0.2	J	P	3.2	U	
CHLOROMETHANE		10	U		0.3	U		0.3	U		6	U	
CIS-1,2-DICHLOROETHENE		110			1.4			1.4			510		
CIS-1,3-DICHLOROPROPENE		4.7	U		0.14	U		0.14	U		2.8	U	
CYCLOHEXANE													
DIBROMOMETHANE		9.3	U		0.28	U		0.28	U		5.6	U	
DICHLORODIFLUOROMETHANE		10	U		0.31	U		0.31	U		6.2	U	
DIISOPROPYL ETHER		50	U		1.5	U		1.5	U		30	U	
ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-													
ETHYL TERT-BUTYL ETHER		3.7	U		0.11	U		0.11	U		2.2	U	
ETHYLBENZENE		5.7	U		0.17	U		0.17	U		3.4	U	
HEXACHLOROBUTADIENE		10	U		0.3	U		0.3	U		6	U	
ISOPROPYLBENZENE		4.3	U		0.13	U		0.13	U		2.6	U	
M+P-XYLENES		8	U		0.24	U		0.24	U		4.8	U	
METHANE, DICHLOROFLUORO-													
METHYL TERT-BUTYL ETHER		5.7	U		0.17	U		0.17	U		3.4	U	
METHYLCYCLOHEXANE													
METHYLENE CHLORIDE		11	U		0.33	U		0.33	U		6.6	U	
NAPHTHALENE		8	U		0.24	U		0.24	U		4.8	U	
N-BUTYLBENZENE		4	U		0.12	U		0.12	U		2.4	U	
N-PROPYLBENZENE		4.7	U		0.14	U		0.14	U		2.8	U	
O-XYLENE		4.7	U		0.14	U		0.14	U		2.8	U	
SEC-BUTYLBENZENE		4.3	U		0.13	U		0.13	U		2.6	U	
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)								1.6	R	Z2			
STYRENE		3.7	U		0.11	U		0.11	U		2.2	U	
TERT-AMYL METHYL ETHER		2.2	U		0.067	U		0.067	U		1.3	U	
TERT-BUTYLBENZENE		4.3	U		0.13	U		0.13	U		2.6	U	
TERTIARY-BUTYL ALCOHOL		130	UR	C	3.9	UR	C	3.9	UR	C	78	UR	C
TETRACHLOROETHENE		9.7	U		0.29	U		0.29	U		5.8	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042012			MSA-MW35S-042012			TB-042012		
SDG: 240-10494-1	LAB_ID	240-10494-3			240-10494-2			240-10494-1		
FRACTION: OV	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		8.7	U		0.17	J	P	0.13	U	
CARBON TETRACHLORIDE		8.7	U		0.13	U		0.13	U	
CHLOROBENZENE		250			0.15	U		0.15	U	
CHLORODIBROMOMETHANE		12	U		0.18	U		0.18	U	
CHLOROETHANE		19	U		0.29	U		0.29	U	
CHLOROFORM		11	U		0.16	U		0.16	U	
CHLOROMETHANE		20	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		1700			6.4			0.17	U	
CIS-1,3-DICHLOROPROPENE		9.3	U		0.14	U		0.14	U	
CYCLOHEXANE		48	NJ	Z1						
DIBROMOMETHANE		19	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		21	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		100	U		1.5	U		1.5	U	
ETHANE, 1,2-DICHLORO-1,1,2-TRIFLUORO-					1.1	NJ	Z1			
ETHYL TERT-BUTYL ETHER		7.3	U		0.11	U		0.11	U	
ETHYLBENZENE		11	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		20	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		8.7	U		0.13	U		0.13	U	
M+P-XYLENES		16	U		0.24	U		0.24	U	
METHANE, DICHLOROFLUORO-					3.6	NJ	Z1			
METHYL TERT-BUTYL ETHER		11	U		0.22	J	P	0.17	U	
METHYLCYCLOHEXANE		31	NJ	Z1						
METHYLENE CHLORIDE		22	U		0.33	U		0.33	U	
NAPHTHALENE		16	U		0.24	U		0.24	U	
N-BUTYLBENZENE		8	U		0.12	U		0.12	U	
N-PROPYLBENZENE		9.3	U		0.14	U		0.14	U	
O-XYLENE		9.3	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		8.7	U		0.13	U		0.13	U	
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)										
STYRENE		7.3	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		4.5	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		8.7	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		260	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		19	U		0.29	U		0.29	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042012			MSA-MW17S-042012			MSA-MW20D-042012			MSA-MW20I-042012		
SDG: 240-10494-1	LAB_ID	240-10494-6			240-10494-5			240-10494-7			240-10494-4		
FRACTION: OV	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TETRAHYDROFURAN								1.3	NJ	Z1			
TOLUENE		4.3	U		0.13	U		0.13	U		2.6	U	
TOTAL XYLENES		9.3	U		0.28	U		0.28	U		5.6	U	
TRANS-1,2-DICHLOROETHENE		6.3	U		0.19	U		0.19	U		3.8	U	
TRANS-1,3-DICHLOROPROPENE		6.3	U		0.19	U		0.19	U		3.8	U	
TRICHLOROETHENE		830			0.17	U		15			60		
TRICHLOROFLUOROMETHANE		7	U		0.21	U		0.21	U		4.2	U	
VINYL ACETATE		6.3	UR	C	0.19	UR	C	0.19	UR	C	3.8	UR	C
VINYL CHLORIDE		9.1	J	P	11			0.22	U		210		

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042012			MSA-MW35S-042012			TB-042012		
SDG: 240-10494-1	LAB_ID	240-10494-3			240-10494-2			240-10494-1		
FRACTION: OV	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TETRAHYDROFURAN										
TOLUENE		12	J	P	0.13	U		0.13	U	
TOTAL XYLENES		19	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		25	J	P	0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		13	U		0.19	U		0.19	U	
TRICHLOROETHENE		510			2.4			0.17	U	
TRICHLOROFLUOROMETHANE		14	U		0.21	U		0.21	U	
VINYL ACETATE		13	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		920			2			0.22	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042012			MSA-MW17S-042012			MSA-MW20D-042012			MSA-MW20I-042012		
SDG: 240-10494-1	LAB_ID	240-10494-6			240-10494-5			240-10494-7			240-10494-4		
FRACTION: OS	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.47	U		0.94	J	P	1.8			11		

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042012			MSA-MW35S-042012		
SDG: 240-10494-1	LAB_ID	240-10494-3			240-10494-2		
FRACTION: OS	SAMP_DATE	4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		240			3.2		

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042012			MSA-MW17S-042012			MSA-MW20D-042012			MSA-MW20I-042012		
SDG: 240-10494-1	LAB_ID	240-10494-6			240-10494-5			240-10494-7			240-10494-4		
FRACTION: MISC	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.19	J	P	0.082	U		0.082	U		0.082	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042012			MSA-MW35S-042012		
SDG: 240-10494-1	LAB_ID	240-10494-3			240-10494-2		
FRACTION: MISC	SAMP_DATE	4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW17S-042012			MSA-MW20S-042012			MSA-MW35S-042012		
SDG: 240-10494-1	LAB_ID	240-10494-5			240-10494-3			240-10494-2		
FRACTION: PET	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		46	B	A	2200			53	B	A
TPH (C10-C32)		240	U		4400			780		

PROJ_NO: 04021	NSAMPLE	MSA-MW17S-042012			MSA-MW20S-042012		
SDG: 240-10494-1	LAB_ID	240-10494-5			240-10494-3		
FRACTION: EXP	SAMP_DATE	4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
RDX		0.038	U		0.037	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17I-042012 Lab Sample ID: 240-10494-6

Matrix: Water Lab File ID: UXX4993.D

Analysis Method: 8260C Date Collected: 04/20/2012 13:25

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 12:41

Soil Aliquot Vol: Dilution Factor: 33.333

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	33	U	33	7.7
71-55-6	1,1,1-Trichloroethane	33	U	33	7.3
79-34-5	1,1,2,2-Tetrachloroethane	33	U	33	6.0
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	33	U	33	9.3
75-34-3	1,1-Dichloroethane	33	U	33	5.0
75-35-4	1,1-Dichloroethene	33	U	33	6.3
563-58-6	1,1-Dichloropropene	33	U	33	4.3
87-61-6	1,2,3-Trichlorobenzene	33	U	33	5.7
96-18-4	1,2,3-Trichloropropane	33	U	33	14
526-73-8	1,2,3-Trimethylbenzene	170	U	170	0.20
120-82-1	1,2,4-Trichlorobenzene	33	U	33	5.0
95-63-6	1,2,4-Trimethylbenzene	33	U	33	4.0
96-12-8	1,2-Dibromo-3-Chloropropane	67	U	67	22
95-50-1	1,2-Dichlorobenzene	33	U	33	4.3
107-06-2	1,2-Dichloroethane	33	U	33	7.3
78-87-5	1,2-Dichloropropane	33	U	33	6.0
541-73-1	1,3-Dichlorobenzene	33	U	33	4.7
142-28-9	1,3-Dichloropropane	33	U	33	5.3
106-46-7	1,4-Dichlorobenzene	33	U	33	4.3
594-20-7	2,2-Dichloropropane	33	U	33	4.3
110-75-8	2-Chloroethyl vinyl ether	330	U	330	33
95-49-8	2-Chlorotoluene	33	U	33	3.7
591-78-6	2-Hexanone	330	U	330	14
108-86-1	Bromobenzene	33	U	33	4.3
74-97-5	Bromochloromethane	33	U	33	9.7
106-43-4	4-Chlorotoluene	33	U	33	6.0
99-87-6	p-Isopropyltoluene	33	U	33	4.0
67-64-1	Acetone	330	U	330	37
71-43-2	Benzene	33	U	33	4.3
75-25-2	Bromoform	33	U	33	21
74-83-9	Bromomethane	33	U	33	14
75-15-0	Carbon disulfide	33	U	33	4.3
56-23-5	Carbon tetrachloride	33	U	33	4.3
108-90-7	Chlorobenzene	33	U	33	5.0
75-00-3	Chloroethane	33	U	33	9.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17I-042012 Lab Sample ID: 240-10494-6

Matrix: Water Lab File ID: UXX4993.D

Analysis Method: 8260C Date Collected: 04/20/2012 13:25

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 12:41

Soil Aliquot Vol: Dilution Factor: 33.333

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	33	U	33	5.3
74-87-3	Chloromethane	33	U	33	10
156-59-2	cis-1,2-Dichloroethene	110		33	5.7
10061-01-5	cis-1,3-Dichloropropene	33	U	33	4.7
87-68-3	Hexachlorobutadiene	33	U	33	10
74-95-3	Dibromomethane	33	U	33	9.3
75-27-4	Bromodichloromethane	33	U	33	5.0
75-71-8	Dichlorodifluoromethane	33	U	33	10
100-41-4	Ethylbenzene	33	U	33	5.7
106-93-4	1,2-Dibromoethane	33	U	33	8.0
108-20-3	Diisopropyl ether	330	U	330	50
91-20-3	Naphthalene	33	U	33	8.0
179601-23-1	m-Xylene & p-Xylene	67	U	67	8.0
104-51-8	n-Butylbenzene	33	U	33	4.0
98-82-8	Isopropylbenzene	33	U	33	4.3
103-65-1	n-Propylbenzene	33	U	33	4.7
78-93-3	2-Butanone	330	U	330	19
108-10-1	4-Methyl-2-pentanone	330	U	330	11
135-98-8	sec-Butylbenzene	33	U	33	4.3
1634-04-4	Methyl tert-butyl ether	170	U	170	5.7
994-05-8	Tert-amyl-methyl ether (TAME)	170	U	170	2.2
75-09-2	Methylene Chloride	33	U	33	11
95-47-6	o-Xylene	33	U	33	4.7
100-42-5	Styrene	33	U	33	3.7
637-92-3	Ethyl-t-butyl ether (ETBE)	170	U	170	3.7
98-06-6	tert-Butylbenzene	33	U	33	4.3
127-18-4	Tetrachloroethene	33	U	33	9.7
108-88-3	Toluene	33	U	33	4.3
156-60-5	trans-1,2-Dichloroethene	33	U	33	6.3
10061-02-6	trans-1,3-Dichloropropene	33	U	33	6.3
79-01-6	Trichloroethene	830		33	5.7
75-69-4	Trichlorofluoromethane	33	U	33	7.0
108-05-4	Vinyl acetate	67	U	67	6.3
75-01-4	Vinyl chloride	9.1	J	33	7.3
75-65-0	tert-Butyl alcohol	1700	U *	1700	130

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17I-042012 | Lab Sample ID: 240-10494-6

Matrix: Water | Lab File ID: UXX4993.D

Analysis Method: 8260C | Date Collected: 04/20/2012 13:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 12:41

Soil Aliquot Vol: | Dilution Factor: 33.333

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	67	U	67	9.3
124-48-1	Dibromochloromethane	33	U	33	6.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		63-129
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	107		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17I-042012 | Lab Sample ID: 240-10494-6

Matrix: Water | Lab File ID: UXX4993.D

Analysis Method: 8260C | Date Collected: 04/20/2012 13:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 12:41

Soil Aliquot Vol: | Dilution Factor: 33.333

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17S-042012 | Lab Sample ID: 240-10494-5

Matrix: Water | Lab File ID: UXX5007.D

Analysis Method: 8260C | Date Collected: 04/20/2012 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 17:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	0.22	J	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17S-042012 | Lab Sample ID: 240-10494-5

Matrix: Water | Lab File ID: UXX5007.D

Analysis Method: 8260C | Date Collected: 04/20/2012 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 17:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	11		1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17S-042012 | Lab Sample ID: 240-10494-5

Matrix: Water | Lab File ID: UXX5007.D

Analysis Method: 8260C | Date Collected: 04/20/2012 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 17:42

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		63-129
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	110		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17S-042012 Lab Sample ID: 240-10494-5

Matrix: Water Lab File ID: UXX5007.D

Analysis Method: 8260C Date Collected: 04/20/2012 12:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 17:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20D-042012 | Lab Sample ID: 240-10494-7

Matrix: Water | Lab File ID: UXM5276.D

Analysis Method: 8260C | Date Collected: 04/20/2012 13:42

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 14:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	0.43	J	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20D-042012 | Lab Sample ID: 240-10494-7

Matrix: Water | Lab File ID: UXM5276.D

Analysis Method: 8260C | Date Collected: 04/20/2012 13:42

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 14:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	0.20	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	15		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20D-042012 | Lab Sample ID: 240-10494-7

Matrix: Water | Lab File ID: UXM5276.D

Analysis Method: 8260C | Date Collected: 04/20/2012 13:42

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 14:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
2037-26-5	Toluene-d8 (Surr)	86		74-115
1868-53-7	Dibromofluoromethane (Surr)	83		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20D-042012 Lab Sample ID: 240-10494-7

Matrix: Water Lab File ID: UXM5276.D

Analysis Method: 8260C Date Collected: 04/20/2012 13:42

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 14:23

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 2 TIC Result Total: 2.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
55644-10-5	Silanol, dimethyl(1,1,2-trimethylpropyl)	4.60	1.6	T J N
109-99-9	Tetrahydrofuran	4.97	1.3	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20I-042012 Lab Sample ID: 240-10494-4

Matrix: Water Lab File ID: UXX4992.D

Analysis Method: 8260C Date Collected: 04/20/2012 11:55

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 12:19

Soil Aliquot Vol: Dilution Factor: 20

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	20	U	20	4.6
71-55-6	1,1,1-Trichloroethane	20	U	20	4.4
79-34-5	1,1,2,2-Tetrachloroethane	20	U	20	3.6
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	20	U	20	5.6
75-34-3	1,1-Dichloroethane	20	U	20	3.0
75-35-4	1,1-Dichloroethene	4.5	J	20	3.8
563-58-6	1,1-Dichloropropene	20	U	20	2.6
87-61-6	1,2,3-Trichlorobenzene	20	U	20	3.4
96-18-4	1,2,3-Trichloropropane	20	U	20	8.6
526-73-8	1,2,3-Trimethylbenzene	100	U	100	0.12
120-82-1	1,2,4-Trichlorobenzene	20	U	20	3.0
95-63-6	1,2,4-Trimethylbenzene	20	U	20	2.4
96-12-8	1,2-Dibromo-3-Chloropropane	40	U	40	13
95-50-1	1,2-Dichlorobenzene	20	U	20	2.6
107-06-2	1,2-Dichloroethane	20	U	20	4.4
78-87-5	1,2-Dichloropropane	20	U	20	3.6
541-73-1	1,3-Dichlorobenzene	20	U	20	2.8
142-28-9	1,3-Dichloropropane	20	U	20	3.2
106-46-7	1,4-Dichlorobenzene	20	U	20	2.6
594-20-7	2,2-Dichloropropane	20	U	20	2.6
110-75-8	2-Chloroethyl vinyl ether	200	U	200	20
95-49-8	2-Chlorotoluene	20	U	20	2.2
591-78-6	2-Hexanone	200	U	200	8.2
108-86-1	Bromobenzene	20	U	20	2.6
74-97-5	Bromochloromethane	20	U	20	5.8
106-43-4	4-Chlorotoluene	20	U	20	3.6
99-87-6	p-Isopropyltoluene	20	U	20	2.4
67-64-1	Acetone	200	U	200	22
71-43-2	Benzene	20	U	20	2.6
75-25-2	Bromoform	20	U	20	13
74-83-9	Bromomethane	20	U	20	8.2
75-15-0	Carbon disulfide	20	U	20	2.6
56-23-5	Carbon tetrachloride	20	U	20	2.6
108-90-7	Chlorobenzene	27		20	3.0
75-00-3	Chloroethane	20	U	20	5.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20I-042012 | Lab Sample ID: 240-10494-4

Matrix: Water | Lab File ID: UXX4992.D

Analysis Method: 8260C | Date Collected: 04/20/2012 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 12:19

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	20	U	20	3.2
74-87-3	Chloromethane	20	U	20	6.0
156-59-2	cis-1,2-Dichloroethene	510		20	3.4
10061-01-5	cis-1,3-Dichloropropene	20	U	20	2.8
87-68-3	Hexachlorobutadiene	20	U	20	6.0
74-95-3	Dibromomethane	20	U	20	5.6
75-27-4	Bromodichloromethane	20	U	20	3.0
75-71-8	Dichlorodifluoromethane	20	U	20	6.2
100-41-4	Ethylbenzene	20	U	20	3.4
106-93-4	1,2-Dibromoethane	20	U	20	4.8
108-20-3	Diisopropyl ether	200	U	200	30
91-20-3	Naphthalene	20	U	20	4.8
179601-23-1	m-Xylene & p-Xylene	40	U	40	4.8
104-51-8	n-Butylbenzene	20	U	20	2.4
98-82-8	Isopropylbenzene	20	U	20	2.6
103-65-1	n-Propylbenzene	20	U	20	2.8
78-93-3	2-Butanone	200	U	200	11
108-10-1	4-Methyl-2-pentanone	200	U	200	6.4
135-98-8	sec-Butylbenzene	20	U	20	2.6
1634-04-4	Methyl tert-butyl ether	100	U	100	3.4
994-05-8	Tert-amyl-methyl ether (TAME)	100	U	100	1.3
75-09-2	Methylene Chloride	20	U	20	6.6
95-47-6	o-Xylene	20	U	20	2.8
100-42-5	Styrene	20	U	20	2.2
637-92-3	Ethyl-t-butyl ether (ETBE)	100	U	100	2.2
98-06-6	tert-Butylbenzene	20	U	20	2.6
127-18-4	Tetrachloroethene	20	U	20	5.8
108-88-3	Toluene	20	U	20	2.6
156-60-5	trans-1,2-Dichloroethene	20	U	20	3.8
10061-02-6	trans-1,3-Dichloropropene	20	U	20	3.8
79-01-6	Trichloroethene	60		20	3.4
75-69-4	Trichlorofluoromethane	20	U	20	4.2
108-05-4	Vinyl acetate	40	U	40	3.8
75-01-4	Vinyl chloride	210		20	4.4
75-65-0	tert-Butyl alcohol	1000	U *	1000	78

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20I-042012 | Lab Sample ID: 240-10494-4

Matrix: Water | Lab File ID: UXX4992.D

Analysis Method: 8260C | Date Collected: 04/20/2012 11:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 12:19

Soil Aliquot Vol: | Dilution Factor: 20

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	40	U	40	5.6
124-48-1	Dibromochloromethane	20	U	20	3.6

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	108		63-129
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
2037-26-5	Toluene-d8 (Surr)	93		74-115
1868-53-7	Dibromofluoromethane (Surr)	110		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20I-042012 Lab Sample ID: 240-10494-4

Matrix: Water Lab File ID: UXX4992.D

Analysis Method: 8260C Date Collected: 04/20/2012 11:55

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 12:19

Soil Aliquot Vol: Dilution Factor: 20

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 | Lab Sample ID: 240-10494-3

Matrix: Water | Lab File ID: UXX4991.D

Analysis Method: 8260C | Date Collected: 04/20/2012 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 11:57

Soil Aliquot Vol: | Dilution Factor: 66.667

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	67	U	67	15
71-55-6	1,1,1-Trichloroethane	67	U	67	15
79-34-5	1,1,2,2-Tetrachloroethane	67	U	67	12
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	67	U	67	19
75-34-3	1,1-Dichloroethane	67	U	67	10
75-35-4	1,1-Dichloroethene	17	J	67	13
563-58-6	1,1-Dichloropropene	67	U	67	8.7
87-61-6	1,2,3-Trichlorobenzene	67	U	67	11
96-18-4	1,2,3-Trichloropropane	67	U	67	29
526-73-8	1,2,3-Trimethylbenzene	330	U	330	0.39
120-82-1	1,2,4-Trichlorobenzene	67	U	67	10
95-63-6	1,2,4-Trimethylbenzene	67	U	67	8.0
96-12-8	1,2-Dibromo-3-Chloropropane	130	U	130	45
95-50-1	1,2-Dichlorobenzene	67	U	67	8.7
107-06-2	1,2-Dichloroethane	67	U	67	15
78-87-5	1,2-Dichloropropane	67	U	67	12
541-73-1	1,3-Dichlorobenzene	67	U	67	9.3
142-28-9	1,3-Dichloropropane	67	U	67	11
106-46-7	1,4-Dichlorobenzene	67	U	67	8.7
594-20-7	2,2-Dichloropropane	67	U	67	8.7
110-75-8	2-Chloroethyl vinyl ether	670	U	670	66
95-49-8	2-Chlorotoluene	67	U	67	7.3
591-78-6	2-Hexanone	670	U	670	27
108-86-1	Bromobenzene	67	U	67	8.7
74-97-5	Bromochloromethane	67	U	67	19
106-43-4	4-Chlorotoluene	67	U	67	12
99-87-6	p-Isopropyltoluene	67	U	67	8.0
67-64-1	Acetone	670	U	670	73
71-43-2	Benzene	23	J	67	8.7
75-25-2	Bromoform	67	U	67	43
74-83-9	Bromomethane	67	U	67	27
75-15-0	Carbon disulfide	67	U	67	8.7
56-23-5	Carbon tetrachloride	67	U	67	8.7
108-90-7	Chlorobenzene	250		67	10
75-00-3	Chloroethane	67	U	67	19

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 | Lab Sample ID: 240-10494-3

Matrix: Water | Lab File ID: UXX4991.D

Analysis Method: 8260C | Date Collected: 04/20/2012 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 11:57

Soil Aliquot Vol: | Dilution Factor: 66.667

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	67	U	67	11
74-87-3	Chloromethane	67	U	67	20
156-59-2	cis-1,2-Dichloroethene	1700		67	11
10061-01-5	cis-1,3-Dichloropropene	67	U	67	9.3
87-68-3	Hexachlorobutadiene	67	U	67	20
74-95-3	Dibromomethane	67	U	67	19
75-27-4	Bromodichloromethane	67	U	67	10
75-71-8	Dichlorodifluoromethane	67	U	67	21
100-41-4	Ethylbenzene	67	U	67	11
106-93-4	1,2-Dibromoethane	67	U	67	16
108-20-3	Diisopropyl ether	670	U	670	100
91-20-3	Naphthalene	67	U	67	16
179601-23-1	m-Xylene & p-Xylene	130	U	130	16
104-51-8	n-Butylbenzene	67	U	67	8.0
98-82-8	Isopropylbenzene	67	U	67	8.7
103-65-1	n-Propylbenzene	67	U	67	9.3
78-93-3	2-Butanone	670	U	670	38
108-10-1	4-Methyl-2-pentanone	670	U	670	21
135-98-8	sec-Butylbenzene	67	U	67	8.7
1634-04-4	Methyl tert-butyl ether	330	U	330	11
994-05-8	Tert-amyl-methyl ether (TAME)	330	U	330	4.5
75-09-2	Methylene Chloride	67	U	67	22
95-47-6	o-Xylene	67	U	67	9.3
100-42-5	Styrene	67	U	67	7.3
637-92-3	Ethyl-t-butyl ether (ETBE)	330	U	330	7.3
98-06-6	tert-Butylbenzene	67	U	67	8.7
127-18-4	Tetrachloroethene	67	U	67	19
108-88-3	Toluene	12	J	67	8.7
156-60-5	trans-1,2-Dichloroethene	25	J	67	13
10061-02-6	trans-1,3-Dichloropropene	67	U	67	13
79-01-6	Trichloroethene	510		67	11
75-69-4	Trichlorofluoromethane	67	U	67	14
108-05-4	Vinyl acetate	130	U	130	13
75-01-4	Vinyl chloride	920		67	15
75-65-0	tert-Butyl alcohol	3300	U *	3300	260

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 | Lab Sample ID: 240-10494-3

Matrix: Water | Lab File ID: UXX4991.D

Analysis Method: 8260C | Date Collected: 04/20/2012 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 11:57

Soil Aliquot Vol: | Dilution Factor: 66.667

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	130	U	130	19
124-48-1	Dibromochloromethane	67	U	67	12

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	103		63-129
460-00-4	4-Bromofluorobenzene (Surr)	80		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	105		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 Lab Sample ID: 240-10494-3

Matrix: Water Lab File ID: UXX4991.D

Analysis Method: 8260C Date Collected: 04/20/2012 10:20

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:57

Soil Aliquot Vol: Dilution Factor: 66.667

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 2 TIC Result Total: 79

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
110-82-7	Cyclohexane	4.65	48	J
108-87-2	Methylcyclohexane	5.62	31	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 | Lab Sample ID: 240-10494-2

Matrix: Water | Lab File ID: UXX5006.D

Analysis Method: 8260C | Date Collected: 04/20/2012 09:55

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	0.84	J	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	1.2	J	10	1.1
71-43-2	Benzene	0.13	J	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	0.17	J	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 Lab Sample ID: 240-10494-2

Matrix: Water Lab File ID: UXX5006.D

Analysis Method: 8260C Date Collected: 04/20/2012 09:55

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	6.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.22	J	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	2.4		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	2.0		1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 Lab Sample ID: 240-10494-2

Matrix: Water Lab File ID: UXX5006.D

Analysis Method: 8260C Date Collected: 04/20/2012 09:55

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	106		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 Lab Sample ID: 240-10494-2

Matrix: Water Lab File ID: UXX5006.D

Analysis Method: 8260C Date Collected: 04/20/2012 09:55

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 2 TIC Result Total: 4.7

CAS NO.	COMPOUND NAME	RT	RESULT	Q
75-43-4	Methane, dichlorofluoro-	2.04	3.6	T J N
354-23-4	Ethane, 1,2-dichloro-1,1,2-trifluoro-	2.52	1.1	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: TB-042012 Lab Sample ID: 240-10494-1

Matrix: Water Lab File ID: UXX5005.D

Analysis Method: 8260C Date Collected: 04/20/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 16:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: TB-042012 Lab Sample ID: 240-10494-1

Matrix: Water Lab File ID: UXX5005.D

Analysis Method: 8260C Date Collected: 04/20/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 16:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: TB-042012 Lab Sample ID: 240-10494-1

Matrix: Water Lab File ID: UXX5005.D

Analysis Method: 8260C Date Collected: 04/20/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 16:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	107		63-129
460-00-4	4-Bromofluorobenzene (Surr)	79		66-117
2037-26-5	Toluene-d8 (Surr)	97		74-115
1868-53-7	Dibromofluoromethane (Surr)	105		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: TB-042012 | Lab Sample ID: 240-10494-1

Matrix: Water | Lab File ID: UXX5005.D

Analysis Method: 8260C | Date Collected: 04/20/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 16:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17I-042012 | Lab Sample ID: 240-10494-6

Matrix: Water | Lab File ID: 20427024.D

Analysis Method: 8270C | Date Collected: 04/20/2012 13:25

Extract. Method: 3520C | Date Extracted: 04/25/2012 08:09

Sample wt/vol: 1050(mL) | Date Analyzed: 04/27/2012 16:28

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41841 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	60		28-110
367-12-4	2-Fluorophenol (Surr)	67		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	67		27-111
4165-62-2	Phenol-d5 (Surr)	70		10-110
1718-51-0	Terphenyl-d14 (Surr)	76		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17S-042012 | Lab Sample ID: 240-10494-5

Matrix: Water | Lab File ID: 20427023.D

Analysis Method: 8270C | Date Collected: 04/20/2012 12:00

Extract. Method: 3520C | Date Extracted: 04/25/2012 08:09

Sample wt/vol: 1050(mL) | Date Analyzed: 04/27/2012 16:09

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41841 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.94	J	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	58		28-110
367-12-4	2-Fluorophenol (Surr)	64		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	66		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	62		27-111
4165-62-2	Phenol-d5 (Surr)	68		10-110
1718-51-0	Terphenyl-d14 (Surr)	70		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20D-042012 | Lab Sample ID: 240-10494-7

Matrix: Water | Lab File ID: 20426014.D

Analysis Method: 8270C | Date Collected: 04/20/2012 13:42

Extract. Method: 3520C | Date Extracted: 04/24/2012 09:55

Sample wt/vol: 1050(mL) | Date Analyzed: 04/26/2012 14:32

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41676 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.8		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	44		28-110
367-12-4	2-Fluorophenol (Surr)	44		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	60		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	44		27-111
4165-62-2	Phenol-d5 (Surr)	48		10-110
1718-51-0	Terphenyl-d14 (Surr)	69		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20I-042012 | Lab Sample ID: 240-10494-4

Matrix: Water | Lab File ID: 20427022.D

Analysis Method: 8270C | Date Collected: 04/20/2012 11:55

Extract. Method: 3520C | Date Extracted: 04/25/2012 08:09

Sample wt/vol: 1030(mL) | Date Analyzed: 04/27/2012 15:50

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41841 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	11		0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	56		28-110
367-12-4	2-Fluorophenol (Surr)	67		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	65		27-111
4165-62-2	Phenol-d5 (Surr)	72		10-110
1718-51-0	Terphenyl-d14 (Surr)	72		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 | Lab Sample ID: 240-10494-3

Matrix: Water | Lab File ID: 20430031.D

Analysis Method: 8270C | Date Collected: 04/20/2012 10:20

Extract. Method: 3520C | Date Extracted: 04/25/2012 08:09

Sample wt/vol: 1050(mL) | Date Analyzed: 04/30/2012 23:45

Con. Extract Vol.: 2(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42189 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	240		4.8	2.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	58		28-110
367-12-4	2-Fluorophenol (Surr)	64		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	72		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	68		27-111
4165-62-2	Phenol-d5 (Surr)	66		10-110
1718-51-0	Terphenyl-d14 (Surr)	72		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name:	TestAmerica Canton	Job No.:	240-10494-1
SDG No.:			
Client Sample ID:	MSA-MW35S-042012	Lab Sample ID:	240-10494-2
Matrix:	Water	Lab File ID:	20427020.D
Analysis Method:	8270C	Date Collected:	04/20/2012 09:55
Extract. Method:	3520C	Date Extracted:	04/25/2012 08:09
Sample wt/vol:	1020(mL)	Date Analyzed:	04/27/2012 15:11
Con. Extract Vol.:	2(mL)	Dilution Factor:	1
Injection Volume:	1(uL)	Level: (low/med)	Low
% Moisture:		GPC Cleanup:(Y/N)	N
Analysis Batch No.:	41841	Units:	ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	3.2		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		28-110
367-12-4	2-Fluorophenol (Surr)	53		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	54		27-111
4165-62-2	Phenol-d5 (Surr)	62		10-110
1718-51-0	Terphenyl-d14 (Surr)	70		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17S-042012 | Lab Sample ID: 240-10494-5

Matrix: Water | Lab File ID: YF042612.D

Analysis Method: 8015B | Date Collected: 04/20/2012 12:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2012 20:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41736 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	46	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 Lab Sample ID: 240-10494-3

Matrix: Water Lab File ID: YF042611.D

Analysis Method: 8015B Date Collected: 04/20/2012 10:20

Sample wt/vol: 5(mL) Date Analyzed: 04/26/2012 19:28

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41736 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	2200	B	500	130

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	66		10-150

FORM I

GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 Lab Sample ID: 240-10494-2

Matrix: Water Lab File ID: YF042608.D

Analysis Method: 8015B Date Collected: 04/20/2012 09:55

Sample wt/vol: 5(mL) Date Analyzed: 04/26/2012 17:33

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41736 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	53	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	64		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW17S-042012 | Lab Sample ID: 240-10494-5

Matrix: Water | Lab File ID: P6B04278.D

Analysis Method: 8015B | Date Collected: 04/20/2012 12:00

Extraction Method: 3520C | Date Extracted: 04/24/2012 09:45

Sample wt/vol: 1010(mL) | Date Analyzed: 04/26/2012 19:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41709 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	64		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 | Lab Sample ID: 240-10494-3

Matrix: Water | Lab File ID: P6B04277.D

Analysis Method: 8015B | Date Collected: 04/20/2012 10:20

Extraction Method: 3520C | Date Extracted: 04/24/2012 09:45

Sample wt/vol: 1030(mL) | Date Analyzed: 04/26/2012 18:56

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41709 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	4400		490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	53		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 | Lab Sample ID: 240-10494-2

Matrix: Water | Lab File ID: P6B04276.D

Analysis Method: 8015B | Date Collected: 04/20/2012 09:55

Extraction Method: 3520C | Date Extracted: 04/24/2012 09:45

Sample wt/vol: 1050(mL) | Date Analyzed: 04/26/2012 18:25

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41709 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	780		480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	51		10-110

TestAmerica Canton

Client Sample ID: MSA-MW17S-042012

HPLC

Lot-Sample #...: G2D240431-004	**Work Order #...:** MR6401AC		**Matrix.....:** WATER	
Date Sampled...: 04/20/12	**Date Received..:** 04/24/12			
Prep Date.....: 04/25/12	**Analysis Date..:** 04/27/12			
Prep Batch #...: 2116029				
Dilution Factor: 1.05	**Method.....:** SW846 8330/8330A			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
RDX	ND	0.10	ug/L	0.038

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	94	(79 - 111)

TestAmerica Canton

Client Sample ID: MSA-MW20S-042012

HPLC

Lot-Sample #...: G2D240431-002 **Work Order #...:** MR6HV1AC **Matrix.....:** WATER
Date Sampled...: 04/20/12 **Date Received..:** 04/24/12
Prep Date.....: 04/25/12 **Analysis Date..:** 04/27/12
Prep Batch #...: 2116029
Dilution Factor: 1.02 **Method.....:** SW846 8330/8330A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
RDX	ND	0.10	ug/L	0.037

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	89	(79 - 111)

TestAmerica Canton

Client Sample ID: MSA-MW17I-042012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D240431-005	**Work Order #...:**	MR6H11AA	**Matrix.....:**	WATER
Date Sampled...:	04/20/12	**Date Received..:**	04/24/12		
Prep Date.....:	04/27/12	**Analysis Date..:**	05/02/12		
Prep Batch #...:	2118065				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.19 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

TestAmerica Canton

Client Sample ID: MSA-MW17S-042012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D240431-004	**Work Order #...:** MR6401AA		**Matrix.....:** WATER	
Date Sampled...: 04/20/12	**Date Received..:** 04/24/12			
Prep Date.....: 04/27/12	**Analysis Date..:** 05/02/12			
Prep Batch #...: 2118065				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW20D-042012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D240431-006	**Work Order #...:**	MR6H21AA	**Matrix.....:**	WATER
Date Sampled...:	04/20/12	**Date Received..:**	04/24/12		
Prep Date.....:	04/27/12	**Analysis Date..:**	05/02/12		
Prep Batch #...:	2118065				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW20I-042012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D240431-003	**Work Order #...:**	MR6HW1AA	**Matrix.....:**	WATER
Date Sampled...:	04/20/12	**Date Received..:**	04/24/12		
Prep Date.....:	04/27/12	**Analysis Date..:**	05/02/12		
Prep Batch #...:	2118065				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW20S-042012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D240431-002	**Work Order #...:**	MR6HV1AA	**Matrix.....:**	WATER
Date Sampled...:	04/20/12	**Date Received..:**	04/24/12		
Prep Date.....:	04/27/12	**Analysis Date..:**	05/02/12		
Prep Batch #...:	2118065				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW35S-042012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D240431-001	**Work Order #...:**	MR6HT1AA	**Matrix.....:**	WATER
Date Sampled...:	04/20/12	**Date Received..:**	04/24/12		
Prep Date.....:	04/27/12	**Analysis Date..:**	05/02/12		
Prep Batch #...:	2118065				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10494-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate and RDX Explosive analysis were performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/21/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4, 1.6 and 1.8 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042012 (240-10494-1), MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/27/2012 and 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample (LCS) for batch 41857 exceeded control limits for tert-Butyl alcohol . This has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Several analytes failed the recovery criteria low for the MS/MSD of sample MSA-MW20S-042012 (240-10494-3) in batch 240-41857.

Refer to the QC report for details.

Samples MSA-MW20S-042012 (240-10494-3)[66.67X], MSA-MW20I-042012 (240-10494-4)[20X] and MSA-MW17I-042012 (240-10494-6)[33.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 41857 exceeded control criteria for several compounds. The samples associated with this CCV were not detected for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is reportable per the facility Standard Operating Procedure (SOP).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/24/2012 and 04/25/2012 and analyzed on 04/26/2012, 04/27/2012 and 04/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 41464.

Sample MSA-MW20S-042012 (240-10494-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3) and MSA-MW17S-042012 (240-10494-5) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/26/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-41736/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sample MSA-MW20S-042012 (240-10494-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3) and MSA-MW17S-042012 (240-10494-5) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/24/2012 and analyzed on 04/26/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 41325.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

Several analytes were detected in method blank MB 240-41326/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-41366/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/26/2012 and 04/27/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/26/2012 and 04/27/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: 301 528-3021		TAT if different from below _____		Walk-in client ☐
Project Name: MSA Ground water Sampling	Method of Shipment/Carrier: Fed EX	☐ 3 weeks		Lab pickup ☐
Project Number: 112IC04021-02	Shipping/Tracking No:	☐ 2 weeks		Lab sampling ☐
PO #		☐ 1 week		Job/SDG No:
		☐ 2 days		
		☐ 1 day		

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C/Grab G	VOCs	Total PPM	Diss PPM	1,4 Dioxane	GRO & DRO	RDX	Perchlorate				Sample Specific Notes / Special Instructions:
TB-042012	4-20-12	—		X						2					N	G	X										
MSA-MW35s-042012	↓	0955		X					2	5			5		↓	↓	X	X	X	X	X		X				
MSA-MW20s-042012	↓	1020		X					2	5			7		↓	↓	X	X	X	X	X	X	X				
MSA-MW20I-042012	↓	1155		X					2	3			3		↓	↓	X	X	X	X			X				
MSA-MW17s-042012	↓	1200		X					2	5			7		↓	↓	X	X	X	X	X	X	X				
MSA-MW17I-042012	↓	1325		X					2	3			3		↓	↓	X	X	X	X			X				
MSA-MW20D-042012	↓	1342		X					2	3			3		↓	↓	X	X	X	X			X				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	4-20-12 / 1426	Paul Hayward	TestAmerica	4/20/12/1427
Paul Hayward	TestAmerica	4/20/12/1530			
			Received in Laboratory by: Mike Hanlone	TA	4/21/12 0930

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TAL-0018 (1008)

05/10/2012

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
35	<2 <2	4/23/12	MB
20S	<2 <2		
20I	<2 <2		
17S	<2 <2		
17I	<2 <2		
20D	<2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client cooler	3.4	1.4	1	ICE
	3.6	1.6		
	3.8	1.8		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Login Number: 10494
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

G2D240431

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

G2D240431

Chain of Custody Record

TestAmerica

Client Information (Sub Contract Lab)	Sampler	Lab PM: O'Meara, Patrick J	Carrier Tracking No(s)	COC No: 240-5342 1
Client Contact: Shipping/Receiving	Phone	E Mail: patrick.omeara@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc				Job #: 240-10494-1
Address: 880 Riverside Parkway	Due Date Requested: 5/9/2012			
City: West Sacramento	TAT Requested (days)			
State Zip: CA, 95605				
Phone: 916-373-5600(Tel)	PO #			
Email	WO #			
Project Name: MSA Groundwater Sampling	Project #: 24005772			
Site	SSOW#			

Analysis Requested

Preservation Codes

A - HCL; B - NaOH; C - Zn Acetate; D - Nitric Acid; E - NaHSO4; F - MeOH; G - Amchlor; H - Ascorbic Acid; I - Ice; J - DI Water; K - EDTA; L - EDA; M - Hexane; N - None; O - AsNaO2; P - Na2O4S; Q - Na2SO3; R - Na2S2SO3; S - H2SO4; T - TSP Dodecahydrate; U - Acetone; V - MCAA; W - ph 4.5; Z - other (specify)

Other

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ 6850 Perchlorate-West Sacramento	SUBCONTRACT/ Explosive-RDX	Total Number of containers	Special Instructions/Note:
			Preservation Code							
MSA-MW35S-042012 (240-10494-2)	4/20/12	09 55 Eastern		Water			X		1	
MSA-MW20S-042012 (240-10494-3)	4/20/12	10 20 Eastern		Water			X	X	3	
MSA-MW20I-042012 (240-10494-4)	4/20/12	11 55 Eastern		Water			X		1	
MSA-MW17S-042012 (240-10494-5)	4/20/12	12 00 Eastern		Water			X	X	3	
MSA-MW17I-042012 (240-10494-6)	4/20/12	13 25 Eastern		Water			X		1	
MSA-MW20D-042012 (240-10494-7)	4/20/12	13 42 Eastern		Water			X		1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return To Client ☐ Disposal By Lab ☐ Archive For _____ Months

Deliverable Requested I, II, III, IV, Other (specify)

Special Instructions/QC Requirements

Empty Kit Relinquished by	Date	Time	Method of Shipment

Relinquished by	Date/Time	Company	Received by	Date/Time	Company
			[signature]	4/24/12 1000	TAL WS
Relinquished by	Date/Time	Company	Received by	Date/Time	Company
Relinquished by	Date/Time	Company	Received by	Date/Time	Company

Custody Seals Intact	Custody Seal No	Cooler Temperature(s) °C and Other Remarks
Δ Yes Δ No		2-8

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TAL CANTON PM KD

LOT# (QUANTIMS ID) G2D240431 QUOTE# 88936 LOCATION W18B

Checked (✓)

DATE RECEIVED 4/24/12 TIME RECEIVED 900 ☑

DELIVERED BY ☑ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☐ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☑ N/A ☐ ☑

CUSTODY SEAL #(S) NA

COC #(S) 240-5342.1 ☐ ☑

TEMPERATURE BLANK Observed: 3.0 Corrected: 2.2

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 2.4, 3.1, 4.1 Average 3.2 Corrected Average 2.8

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☑ #5 ☐ ☐ OTHER ☐ ☑

JS (Initials) 4/24/12 (Date)

==========

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY JS ☑

LOGGED IN BY JS ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☑ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☐ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)[1] ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

JS (Initials) 4/24/12 (Date)

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10494-1TB	TB-042012	Water	04/20/2012 0000	04/21/2012 0930
240-10494-2	MSA-MW35S-042012	Water	04/20/2012 0955	04/21/2012 0930
240-10494-3	MSA-MW20S-042012	Water	04/20/2012 1020	04/21/2012 0930
240-10494-4	MSA-MW20I-042012	Water	04/20/2012 1155	04/21/2012 0930
240-10494-5	MSA-MW17S-042012	Water	04/20/2012 1200	04/21/2012 0930
240-10494-6	MSA-MW17I-042012	Water	04/20/2012 1325	04/21/2012 0930
240-10494-7	MSA-MW20D-042012	Water	04/20/2012 1342	04/21/2012 0930

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

HOLDTIME

SDG 240-10350-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW15S-041812	240-10391-1	NM	4/18/2012	4/25/2012	4/27/2012	7	2	9
HG	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HG	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
M	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
M	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HGF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HGF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HGF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
MF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
PCL	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/27/2012	5/2/2012	9	5	14
PCL	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
OS	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/30/2012	5	5	10
OS	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/23/2012	4/25/2012	4	2	6
OS	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
OS	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OS	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
OS	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/20/2012	4/23/2012	2	3	5
OV	UG/L	TB-042012	240-10494-1	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	TB-042012	240-10494-1	TB	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/30/2012	4/30/2012	11	0	11
OV	UG/L	TB-041812	240-10350-1	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	TB-041812	240-10350-1	TB	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	TB-041912	240-10391-2	TB	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	TB-041912	240-10391-2	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/30/2012	4/30/2012	12	0	12
OV	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/27/2012	4/27/2012	9	0	9
OV	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
OV	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/27/2012	4/27/2012	8	0	8
OV	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/30/2012	4/30/2012	10	0	10
OV	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	4/27/2012	7	0	7
TPH	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/24/2012	6	0	6
TPH	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/25/2012	4/26/2012	6	1	7
TPH	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/25/2012	4/26/2012	7	1	8
TPH	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/24/2012	6	0	6
TPH	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6
TPH	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
TPH	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/24/2012	5	0	5
TPH	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/24/2012	5	0	5
TPH	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
TPH	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
TPH	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/26/2012	4/26/2012	6	0	6
TPH	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/25/2012	4/26/2012	7	1	8
TPH	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/25/2012	4/26/2012	6	1	7
TPH	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42092/2	UXM5239.D	04/29/2012	15:41
	STD8260 240-42092/3	UXM5240.D	04/29/2012	16:03
	STD8260 240-42092/4	UXM5241.D	04/29/2012	16:26
	STD8260 240-42092/5	UXM5242.D	04/29/2012	16:49
	STD8260 240-42092/6	UXM5243.D	04/29/2012	17:12
	STD8260 240-42092/7	UXM5244.D	04/29/2012	17:34
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50
	ICV 240-42092/14	UXM5251.D	04/29/2012	20:13

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.3038	0.2649	0.2905	0.2889	0.3016	Ave		0.2829			0.1000	7.8		15.0			
Chloromethane	0.4695 0.4320	0.4893	0.4830	0.4487	0.4452	Ave		0.4613			0.1000	4.9		15.0			
Vinyl chloride	0.4202 0.4041	0.4409	0.4365	0.4256	0.4202	Ave		0.4246			0.1000	3.1		15.0			
Bromomethane	0.1730 0.1493	0.1760	0.1733	0.1676	0.1710	Ave		0.1684			0.0500	5.8		15.0			
Chloroethane	0.2470 0.2229	0.2473	0.2344	0.2374	0.2336	Ave		0.2371				3.9		15.0			
Trichlorofluoromethane	0.2704 0.3132	0.3068	0.3031	0.3070	0.3204	Ave		0.3035			0.1000	5.7		15.0			
Acrolein	0.0469 0.0473	0.0483	0.0502	0.0508	0.0498	Ave		0.0489 NT				3.3		15.0			
1,1-Dichloroethene	0.2340 0.2501	0.2402	0.2424	0.2499	0.2511	Ave		0.2446			0.1000	2.8		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1512 0.1622	0.1553	0.1500	0.1479	0.1608	Ave		0.1546			0.0500	3.8		15.0			
Acetone	0.2162 0.0864	0.1595	0.1181	0.1099	0.0970	Lin1	0.2842	0.0868			0.0500				0.9960		0.9950
Iodomethane	0.3345 0.3288	0.3415	0.3505	0.3469	0.3574	Ave		0.3433				3.1		15.0			
Carbon disulfide	0.6238 0.8183	0.6509	0.6976	0.7556	0.8104	Ave		0.7261			0.1000	11.0		15.0			
Acetonitrile	0.0391 0.0299	0.0368	0.0353	0.0335	0.0333	Ave		0.0346 NT				9.2		15.0			
Methyl acetate	0.2451 0.2094	0.2377	0.2404	0.2374	0.2264	Ave		0.2327			0.1000	5.6		15.0			
Methylene Chloride	0.4532 0.2926	0.3791	0.3449	0.3188	0.3120	Lin1	0.1763	0.2950			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0187 0.0171	0.0206	0.0189	0.0189	0.0192	Ave		0.0189				6.0		15.0			
Acrylonitrile	0.1145 0.1022	0.1105	0.1139	0.1170	0.1105	Ave		0.1114				4.6		15.0			
trans-1,2-Dichloroethene	0.2839 0.2770	0.2945	0.2944	0.2851	0.2889	Ave		0.2873			0.1000	2.4		15.0			
Methyl tert-butyl ether	0.8507 0.8216	0.8205	0.8460	0.8461	0.8566	Ave		0.8402			0.1000	1.8		15.0			
Hexane	0.0529 0.0560	0.0521	0.0488	0.0501	0.0574	Ave		0.0529				6.3		15.0			
1,1-Dichloroethane	0.5478 0.5504	0.5906	0.5789	0.5698	0.5773	Ave		0.5691			0.1000	3.0		15.0			
Vinyl acetate	0.0438 0.0547	0.0420	0.0492	0.0562	0.0568	Ave		0.0505				13.0		15.0			
2-Butanone	0.1431 0.1214	0.1392	0.1413	0.1375	0.1314	Ave		0.1356			0.0500	5.9		15.0			
cis-1,2-Dichloroethene	0.3153 0.3006	0.3006	0.3107	0.3096	0.3157	Ave		0.3087			0.1000	2.2		15.0			
2,2-Dichloropropane	0.2459 0.3076	0.2799	0.2938	0.3057	0.3261	Ave		0.2932				9.5		15.0			
Bromochloromethane	0.1255 0.1262	0.1225	0.1298	0.1329	0.1330	Ave		0.1283				3.3		15.0			
Tetrahydrofuran	0.0875 0.0744	0.0826	0.0830	0.0854	0.0842	Ave		0.0828				5.4		15.0			
Chloroform	0.5169 0.5153	0.5299	0.5388	0.5290	0.5477	Ave		0.5296				2.4		15.0			
1,1,1-Trichloroethane	0.3234 0.3831	0.3500	0.3674	0.3840	0.3986	Ave		0.3678			0.1000	7.4		15.0			
Cyclohexane	0.4217 0.4832	0.4863	0.4431	0.4476	0.4809	Ave		0.4605			0.1000	5.8		15.0			
1,1-Dichloropropene	0.4359 0.4194	0.4199	0.4223	0.4252	0.4356	Ave		0.4264				1.8		15.0			
Carbon tetrachloride	0.2456 0.3072	0.2543	0.2617	0.2867	0.3066	Ave		0.2770			0.1000	9.7		15.0			
1,2-Dichloroethane	0.4838 0.4518	0.4761	0.4673	0.4667	0.4711	Ave		0.4694			0.1000	2.3		15.0			
Benzene	1.2256 1.2453	1.2535	1.2750	1.2420	1.2666	Ave		1.2513			0.5000	1.4		15.0			
Trichloroethene	0.2714 0.2655	0.2671	0.2733	0.2695	0.2719	Ave		0.2698			0.2000	1.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3056 0.3781	0.3553	0.3486	0.3331	0.3656	Ave		0.3477			0.1000	7.4		15.0			
1,2-Dichloropropane	0.2994 0.3048	0.3058	0.3148	0.3132	0.3116	Ave		0.3083			0.1000	1.9		15.0			
Dibromomethane	0.1675 0.1555	0.1521	0.1644	0.1597	0.1644	Ave		0.1606				3.7		15.0			
1,4-Dioxane	0.0023 0.0020	0.0024	0.0025	0.0025	0.0025	Ave		0.0024	NT			8.2		15.0			
Bromodichloromethane	0.2586 0.3533	0.2732	0.3036	0.3210	0.3455	Ave		0.3092			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1532 0.1582	0.1459	0.1670	0.1699	0.1653	Ave		0.1599				5.8		15.0			
cis-1,3-Dichloropropene	0.3061 0.4576	0.3249	0.3845	0.4238	0.4469	Lin1	-0.212	0.4568			0.1500				0.9990		0.9950
4-Methyl-2-pentanone	0.2451 0.2575	0.2540	0.2759	0.2780	0.2752	Ave		0.2643			0.0500	5.3		15.0			
Toluene	1.7728 1.9294	1.8880	1.8619	1.8474	1.9604	Ave		1.8766			0.4000	3.5		15.0			
trans-1,3-Dichloropropene	0.3835 0.6056	0.4211	0.4964	0.5287	0.6010	Lin1	-0.314	0.6041			0.1000				0.9980		0.9950
Ethyl methacrylate	0.4455 0.5778	0.5229	0.5765	0.5788	0.6242	Ave		0.5543				11.0		15.0			
1,1,2-Trichloroethane	0.3279 0.3212	0.3141	0.3421	0.3341	0.3447	Ave		0.3307			0.1000	3.6		15.0			
1,3-Dichloropropane	0.6891 0.6635	0.6944	0.7152	0.6928	0.7223	Ave		0.6962				3.0		15.0			
Tetrachloroethene	0.2452 0.2600	0.2630	0.2668	0.2612	0.2738	Ave		0.2617			0.2000	3.6		15.0			
2-Hexanone	0.2323 0.2576	0.2818	0.2796	0.2822	0.2852	Ave		0.2698			0.0500	7.8		15.0			
Dibromochloromethane	0.1872 0.3114	0.2160	0.2464	0.2709	0.3057	Lin1	-0.171	0.3097							0.9980		0.9950
1,2-Dibromoethane	0.2962 0.3220	0.3089	0.3344	0.3261	0.3462	Ave		0.3223				5.5		15.0			
Chlorobenzene	1.0759 1.0855	1.1279	1.1114	1.0941	1.1299	Ave		1.1041			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	0.2665 0.3469	0.2706	0.3066	0.3249	0.3538	Ave		0.3116				12.0		15.0			
Ethylbenzene	0.5227 0.5869	0.5825	0.6026	0.5858	0.6163	Ave		0.5828				5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6757 0.7551	0.7220	0.7191	0.7176	0.7638	Ave		0.7256				4.3		15.0			
o-Xylene	0.6806 0.7276	0.7176	0.7304	0.7130	0.7551	Ave		0.7207				3.4		15.0			
Styrene	1.0565 1.2902	1.1310	1.1966	1.1904	1.2870	Ave		1.1920			0.3000	7.6		15.0			
Bromoform	0.0815 0.1487	0.0938	0.1133	0.1171	0.1413	Lin1	-0.094	0.1455			0.1000				0.9950		0.9950
Isopropylbenzene	1.5492 1.8304	1.6861	1.6648	1.6944	1.8507	Ave		1.7126			0.1000	6.6		15.0			
1,1,2,2-Tetrachloroethane	0.8553 0.8338	0.9184	0.9469	0.9293	0.9310	Ave		0.9025			0.3000	5.1		15.0			
Bromobenzene	0.8074 0.7779	0.8287	0.8325	0.8084	0.8409	Ave		0.8159				2.8		15.0			
1,2,3-Trichloropropane	0.2880 0.2558	0.2803	0.2925	0.2919	0.2938	Ave		0.2837				5.1		15.0			
trans-1,4-Dichloro-2-butene	0.2181 0.2689	0.2471	0.2346	0.2535	0.2845	Ave		0.2511				9.5		15.0			
n-Propylbenzene	0.7292 0.8665	0.8823	0.8741	0.8947	0.9118	Ave		0.8598				7.7		15.0			
2-Chlorotoluene	0.8583 0.7918	0.8579	0.8258	0.8361	0.8474	Ave		0.8362				3.0		15.0			
1,3,5-Trimethylbenzene	2.5787 2.8481	2.7830	2.7962	2.7951	2.9477	Ave		2.7914				4.3		15.0			
4-Chlorotoluene	0.8421 0.8602	0.8907	0.8940	0.8564	0.9136	Ave		0.8762				3.1		15.0			
tert-Butylbenzene	2.2870 2.5025	2.5077	2.4568	2.4969	2.5752	Ave		2.4710				4.0		15.0			
1,2,4-Trimethylbenzene	2.7586 2.9544	2.8331	2.8754	2.9504	3.0668	Ave		2.9065				3.7		15.0			
sec-Butylbenzene	2.8024 3.1977	3.0238	2.9596	3.0216	3.2137	Ave		3.0365				5.1		15.0			
1,3-Dichlorobenzene	1.5037 1.4698	1.4901	1.5135	1.5069	1.5495	Ave		1.5056			0.6000	1.8		15.0			
p-Isopropyltoluene	2.2069 2.6255	2.4647	2.4703	2.4761	2.6715	Ave		2.4858				6.6		15.0			
1,4-Dichlorobenzene	1.6073 1.5308	1.6512	1.5577	1.5557	1.6211	Ave		1.5873			0.5000	2.9		15.0			
n-Butylbenzene	2.0896 2.4436	2.2004	2.2368	2.2659	2.4792	Ave		2.2859				6.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4966 1.3945	1.5126	1.5119	1.4682	1.5239	Ave		1.4846			0.4000	3.2		15.0			
1,2-Dibromo-3-Chloropropane	0.0886 0.0950	0.0916	0.0904	0.0972	0.1086	Ave		0.0952			0.0500	7.6		15.0			
1,3,5-Trichlorobenzene	0.7904 0.7093	0.7633	0.7631	0.7837	0.8038	Ave		0.7690				4.3		15.0			
1,2,4-Trichlorobenzene	0.6476 0.5852	0.7228	0.7185	0.6951	0.7215	Ave		0.6818			0.2000	8.1		15.0			
Hexachlorobutadiene	0.2814 0.2092	0.2884	0.2495	0.2645	0.2531	Ave		0.2577				11.0		15.0			
Naphthalene	1.9527 1.6802	2.0647	2.2163	2.2497	2.2115	Ave		2.0625				11.0		15.0			
1,2,3-Trichlorobenzene	0.6221 0.4278	0.6296	0.6285	0.6505	0.5938	Ave		0.5920				14.0		15.0			
Dibromofluoromethane (Surr)	0.2331 0.2366	0.2278	0.2460	0.2403	0.2499	Ave		0.2389				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4238 0.3659	0.3675	0.3946	0.3884	0.3801	Ave		0.3867				5.5		15.0			
Toluene-d8 (Surr)	1.5539 1.5702	1.4814	1.5599	1.5466	1.5977	Ave		1.5516				2.5		15.0			
4-Bromofluorobenzene (Surr)	0.5499 0.5492	0.5504	0.5556	0.5412	0.5764	Ave		0.5538				2.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386	NT			8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086	NT			8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406	NT			12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070	NT						0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002 NT						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2340	0.1000	8.27	10.0	-17.3	20.0
Chloromethane	Ave	0.4613	0.4720	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.4246	0.4443	0.1000	10.5	10.0	4.6	20.0
Bromomethane	Ave	0.1684	0.1539	0.0500	9.14	10.0	-8.6	20.0
Chloroethane	Ave	0.2371	0.2329	0.0500	9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.3035	0.3240	0.1000	10.7	10.0	6.8	20.0
Acrolein	Ave	0.0489	0.0264		16.2	30.0	-46.0*	20.0
1,1-Dichloroethene	Ave	0.2446	0.2652	0.1000	10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trichf luoroethane	Ave	0.1546	0.1709	0.0500	11.1	10.0	10.6	20.0
Acetone	Lin1		0.1057	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.3433	0.3416		9.95	10.0	-0.5	20.0
Carbon disulfide	Ave	0.7261	0.7042	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0346	0.0393		34.0	30.0	13.4	20.0
Methyl acetate	Ave	0.2327	0.2751	0.1000	11.8	10.0	18.2	20.0
Methylene Chloride	Lin1		0.3299	0.1000	10.6	10.0	6.0	20.0
tert-Butyl alcohol	Ave	0.0189	0.0195		207	200	3.2	20.0
Acrylonitrile	Ave	0.1114	0.1186		31.9	30.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.8405	0.1000	10.0	10.0	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2952	0.1000	10.3	10.0	2.7	20.0
Hexane	Ave	0.0529	0.0579		10.9	10.0	9.4	20.0
1,1-Dichloroethane	Ave	0.5691	0.6028	0.1000	10.6	10.0	5.9	20.0
Vinyl acetate	Ave	0.0505	0.0387		7.67	10.0	-23.3*	20.0
2-Butanone	Ave	0.1356	0.1389	0.0500	20.5	20.0	2.4	20.0
2,2-Dichloropropane	Ave	0.2932	0.2855		9.74	10.0	-2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.3186	0.1000	10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1283	0.1312		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0828	0.0852		10.3	10.0	2.9	20.0
Chloroform	Ave	0.5296	0.5462	0.2000	10.3	10.0	3.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3794	0.1000	10.3	10.0	3.2	20.0
Cyclohexane	Ave	0.4605	0.4767	0.1000	10.4	10.0	3.5	20.0
1,1-Dichloropropene	Ave	0.4264	0.4383		10.3	10.0	2.8	20.0
Carbon tetrachloride	Ave	0.2770	0.2912	0.1000	10.5	10.0	5.1	20.0
1,2-Dichloroethane	Ave	0.4694	0.4938	0.1000	10.5	10.0	5.2	20.0
Benzene	Ave	1.251	1.319	0.5000	10.5	10.0	5.4	20.0
Trichloroethene	Ave	0.2698	0.2968	0.2000	11.0	10.0	10.0	20.0
1,2-Dichloropropane	Ave	0.3083	0.3319	0.1000	10.8	10.0	7.7	20.0
Methylcyclohexane	Ave	0.3477	0.3665	0.1000	10.5	10.0	5.4	20.0
Dibromomethane	Ave	0.1606	0.1738		10.8	10.0	8.2	20.0
Bromodichloromethane	Ave	0.3092	0.3331	0.1000	10.8	10.0	7.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1599	0.1722		10.8	10.0	7.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.4089	0.1500	9.41	10.0	-5.9	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2914	0.0500	22.1	20.0	10.3	20.0
Toluene	Ave	1.877	1.918	0.4000	10.2	10.0	2.2	20.0
trans-1,3-Dichloropropene	Lin1		0.5291	0.1000	9.28	10.0	-7.2	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3442	0.1000	10.4	10.0	4.1	20.0
1,3-Dichloropropane	Ave	0.6962	0.7105		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	0.2617	0.2644	0.2000	10.1	10.0	1.0	20.0
2-Hexanone	Ave	0.2698	0.2927	0.0500	21.7	20.0	8.5	20.0
Dibromochloromethane	Lin1		0.2623		9.02	10.0	-9.8	20.0
1,2-Dibromoethane	Ave	0.3223	0.3341		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	1.104	1.136	0.3000	10.3	10.0	2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3283		10.5	10.0	5.4	20.0
Ethylbenzene	Ave	0.5828	0.6250		10.7	10.0	7.2	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7452		20.5	20.0	2.7	20.0
o-Xylene	Ave	0.7207	0.7518		10.4	10.0	4.3	20.0
Styrene	Ave	1.192	1.255	0.3000	10.5	10.0	5.3	20.0
Bromoform	Lin1		0.1220	0.1000	9.03	10.0	-9.7	20.0
Isopropylbenzene	Ave	1.713	1.779	0.1000	10.4	10.0	3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.9195	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8159	0.8010		9.82	10.0	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2982		10.5	10.0	5.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2617		20.8	20.0	4.2	20.0
n-Propylbenzene	Ave	0.8598	0.9010		10.5	10.0	4.8	20.0
2-Chlorotoluene	Ave	0.8362	0.8214		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.836		10.2	10.0	1.6	20.0
4-Chlorotoluene	Ave	0.8762	0.8813		10.1	10.0	0.6	20.0
tert-Butylbenzene	Ave	2.471	2.497		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.988		10.3	10.0	2.8	20.0
sec-Butylbenzene	Ave	3.036	3.064		10.1	10.0	0.9	20.0
1,3-Dichlorobenzene	Ave	1.506	1.484	0.6000	9.85	10.0	-1.5	20.0
p-Isopropyltoluene	Ave	2.486	2.579		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.584	0.5000	9.98	10.0	-0.2	20.0
n-Butylbenzene	Ave	2.286	2.295		10.0	10.0	0.4	20.0
1,2-Dichlorobenzene	Ave	1.485	1.504	0.4000	10.1	10.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.1049	0.0500	11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6660	0.2000	9.77	10.0	-2.3	20.0
Hexachlorobutadiene	Ave	0.2577	0.2217		8.60	10.0	-14.0	20.0
Naphthalene	Ave	2.063	2.211		10.7	10.0	7.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5920	0.6250		10.6	10.0	5.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2274		9.72	10.2	-4.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3583		9.46	10.2	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.552	1.491		9.81	10.2	-3.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5469		10.1	10.2	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3065		9.63	10.0	-3.7	20.0
Diisopropyl ether	Ave	0.2775	0.2745		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		527	500	5.4	20.0
Cyclohexanone	Lin1		0.0256		52.9	200	-73.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	3.178		10.7	10.0	6.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: BFB2916.D BFB Injection Date: 04/30/2012

Instrument ID: A3UX16 BFB Injection Time: 11:22

Analysis Batch No.: 42171

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.1	(0.2)1
174	50.0 - 120.00 % of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	4.8	(7.3)1
176	95.0 - 101.0 % of mass 174	63.9	(96.5)1
177	5.0 - 9.0 % of mass 176	4.2	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-42171/2	UXM5270.D	04/30/2012	11:50
	CCV 240-42171/3	UXM5271.D	04/30/2012	12:13
	LCS 240-42171/4	UXM5272.D	04/30/2012	12:36
	MB 240-42171/5	UXM5273.D	04/30/2012	12:59
MSA-MW20D-042012	240-10494-7	UXM5276.D	04/30/2012	14:23
	240-10350-A-5 MS	UXM5284.D	04/30/2012	17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012	17:48

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2885	0.1000	10.2	10.0	2.0	20.0
Chloromethane	Ave	0.4613	0.4195	0.1000	9.10	10.0	-9.0	20.0
Vinyl chloride	Ave	0.4246	0.4029	0.1000	9.49	10.0	-5.1	20.0
Bromomethane	Ave	0.1684	0.1518	0.0500	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2371	0.2197	0.0500	9.27	10.0	-7.3	20.0
Trichlorofluoromethane	Ave	0.3035	0.3119	0.1000	10.3	10.0	2.8	20.0
Acrolein	Ave	0.0489	0.0440 NT		89.9	100	-10.1	20.0
1,1-Dichloroethene	Ave	0.2446	0.2428	0.1000	9.93	10.0	-0.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1669	0.0500	10.8	10.0	8.0	20.0
Acetone	Lin1		0.0864	0.0500	16.6	20.0	-17.0	20.0
Iodomethane	Ave	0.3433	0.3500		10.2	10.0	1.9	20.0
Carbon disulfide	Ave	0.7261	0.7265	0.1000	10.0	10.0	0.0	20.0
Acetonitrile	Ave	0.0346	0.0292 NT		84.2	100	-15.8	20.0
Methyl acetate	Ave	0.2327	0.1967	0.1000	16.9	20.0	-15.5	20.0
Methylene Chloride	Lin1		0.3004	0.1000	9.58	10.0	-4.2	20.0
tert-Butyl alcohol	Ave	0.0189	0.0158		167	200	-16.6	20.0
Acrylonitrile	Ave	0.1114	0.0998		17.9	20.0	-10.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7869	0.1000	9.36	10.0	-6.4	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2775	0.1000	9.66	10.0	-3.4	20.0
Hexane	Ave	0.0529	0.0551		10.4	10.0	4.1	20.0
1,1-Dichloroethane	Ave	0.5691	0.5381	0.1000	9.45	10.0	-5.5	20.0
Vinyl acetate	Ave	0.0505	0.0473		9.37	10.0	-6.3	20.0
2-Butanone	Ave	0.1356	0.1228	0.0500	18.1	20.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2944	0.1000	9.54	10.0	-4.6	20.0
2,2-Dichloropropane	Ave	0.2932	0.3012		10.3	10.0	2.7	20.0
Bromochloromethane	Ave	0.1283	0.1246		9.71	10.0	-2.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		8.61	10.0	-13.9	20.0
Chloroform	Ave	0.5296	0.5127	0.2000	9.68	10.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3764	0.1000	10.2	10.0	2.3	20.0
Cyclohexane	Ave	0.4605	0.4777	0.1000	10.4	10.0	3.7	20.0
1,1-Dichloropropene	Ave	0.4264	0.4061		9.53	10.0	-4.7	20.0
Carbon tetrachloride	Ave	0.2770	0.2871	0.1000	10.4	10.0	3.7	20.0
1,2-Dichloroethane	Ave	0.4694	0.4390	0.1000	9.35	10.0	-6.5	20.0
Benzene	Ave	1.251	1.173	0.5000	9.38	10.0	-6.2	20.0
Trichloroethene	Ave	0.2698	0.2578	0.2000	9.56	10.0	-4.4	20.0
1,2-Dichloropropane	Ave	0.3083	0.2961	0.1000	9.61	10.0	-3.9	20.0
Methylcyclohexane	Ave	0.3477	0.3809	0.1000	11.0	10.0	9.5	20.0
Dibromomethane	Ave	0.1606	0.1478		9.20	10.0	-8.0	20.0
1,4-Dioxane	Ave	0.0024	0.0019 NT		403	500	-19.5	20.0
Bromodichloromethane	Ave	0.3092	0.3153	0.1000	10.2	10.0	2.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1599	0.1432		17.9	20.0	-10.4	20.0
cis-1,3-Dichloropropene	Lin1		0.3918	0.1500	9.04	10.0	-9.6	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2348	0.0500	17.8	20.0	-11.1	20.0
Toluene	Ave	1.877	1.787	0.4000	9.52	10.0	-4.8	20.0
trans-1,3-Dichloropropene	Lin1		0.5043	0.1000	8.87	10.0	-11.3	20.0
Ethyl methacrylate	Ave	0.5543	0.5335		9.62	10.0	-3.8	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3148	0.1000	9.52	10.0	-4.8	20.0
1,3-Dichloropropane	Ave	0.6962	0.6368		9.15	10.0	-8.5	20.0
Tetrachloroethene	Ave	0.2617	0.2605	0.2000	9.95	10.0	-0.5	20.0
2-Hexanone	Ave	0.2698	0.2379	0.0500	17.6	20.0	-11.8	20.0
Dibromochloromethane	Lin1		0.2633		9.05	10.0	-9.5	20.0
1,2-Dibromoethane	Ave	0.3223	0.3055		9.48	10.0	-5.2	20.0
Chlorobenzene	Ave	1.104	1.033	0.3000	9.36	10.0	-6.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3137		10.1	10.0	0.7	20.0
Ethylbenzene	Ave	0.5828	0.5604		9.61	10.0	-3.9	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7011		19.3	20.0	-3.4	20.0
o-Xylene	Ave	0.7207	0.6828		9.47	10.0	-5.3	20.0
Styrene	Ave	1.192	1.161	0.3000	9.74	10.0	-2.6	20.0
Bromoform	Lin1		0.1180	0.1000	8.76	10.0	-12.4	20.0
Isopropylbenzene	Ave	1.713	1.674	0.1000	9.78	10.0	-2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.8145	0.3000	9.03	10.0	-9.7	20.0
Bromobenzene	Ave	0.8159	0.7672		9.40	10.0	-6.0	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2411		8.50	10.0	-15.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2253		8.97	10.0	-10.3	20.0
n-Propylbenzene	Ave	0.8598	0.8408		9.78	10.0	-2.2	20.0
2-Chlorotoluene	Ave	0.8362	0.7704		9.21	10.0	-7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.685		9.62	10.0	-3.8	20.0
4-Chlorotoluene	Ave	0.8762	0.8030		9.16	10.0	-8.4	20.0
tert-Butylbenzene	Ave	2.471	2.377		9.62	10.0	-3.8	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.768		9.52	10.0	-4.8	20.0
sec-Butylbenzene	Ave	3.036	2.929		9.65	10.0	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.506	1.415	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.486	2.404		9.67	10.0	-3.3	20.0
1,4-Dichlorobenzene	Ave	1.587	1.474	0.5000	9.29	10.0	-7.1	20.0
n-Butylbenzene	Ave	2.286	2.220		9.71	10.0	-2.9	20.0
1,2-Dichlorobenzene	Ave	1.485	1.388	0.4000	9.35	10.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.0894	0.0500	9.39	10.0	-6.1	20.0
1,3,5-Trichlorobenzene	Ave	0.7690	0.7641		9.94	10.0	-0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6748	0.2000	9.90	10.0	-1.0	20.0
Hexachlorobutadiene	Ave	0.2577	0.2544		9.87	10.0	-1.3	20.0
Naphthalene	Ave	2.063	1.886		9.14	10.0	-8.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5920	0.5682		9.60	10.0	-4.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2170		9.27	10.2	-9.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3153		8.32	10.2	-18.5	20.0
Toluene-d8 (Surr)	Ave	1.552	1.338		8.81	10.2	-13.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5067		9.34	10.2	-8.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2389	0.2197		9.39	10.2	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3395		8.96	10.2	-12.2	20.0
Toluene-d8 (Surr)	Ave	1.552	1.410		9.28	10.2	-9.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5352		9.87	10.2	-3.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4967		9.39	10.0	-6.1	20.0
Ethyl ether	Ave	0.3182	0.2722		8.56	10.0	-14.4	20.0
3-Chloro-1-propene	Ave	0.1408	0.1458		10.4	10.0	3.5	20.0
Diisopropyl ether	Ave	0.2775	0.2702		48.7	50.0	-2.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.4999		9.70	10.0	-3.0	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.8664		9.74	10.0	-2.6	20.0
Propionitrile	Ave	0.0386	0.0384		19.9	20.0	-0.6	20.0
Ethyl acetate	Ave	0.2719	0.2478		18.2	20.0	-8.9	20.0
Methacrylonitrile	Ave	0.1921	0.1753		9.13	10.0	-8.7	20.0
Isobutyl alcohol	Ave	0.0086	0.0076		176	200	-12.2	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6972		9.74	10.0	-2.6	20.0
n-Heptane	Ave	0.0406	0.0438		10.8	10.0	7.7	20.0
n-Butanol	Lin1		0.0054		165	200	-17.6	20.0
2-Nitropropane	Qua		0.0379		18.5	20.0	-7.5	20.0
Cyclohexanone	Lin1		0.0798		79.4	100	-20.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.888		9.68	10.0	-3.2	20.0
2-Methylnaphthalene	Qua		0.8088		16.2	20.0	-19.0	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: UXM5273.D Lab Sample ID: MB 240-42171/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 04/30/2012 12:59

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42171/4	UXM5272.D	04/30/2012 12:36
MSA-MW20D-042012	240-10494-7	UXM5276.D	04/30/2012 14:23
	240-10350-A-5 MS	UXM5284.D	04/30/2012 17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012 17:48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.288	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	96		66-117
2037-26-5	Toluene-d8 (Surr)	92		74-115
1868-53-7	Dibromofluoromethane (Surr)	86		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 0.197

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	0.197	J

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: BFB3643.D BFB Injection Date: 04/09/2012

Instrument ID: A3UX10 BFB Injection Time: 10:15

Analysis Batch No.: 39613

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	18.7	
75	30.0 - 60.0 % of mass 95	48.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.0	(0.0)1
174	50.0 - 120.00 % of mass 95	74.4	
175	5.0 - 9.0 % of mass 174	5.3	(7.1)1
176	95.0 - 101.0 % of mass 174	71.7	(96.3)1
177	5.0 - 9.0 % of mass 176	5.0	(7.0)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-39613/2	UXX0990.D	04/09/2012	10:43
	STD8260 240-39613/3	UXX0991.D	04/09/2012	11:04
	STD8260 240-39613/4	UXX0992.D	04/09/2012	11:26
	STD8260 240-39613/5	UXX0993.D	04/09/2012	11:47
	STD8260 240-39613/6	UXX0994.D	04/09/2012	12:09
	STD8260 240-39613/7	UXX0995.D	04/09/2012	12:30
	STDA9 240-39613/8	UXX0996.D	04/09/2012	12:51
	STDA9 240-39613/9	UXX0997.D	04/09/2012	13:13
	STDA9 240-39613/10	UXX0998.D	04/09/2012	13:35
	STDA9 240-39613/11	UXX0999.D	04/09/2012	13:56
	STDA9 240-39613/12	UXX1000.D	04/09/2012	14:18
	STDA9 240-39613/13	UXX1001.D	04/09/2012	14:40
	ICV 240-39613/14	UXX1002.D	04/09/2012	15:01

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-39613/7	UXX0995.D
Level 2	STD8260 240-39613/6	UXX0994.D
Level 3	STD8260 240-39613/5	UXX0993.D
Level 4	STD8260 240-39613/4	UXX0992.D
Level 5	STD8260 240-39613/3	UXX0991.D
Level 6	STD8260 240-39613/2	UXX0990.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.1922 0.1920	0.1832	0.1942	0.1712	0.1791	Ave		0.1853			0.1000	4.9		15.0			
Chloromethane	0.2986 0.2893	0.3127	0.2900	0.2885	0.3062	Ave		0.2976			0.1000	3.4		15.0			
Vinyl chloride	0.2876 0.2937	0.2940	0.2946	0.2867	0.3020	Ave		0.2931			0.1000	1.9		15.0			
Bromomethane	0.1058 0.0872	0.1244	0.0954	0.1061	0.1061	Ave		0.1041			0.0500	12.0		15.0			
Chloroethane	0.1423 0.1435	0.1560	0.1496	0.1525	0.1578	Ave		0.1503				4.2		15.0			
Trichlorofluoromethane	0.2195 0.2316	0.2381	0.2442	0.2249	0.2394	Ave		0.2330			0.1000	4.0		15.0			
Acrolein	0.0270 0.0353	0.0353	0.0335	0.0353	0.0387	Ave		0.0342	NT			11.0		15.0			
1,1-Dichloroethene	0.2065 0.2066	0.2039	0.1970	0.1975	0.2117	Ave		0.2039			0.1000	2.8		15.0			
Acetone	0.0847 0.0537	0.0729	0.0526	0.0546	0.0602	Lin1	0.0298	0.0547			0.0500				0.9960		0.9950
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1545 0.1565	0.1488	0.1580	0.1391	0.1516	Ave		0.1514			0.0500	4.6		15.0			
Iodomethane	0.2922 0.3012	0.3044	0.2997	0.3038	0.3300	Ave		0.3052				4.2		15.0			
Carbon disulfide	0.7012 0.7556	0.6734	0.6914	0.7088	0.7810	Ave		0.7186			0.1000	5.7		15.0			
Acetonitrile	0.0197 0.0153	0.0213	0.0162	0.0166	0.0168	Ave		0.0176	NT			13.0		15.0			
Methyl acetate	0.1785 0.1672	0.1799	0.1553	0.1657	0.1792	Ave		0.1710			0.1000	5.8		15.0			
Methylene Chloride	0.4964 0.2337	0.3611	0.2578	0.2506	0.2588	Lin1	0.1287	0.2373			0.1000				0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0139 0.0113	0.0159	0.0121	0.0128	0.0132	Ave		0.0132				12.0		15.0			
Acrylonitrile	0.0815 0.0870	0.0882	0.0840	0.0861	0.0926	Ave		0.0866				4.4		15.0			
Methyl tert-butyl ether	0.6298 0.6761	0.6642	0.6410	0.6715	0.7312	Ave		0.6690			0.1000	5.3		15.0			
trans-1,2-Dichloroethene	0.2368 0.2297	0.2291	0.2268	0.2326	0.2486	Ave		0.2339			0.1000	3.4		15.0			
Hexane	0.0580 0.0648	0.0554	0.0620	0.0574	0.0625	Ave		0.0600				6.1		15.0			
1,1-Dichloroethane	0.4254 0.4303	0.4217	0.4250	0.4379	0.4668	Ave		0.4345			0.1000	3.9		15.0			
Vinyl acetate	0.0316 0.0484	0.0385	0.0396	0.0459	0.0502	Lin1	-0.011	0.0486							0.9980		0.9950
2-Butanone	0.1052 0.0887	0.0917	0.0897	0.0852	0.0938	Ave		0.0924			0.0500	7.5		15.0			
cis-1,2-Dichloroethene	0.2508 0.2495	0.2545	0.2464	0.2543	0.2736	Ave		0.2548			0.1000	3.8		15.0			
2,2-Dichloropropane	0.2781 0.2817	0.2747	0.2768	0.2805	0.3092	Ave		0.2835				4.5		15.0			
Bromochloromethane	0.1023 0.1073	0.1074	0.1037	0.1113	0.1197	Ave		0.1086				5.8		15.0			
Tetrahydrofuran	0.0749 0.0640	0.0739	0.0637	0.0641	0.0668	Ave		0.0679				7.6		15.0			
Chloroform	0.3657 0.3760	0.3800	0.3621	0.3800	0.4090	Ave		0.3788				4.4		15.0			
1,1,1-Trichloroethane	0.2761 0.3005	0.2886	0.2958	0.3014	0.3241	Ave		0.2977			0.1000	5.4		15.0			
Cyclohexane	0.4772 0.4869	0.4382	0.4655	0.4350	0.4781	Ave		0.4635			0.1000	4.7		15.0			
1,1-Dichloropropene	0.3213 0.3320	0.3151	0.3070	0.3141	0.3435	Ave		0.3222				4.2		15.0			
Carbon tetrachloride	0.2206 0.2597	0.2225	0.2352	0.2404	0.2675	Ave		0.2410			0.1000	8.0		15.0			
1,2-Dichloroethane	0.2598 0.2874	0.2825	0.2743	0.2849	0.3058	Ave		0.2825			0.1000	5.4		15.0			
Benzene	0.9882 0.9961	0.9621	0.9148	0.9557	1.0428	Ave		0.9766			0.5000	4.4		15.0			
Trichloroethene	0.2155 0.2336	0.2156	0.2171	0.2257	0.2465	Ave		0.2257			0.2000	5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichloropropane	0.2031 0.2332	0.2084	0.2116	0.2223	0.2432	Ave		0.2203			0.1000	7.1		15.0			
Methylcyclohexane	0.4272 0.4463	0.3866	0.4134	0.3942	0.4352	Ave		0.4171			0.1000	5.6		15.0			
Dibromomethane	0.1001 0.1127	0.1089	0.1070	0.1126	0.1211	Ave		0.1104				6.3		15.0			
1,4-Dioxane	0.0013 0.0009	0.0018	0.0014	0.0014	0.0014	Qua	-0.027	0.0018	Nt 0						0.9970		0.9900
Bromodichloromethane	0.2071 0.2625	0.2125	0.2276	0.2426	0.2687	Ave		0.2368			0.1000	11.0		15.0			
2-Chloroethyl vinyl ether	0.0953 0.1154	0.1026	0.0991	0.1078	0.1132	Ave		0.1056				7.5		15.0			
cis-1,3-Dichloropropene	0.2382 0.3446	0.2773	0.2815	0.3117	0.3437	Ave		0.2995			0.1500	14.0		15.0			
4-Methyl-2-pentanone	0.1971 0.1880	0.2052	0.1814	0.1816	0.1961	Ave		0.1916			0.0500	5.0		15.0			
Toluene	1.2786 1.5136	1.3700	1.3458	1.4118	1.5315	Ave		1.4085			0.4000	7.0		15.0			
trans-1,3-Dichloropropene	0.3267 0.4617	0.3736	0.4006	0.4275	0.4637	Ave		0.4089			0.1000	13.0		15.0			
Ethyl methacrylate	0.3361 0.4221	0.3883	0.3882	0.4025	0.4314	Ave		0.3948				8.5		15.0			
1,1,2-Trichloroethane	0.2085 0.2507	0.2511	0.2385	0.2498	0.2616	Ave		0.2434			0.1000	7.6		15.0			
1,3-Dichloropropane	0.4259 0.4866	0.4555	0.4568	0.4677	0.4983	Ave		0.4651				5.5		15.0			
Tetrachloroethene	0.2410 0.2722	0.2563	0.2573	0.2544	0.2751	Ave		0.2594			0.2000	4.8		15.0			
2-Hexanone	0.2221 0.1891	0.2255	0.1950	0.1947	0.2012	Ave		0.2046			0.0500	7.5		15.0			
Dibromochloromethane	0.1763 0.2674	0.1884	0.2182	0.2426	0.2727	Lin1	-0.068	0.2661							0.9970		0.9950
1,2-Dibromoethane	0.2133 0.2476	0.2244	0.2361	0.2432	0.2575	Ave		0.2370				6.8		15.0			
Chlorobenzene	0.8320 0.8941	0.8752	0.8283	0.8641	0.9261	Ave		0.8700			0.3000	4.3		15.0			
1,1,1,2-Tetrachloroethane	0.2333 0.3032	0.2624	0.2751	0.2957	0.3260	Ave		0.2826				12.0		15.0			
Ethylbenzene	0.4292 0.5024	0.4724	0.4654	0.4836	0.5280	Ave		0.4802				7.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.5577 0.6499	0.5701	0.5874	0.6183	0.6694	Ave		0.6088				7.4		15.0			
o-Xylene	0.5549 0.6240	0.6077	0.5963	0.6172	0.6639	Ave		0.6107				5.8		15.0			
Styrene	0.8287 1.0696	0.9177	0.9680	1.0250	1.1140	Ave		0.9872			0.3000	11.0		15.0			
Bromoform	0.0939 0.1719	0.1147	0.1361	0.1517	0.1745	Lin1	-0.053	0.1705			0.1000				0.9970		0.9950
Isopropylbenzene	1.3747 1.6409	1.4124	1.4899	1.5573	1.7130	Ave		1.5314			0.1000	8.6		15.0			
1,1,2,2-Tetrachloroethane	0.5732 0.6230	0.6197	0.5912	0.6095	0.6386	Ave		0.6092			0.3000	3.9		15.0			
Bromobenzene	0.6522 0.6987	0.6857	0.6341	0.6725	0.7188	Ave		0.6770				4.6		15.0			
1,2,3-Trichloropropane	0.1810 0.1956	0.2088	0.1929	0.2013	0.2011	Ave		0.1968				4.8		15.0			
trans-1,4-Dichloro-2-butene	0.1360 0.2023	0.1580	0.1647	0.1760	0.2002	Ave		0.1729				15.0		15.0			
n-Propylbenzene	0.7694 0.8091	0.7558	0.7378	0.7624	0.8209	Ave		0.7759				4.2		15.0			
2-Chlorotoluene	0.6505 0.6734	0.6398	0.6312	0.6578	0.7023	Ave		0.6592				3.9		15.0			
1,3,5-Trimethylbenzene	2.0379 2.4370	2.1698	2.2099	2.3280	2.4921	Ave		2.2791				7.5		15.0			
4-Chlorotoluene	0.6323 0.7151	0.6892	0.6608	0.6847	0.7321	Ave		0.6857				5.3		15.0			
tert-Butylbenzene	1.9422 2.3279	2.0355	1.8591	2.0505	2.2285	Ave		2.0739				8.5		15.0			
1,2,4-Trimethylbenzene	2.1858 2.4421	2.2876	2.2306	2.3565	2.5508	Ave		2.3422				5.8		15.0			
sec-Butylbenzene	2.6755 2.9768	2.7608	2.6887	2.8219	3.0539	Ave		2.8296				5.5		15.0			
1,3-Dichlorobenzene	1.3196 1.3143	1.3142	1.2097	1.2670	1.3816	Ave		1.3010			0.6000	4.4		15.0			
p-Isopropyltoluene	2.1167 2.4358	2.2268	2.2779	2.3536	2.5285	Ave		2.3232				6.4		15.0			
1,4-Dichlorobenzene	1.4040 1.3764	1.4143	1.2899	1.3378	1.4396	Ave		1.3770			0.5000	4.0		15.0			
n-Butylbenzene	1.9086 2.1618	2.0204	1.9681	2.0761	2.2496	Ave		2.0641				6.1		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.1398 1.1675	1.1499	1.1302	1.1865	1.2579	Ave		1.1720			0.4000	4.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0615 0.0778	0.0863	0.0847	0.0841	0.0875	Ave		0.0803			0.0500	12.0		15.0			
1,3,5-Trichlorobenzene	0.7364 0.6391	0.8036	0.7375	0.7812	0.7751	Ave		0.7455				7.8		15.0			
1,2,4-Trichlorobenzene	0.6466 0.4706	0.6576	0.5934	0.6231	0.6022	Ave		0.5989			0.2000	11.0		15.0			
Hexachlorobutadiene	0.3137 0.2066	0.2926	0.2723	0.2702	0.2679	Ave		0.2705				13.0		15.0			
Naphthalene	1.4992 1.0051	1.5650	1.4010	1.4042	1.3227	Ave		1.3662				14.0		15.0			
1,2,3-Trichlorobenzene	0.4997 +++++	0.5300	0.4779	0.4705	0.4172	Ave		0.4791				8.7		15.0			
Dibromofluoromethane (Surr)	0.1864 0.1774	0.1644	0.1790	0.1914	0.1964	Ave		0.1825				6.3		15.0			
1,2-Dichloroethane-d4 (Surr)	0.2221 0.2179	0.2119	0.2324	0.2502	0.2570	Ave		0.2319				7.8		15.0			
Toluene-d8 (Surr)	1.1066 1.1734	1.0100	1.1068	1.1923	1.2234	Ave		1.1354				6.8		15.0			
4-Bromofluorobenzene (Surr)	0.4485 0.4158	0.4010	0.4244	0.4564	0.4511	Ave		0.4329				5.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 12:51 Calibration End Date: 04/09/2012 14:40 Calibration ID: 7932

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STDA9 240-39613/13	UXX1001.D
Level 2	STDA9 240-39613/12	UXX1000.D
Level 3	STDA9 240-39613/11	UXX0999.D
Level 4	STDA9 240-39613/10	UXX0998.D
Level 5	STDA9 240-39613/9	UXX0997.D
Level 6	STDA9 240-39613/8	UXX0996.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.3643 0.3617	0.3526	0.3600	0.3550	0.3495	Ave		0.3572				1.6		15.0			
Ethyl ether	0.2107 0.2179	0.2024	0.2090	0.2155	0.2126	Ave		0.2114				2.6		15.0			
3-Chloro-1-propene	0.1084 0.1417	0.1204	0.1266	0.1330	0.1330	Ave		0.1272				9.2		15.0			
Diisopropyl ether	0.1932 0.2263	0.1983	0.2038	0.2131	0.2167	Ave		0.2086				5.9		15.0			
2-Chloro-1,3-butadiene	0.3480 0.4108	0.3615	0.3814	0.3852	0.3949	Ave		0.3803				6.0		15.0			
Ethyl-t-butyl ether (ETBE)	0.7025 0.7601	0.7010	0.7140	0.7327	0.7418	Ave		0.7254				3.3		15.0			
Propionitrile	0.0228 0.0268	0.0240	0.0258	0.0264	0.0268	Ave		0.0254	NT			6.5		15.0			
Ethyl acetate	0.1895 0.1788	0.1648	0.1556	0.1742	0.1716	Ave		0.1724				6.8		15.0			
Methacrylonitrile	0.1260 0.1318	0.1402	0.1198	0.1290	0.1314	Ave		0.1297				5.2		15.0			
Isobutyl alcohol	0.0085 0.0080	0.0116	0.0080	0.0082	0.0088	Lin1	0.0237	0.0082	NT						0.9960		0.9950
Tert-amyl-methyl ether (TAME)	0.5913 0.6785	0.6204	0.6192	0.6508	0.6555	Ave		0.6360				4.9		15.0			
n-Heptane	0.0548 0.0616	0.0580	0.0581	0.0600	0.0595	Ave		0.0587				4.0		15.0			
n-Butanol	0.0066 0.0074	0.0082	0.0087	0.0085	0.0091	Ave		0.0081	NT			12.0		15.0			
2-Nitropropane	0.0284 0.0370	0.0273	0.0305	0.0325	0.0354	Ave		0.0318	NT			12.0		15.0			
Cyclohexanone	0.0483 0.0436	0.0577	0.0472	0.0494	0.0533	Ave		0.0499	NT			9.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 12:51 Calibration End Date: 04/09/2012 14:40 Calibration ID: 7932

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.1321 2.3697	2.1272	2.1034	2.2882	2.3575	Ave		2.2297				5.5		15.0			
2-Methylnaphthalene	0.4611 0.4017	0.4993	0.3907	0.4014	0.4716	Ave		0.4376				10.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1853	0.2035	0.1000	11.0	10.0	9.8	20.0
Chloromethane	Ave	0.2976	0.3144	0.1000	10.6	10.0	5.7	20.0
Vinyl chloride	Ave	0.2931	0.2808	0.1000	9.58	10.0	-4.2	20.0
Bromomethane	Ave	0.1041	0.1074	0.0500	10.3	10.0	3.1	20.0
Chloroethane	Ave	0.1503	0.1536	0.0500	10.2	10.0	2.2	20.0
Trichlorofluoromethane	Ave	0.2330	0.2481	0.1000	10.7	10.0	6.5	20.0
1,1-Dichloroethene	Ave	0.2039	0.2103	0.1000	10.3	10.0	3.1	20.0
Acetone	Lin1		0.0534	0.0500	19.0	20.0	-5.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1514	0.1693	0.0500	11.2	10.0	11.8	20.0
Iodomethane	Ave	0.3052	0.3042		9.97	10.0	-0.3	20.0
Carbon disulfide	Ave	0.7186	0.7032	0.1000	9.79	10.0	-2.1	20.0
Methyl acetate	Ave	0.1710	0.1780	0.1000	10.4	10.0	4.1	20.0
Methylene Chloride	Lin1		0.2327	0.1000	9.26	10.0	-7.4	20.0
tert-Butyl alcohol	Ave	0.0132	0.0116		176	200	-12.2	20.0
Methyl tert-butyl ether	Ave	0.6690	0.6335	0.1000	9.47	10.0	-5.3	20.0
trans-1,2-Dichloroethene	Ave	0.2339	0.2317	0.1000	9.91	10.0	-0.9	20.0
Hexane	Ave	0.0600	0.0692		11.5	10.0	15.3	20.0
1,1-Dichloroethane	Ave	0.4345	0.4342	0.1000	10.0	10.0	-0.0	20.0
Vinyl acetate	Lin1		0.0412		8.71	10.0	-12.9	20.0
2-Butanone	Ave	0.0924	0.0812	0.0500	17.6	20.0	-12.1	20.0
cis-1,2-Dichloroethene	Ave	0.2548	0.2462	0.1000	9.66	10.0	-3.4	20.0
2,2-Dichloropropane	Ave	0.2835	0.2698		9.52	10.0	-4.8	20.0
Bromochloromethane	Ave	0.1086	0.1042		9.60	10.0	-4.0	20.0
Tetrahydrofuran	Ave	0.0679	0.0621		9.15	10.0	-8.5	20.0
Chloroform	Ave	0.3788	0.3616	0.2000	9.55	10.0	-4.5	20.0
1,1,1-Trichloroethane	Ave	0.2977	0.2884	0.1000	9.69	10.0	-3.1	20.0
Cyclohexane	Ave	0.4635	0.4585	0.1000	9.89	10.0	-1.1	20.0
1,1-Dichloropropene	Ave	0.3222	0.3187		9.89	10.0	-1.1	20.0
Carbon tetrachloride	Ave	0.2410	0.2360	0.1000	9.79	10.0	-2.1	20.0
1,2-Dichloroethane	Ave	0.2825	0.2719	0.1000	9.63	10.0	-3.7	20.0
Benzene	Ave	0.9766	0.9299	0.5000	9.52	10.0	-4.8	20.0
Trichloroethene	Ave	0.2257	0.2189	0.2000	9.70	10.0	-3.0	20.0
1,2-Dichloropropane	Ave	0.2203	0.2134	0.1000	9.69	10.0	-3.1	20.0
Methylcyclohexane	Ave	0.4171	0.4233	0.1000	10.1	10.0	1.5	20.0
Dibromomethane	Ave	0.1104	0.1097		9.94	10.0	-0.6	20.0
Bromodichloromethane	Ave	0.2368	0.2294	0.1000	9.68	10.0	-3.2	20.0
2-Chloroethyl vinyl ether	Ave	0.1056	0.1019		9.65	10.0	-3.5	20.0
cis-1,3-Dichloropropene	Ave	0.2995	0.2767	0.1500	9.24	10.0	-7.6	20.0
4-Methyl-2-pentanone	Ave	0.1916	0.1755	0.0500	18.3	20.0	-8.4	20.0
Toluene	Ave	1.409	1.331	0.4000	9.45	10.0	-5.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Ave	0.4089	0.3861	0.1000	9.44	10.0	-5.6	20.0
1,1,2-Trichloroethane	Ave	0.2434	0.2412	0.1000	9.91	10.0	-0.9	20.0
1,3-Dichloropropane	Ave	0.4651	0.4482		9.64	10.0	-3.6	20.0
Tetrachloroethene	Ave	0.2594	0.2571	0.2000	9.91	10.0	-0.9	20.0
2-Hexanone	Ave	0.2046	0.1889	0.0500	18.5	20.0	-7.7	20.0
Dibromochloromethane	Lin1		0.2162		8.38	10.0	-16.2	20.0
1,2-Dibromoethane	Ave	0.2370	0.2321		9.79	10.0	-2.1	20.0
Chlorobenzene	Ave	0.8700	0.8349	0.3000	9.60	10.0	-4.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.2826	0.2649		9.37	10.0	-6.3	20.0
Ethylbenzene	Ave	0.4802	0.4607		9.60	10.0	-4.0	20.0
m-Xylene & p-Xylene	Ave	0.6088	0.5860		19.3	20.0	-3.7	20.0
o-Xylene	Ave	0.6107	0.5798		9.49	10.0	-5.1	20.0
Styrene	Ave	0.9872	0.9621	0.3000	9.75	10.0	-2.5	20.0
Bromoform	Lin1		0.1315	0.1000	8.02	10.0	-19.8	20.0
Isopropylbenzene	Ave	1.531	1.464	0.1000	9.56	10.0	-4.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6092	0.5847	0.3000	9.60	10.0	-4.0	20.0
Bromobenzene	Ave	0.6770	0.6581		9.72	10.0	-2.8	20.0
1,2,3-Trichloropropane	Ave	0.1968	0.1912		9.72	10.0	-2.8	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1624		18.8	20.0	-6.1	20.0
n-Propylbenzene	Ave	0.7759	0.7610		9.81	10.0	-1.9	20.0
2-Chlorotoluene	Ave	0.6592	0.6226		9.45	10.0	-5.5	20.0
1,3,5-Trimethylbenzene	Ave	2.279	2.210		9.70	10.0	-3.0	20.0
4-Chlorotoluene	Ave	0.6857	0.6680		9.74	10.0	-2.6	20.0
tert-Butylbenzene	Ave	2.074	1.908		9.20	10.0	-8.0	20.0
1,2,4-Trimethylbenzene	Ave	2.342	2.228		9.51	10.0	-4.9	20.0
sec-Butylbenzene	Ave	2.830	2.735		9.66	10.0	-3.4	20.0
1,3-Dichlorobenzene	Ave	1.301	1.223	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.323	2.318		9.98	10.0	-0.2	20.0
1,4-Dichlorobenzene	Ave	1.377	1.253	0.5000	9.10	10.0	-9.0	20.0
n-Butylbenzene	Ave	2.064	1.947		9.43	10.0	-5.7	20.0
1,2-Dichlorobenzene	Ave	1.172	1.093	0.4000	9.33	10.0	-6.7	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0803	0.0756	0.0500	9.40	10.0	-6.0	20.0
1,2,4-Trichlorobenzene	Ave	0.5989	0.4928	0.2000	8.23	10.0	-17.7	20.0
Hexachlorobutadiene	Ave	0.2705	0.2355		8.70	10.0	-13.0	20.0
Naphthalene	Ave	1.366	1.126		8.25	10.0	-17.5	20.0
1,2,3-Trichlorobenzene	Ave	0.4791	0.3787		7.90	10.0	-21.0*	20.0
Dibromofluoromethane (Surr)	Ave	0.1825	0.1722		9.43	10.0	-5.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2274		9.81	10.0	-1.9	20.0
Toluene-d8 (Surr)	Ave	1.135	1.083		9.54	10.0	-4.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3943		9.11	10.0	-8.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-39613/14 Calibration Date: 04/09/2012 15:01

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 12:51

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 14:40

Lab File ID: UXX1002.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2114	0.2095		9.91	10.0	-0.9	20.0
Diisopropyl ether	Ave	0.2086	0.2011		9.64	10.0	-3.6	20.0
Isobutyl alcohol	Lin1		0.0085		514	500	2.8	20.0
Cyclohexanone	Ave	0.0499	0.0116		46.5	200	-76.7*	20.0
1,2,3-Trimethylbenzene	Ave	2.230	2.149		9.64	10.0	-3.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: BFB4683.D BFB Injection Date: 04/27/2012

Instrument ID: A3UX10 BFB Injection Time: 09:20

Analysis Batch No.: 41857

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.7	
75	30.0 - 60.0 % of mass 95	50.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.4	
173	Less than 2.0 % of mass 174	0.3	(0.3)1
174	50.0 - 120.00 % of mass 95	90.5	
175	5.0 - 9.0 % of mass 174	6.6	(7.3)1
176	95.0 - 101.0 % of mass 174	89.3	(98.7)1
177	5.0 - 9.0 % of mass 176	6.0	(6.7)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-41857/2	UXX4986.D	04/27/2012	09:48
	CCV 240-41857/3	UXX4987.D	04/27/2012	10:10
	LCS 240-41857/4	UXX4988.D	04/27/2012	10:31
	MB 240-41857/6	UXX4990.D	04/27/2012	11:14
MSA-MW20S-042012	240-10494-3	UXX4991.D	04/27/2012	11:57
MSA-MW20I-042012	240-10494-4	UXX4992.D	04/27/2012	12:19
MSA-MW17I-042012	240-10494-6	UXX4993.D	04/27/2012	12:41
TB-042012	240-10494-1	UXX5005.D	04/27/2012	16:59
MSA-MW35S-042012	240-10494-2	UXX5006.D	04/27/2012	17:20
MSA-MW17S-042012	240-10494-5	UXX5007.D	04/27/2012	17:42
MSA-MW20S-042012 MS	240-10494-3 MS	UXX5009.D	04/27/2012	18:24
MSA-MW20S-042012 MSD	240-10494-3 MSD	UXX5010.D	04/27/2012	18:46

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.1853	0.1735	0.1000	9.36	10.0	-6.4	20.0
Chloromethane	Ave	0.2976	0.2414	0.1000	8.11	10.0	-18.9	20.0
Vinyl chloride	Ave	0.2931	0.2470	0.1000	8.43	10.0	-15.7	20.0
Bromomethane	Ave	0.1041	0.1078	0.0500	10.4	10.0	3.5	20.0
Chloroethane	Ave	0.1503	0.1320	0.0500	8.78	10.0	-12.2	20.0
Trichlorofluoromethane	Ave	0.2330	0.2761	0.1000	11.9	10.0	18.5	20.0
Acrolein	Ave	0.0342	0.0183 NT		53.6	100	-46.4* NT	20.0
1,1-Dichloroethene	Ave	0.2039	0.2090	0.1000	10.2	10.0	2.5	20.0
Acetone	Lin1		0.0513	0.0500	18.2	20.0	-9.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1514	0.1970	0.0500	13.0	10.0	30.1*	20.0
Iodomethane	Ave	0.3052	0.3404		11.2	10.0	11.5	20.0
Carbon disulfide	Ave	0.7186	0.6677	0.1000	9.29	10.0	-7.1	20.0
Acetonitrile	Ave	0.0176	0.0128 NT		72.6	100	-27.4* NT	20.0
Methyl acetate	Ave	0.1710	0.1380	0.1000	16.1	20.0	-19.3	20.0
Methylene Chloride	Lin1		0.2394	0.1000	9.54	10.0	-4.6	20.0
tert-Butyl alcohol	Ave	0.0132	0.0078		119	200	-40.8*	20.0
Acrylonitrile	Ave	0.0866	0.0722		16.7	20.0	-16.7	20.0
Methyl tert-butyl ether	Ave	0.6690	0.5934	0.1000	8.87	10.0	-11.3	20.0
trans-1,2-Dichloroethene	Ave	0.2339	0.2288	0.1000	9.78	10.0	-2.2	20.0
Hexane	Ave	0.0600	0.0608		10.1	10.0	1.4	20.0
1,1-Dichloroethane	Ave	0.4345	0.3886	0.1000	8.94	10.0	-10.6	20.0
Vinyl acetate	Lin1		0.0384		8.14	10.0	-18.6	20.0
2-Butanone	Ave	0.0924	0.0789	0.0500	17.1	20.0	-14.6	20.0
2,2-Dichloropropane	Ave	0.2835	0.2692		9.50	10.0	-5.0	20.0
cis-1,2-Dichloroethene	Ave	0.2548	0.2379	0.1000	9.34	10.0	-6.6	20.0
Bromochloromethane	Ave	0.1086	0.1136		10.5	10.0	4.6	20.0
Tetrahydrofuran	Ave	0.0679	0.0462 NT		6.80	10.0	-32.0* NT	20.0
Chloroform	Ave	0.3788	0.3845	0.2000	10.2	10.0	1.5	20.0
1,1,1-Trichloroethane	Ave	0.2977	0.3065	0.1000	10.3	10.0	2.9	20.0
Cyclohexane	Ave	0.4635	0.4127	0.1000	8.90	10.0	-11.0	20.0
1,1-Dichloropropene	Ave	0.3222	0.3003		9.32	10.0	-6.8	20.0
Carbon tetrachloride	Ave	0.2410	0.2478	0.1000	10.3	10.0	2.9	20.0
1,2-Dichloroethane	Ave	0.2825	0.2986	0.1000	10.6	10.0	5.7	20.0
Benzene	Ave	0.9766	0.9005	0.5000	9.22	10.0	-7.8	20.0
Trichloroethene	Ave	0.2257	0.2313	0.2000	10.3	10.0	2.5	20.0
1,2-Dichloropropane	Ave	0.2203	0.2051	0.1000	9.31	10.0	-6.9	20.0
Methylcyclohexane	Ave	0.4171	0.4154	0.1000	9.96	10.0	-0.4	20.0
Dibromomethane	Ave	0.1104	0.1197		10.8	10.0	8.4	20.0
1,4-Dioxane	Qua		0.0009 NT		280	500	-44.0* NT	20.0
Bromodichloromethane	Ave	0.2368	0.2354	0.1000	9.94	10.0	-0.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1056	0.0986		18.7	20.0	-6.6	20.0
cis-1,3-Dichloropropene	Ave	0.2995	0.2825	0.1500	9.43	10.0	-5.7	20.0
4-Methyl-2-pentanone	Ave	0.1916	0.1529	0.0500	16.0	20.0	-20.2*	20.0
Toluene	Ave	1.409	1.313	0.4000	9.32	10.0	-6.8	20.0
trans-1,3-Dichloropropene	Ave	0.4089	0.3430	0.1000	8.39	10.0	-16.1	20.0
Ethyl methacrylate	Ave	0.3948	0.3154		7.99	10.0	-20.1 NT	20.0
1,1,2-Trichloroethane	Ave	0.2434	0.2426	0.1000	9.97	10.0	-0.3	20.0
1,3-Dichloropropane	Ave	0.4651	0.4300		9.24	10.0	-7.6	20.0
Tetrachloroethene	Ave	0.2594	0.2834	0.2000	10.9	10.0	9.2	20.0
2-Hexanone	Ave	0.2046	0.1436	0.0500	14.0	20.0	-29.8*	20.0
Dibromochloromethane	Lin1		0.2164		8.39	10.0	-16.1	20.0
1,2-Dibromoethane	Ave	0.2370	0.2320		9.79	10.0	-2.1	20.0
Chlorobenzene	Ave	0.8700	0.8244	0.3000	9.48	10.0	-5.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.2826	0.2624		9.28	10.0	-7.2	20.0
Ethylbenzene	Ave	0.4802	0.4457		9.28	10.0	-7.2	20.0
m-Xylene & p-Xylene	Ave	0.6088	0.5678		18.7	20.0	-6.7	20.0
o-Xylene	Ave	0.6107	0.5515		9.03	10.0	-9.7	20.0
Styrene	Ave	0.9872	0.8859	0.3000	8.97	10.0	-10.3	20.0
Bromoform	Lin1		0.1193	0.1000	7.31	10.0	-26.9*	20.0
Isopropylbenzene	Ave	1.531	1.368	0.1000	8.93	10.0	-10.7	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6092	0.5343	0.3000	8.77	10.0	-12.3	20.0
Bromobenzene	Ave	0.6770	0.6480		9.57	10.0	-4.3	20.0
1,2,3-Trichloropropane	Ave	0.1968	0.1836		9.33	10.0	-6.7	20.0
trans-1,4-Dichloro-2-butene	Ave	0.1729	0.1082		6.26	10.0	-37.4* NT	20.0
n-Propylbenzene	Ave	0.7759	0.6680		8.61	10.0	-13.9	20.0
2-Chlorotoluene	Ave	0.6592	0.5906		8.96	10.0	-10.4	20.0
1,3,5-Trimethylbenzene	Ave	2.279	1.972		8.65	10.0	-13.5	20.0
4-Chlorotoluene	Ave	0.6857	0.6286		9.17	10.0	-8.3	20.0
tert-Butylbenzene	Ave	2.074	1.723		8.31	10.0	-16.9	20.0
1,2,4-Trimethylbenzene	Ave	2.342	1.981		8.46	10.0	-15.4	20.0
sec-Butylbenzene	Ave	2.830	2.292		8.10	10.0	-19.0	20.0
1,3-Dichlorobenzene	Ave	1.301	1.145	0.6000	8.80	10.0	-12.0	20.0
p-Isopropyltoluene	Ave	2.323	1.898		8.17	10.0	-18.3	20.0
1,4-Dichlorobenzene	Ave	1.377	1.217	0.5000	8.84	10.0	-11.6	20.0
n-Butylbenzene	Ave	2.064	1.467		7.11	10.0	-28.9*	20.0
1,2-Dichlorobenzene	Ave	1.172	1.046	0.4000	8.92	10.0	-10.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0803	0.0607	0.0500	7.56	10.0	-24.4*	20.0
1,3,5-Trichlorobenzene	Ave	0.7455	0.5821		7.81	10.0	-21.9* NT	20.0
1,2,4-Trichlorobenzene	Ave	0.5989	0.4408	0.2000	7.36	10.0	-26.4*	20.0
Hexachlorobutadiene	Ave	0.2705	0.1667		6.16	10.0	-38.4*	20.0
Naphthalene	Ave	1.366	0.9579		7.01	10.0	-29.9*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCVIS 240-41857/2 Calibration Date: 04/27/2012 09:48

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4986.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.4791	0.3776		7.77	10.0	-21.2*	20.0
Dibromofluoromethane (Surr)	Ave	0.1825	0.1945		12.8	12.0	6.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2571		13.3	12.0	10.8	20.0
Toluene-d8 (Surr)	Ave	1.135	1.122		11.9	12.0	-1.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3853		10.7	12.0	-11.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41857/3 Calibration Date: 04/27/2012 10:10

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 10:43

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 12:30

Lab File ID: UXX4987.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.1825	0.1890		12.5	12.0	3.6	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.2319	0.2351		12.2	12.0	1.4	20.0
Toluene-d8 (Surr)	Ave	1.135	1.094		11.6	12.0	-3.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.4329	0.3693		10.3	12.0	-14.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41857/3 Calibration Date: 04/27/2012 10:10

Instrument ID: A3UX10 Calib Start Date: 04/09/2012 12:51

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/09/2012 14:40

Lab File ID: UXX4987.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.3572	0.4349		12.2	10.0	21.8* NT	20.0
Ethyl ether	Ave	0.2114	0.2219		10.5	10.0	5.0	20.0
3-Chloro-1-propene	Ave	0.1272	0.1239		9.74	10.0	-2.6	20.0
Diisopropyl ether	Ave	0.2086	0.2243		53.8	50.0	7.5	20.0
2-Chloro-1,3-butadiene	Ave	0.3803	0.3858		10.1	10.0	1.4	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.7254	0.6882		9.49	10.0	-5.1	20.0
Ethyl acetate	Ave	0.1724	0.1690		19.6	20.0	-2.0	20.0
Propionitrile	Ave	0.0254	0.0216 NT		17.0	20.0	-15.0	20.0
Methacrylonitrile	Ave	0.1297	0.1154		8.89	10.0	-11.1	20.0
Isobutyl alcohol	Lin1		0.0057 NT		138	200	-31.2* NT	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.6360	0.6204		9.75	10.0	-2.5	20.0
n-Heptane	Ave	0.0587	0.0500		8.52	10.0	-14.8	20.0
n-Butanol	Ave	0.0081	0.0047 NT		115	200	-42.3* NT	20.0
2-Nitropropane	Ave	0.0318	0.0193 NT		12.1	20.0	-39.6* NT	20.0
Cyclohexanone	Ave	0.0499	0.0311 NT		62.4	100	-37.6* NT	20.0
1,2,3-Trimethylbenzene	Ave	2.230	2.273		10.2	10.0	1.9	20.0
2-Methylnaphthalene	Ave	0.4376	0.4035		18.4	20.0	-7.8	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: UXX4990.D Lab Sample ID: MB 240-41857/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX10 Date Analyzed: 04/27/2012 11:14

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-41857/4	UXX4988.D	04/27/2012 10:31
MSA-MW20S-042012	240-10494-3	UXX4991.D	04/27/2012 11:57
MSA-MW20I-042012	240-10494-4	UXX4992.D	04/27/2012 12:19
MSA-MW17I-042012	240-10494-6	UXX4993.D	04/27/2012 12:41
TB-042012	240-10494-1	UXX5005.D	04/27/2012 16:59
MSA-MW35S-042012	240-10494-2	UXX5006.D	04/27/2012 17:20
MSA-MW17S-042012	240-10494-5	UXX5007.D	04/27/2012 17:42
MSA-MW20S-042012 MS	240-10494-3 MS	UXX5009.D	04/27/2012 18:24
MSA-MW20S-042012 MSD	240-10494-3 MSD	UXX5010.D	04/27/2012 18:46

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41857/6

Matrix: Water | Lab File ID: UXX4990.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41857/6

Matrix: Water | Lab File ID: UXX4990.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41857 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		63-129
460-00-4	4-Bromofluorobenzene (Surr)	81		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	100		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41857/6

Matrix: Water Lab File ID: UXX4990.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 11:14

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042012	240-10494-1	105	107	97	79
MSA-MW35S-042012	240-10494-2	106	106	96	79
MSA-MW20S-042012	240-10494-3	105	103	96	80
MSA-MW20I-042012	240-10494-4	110	108	93	83
MSA-MW17S-042012	240-10494-5	110	111	96	79
MSA-MW17I-042012	240-10494-6	107	108	95	81
MSA-MW20D-042012	240-10494-7	83	83	86	89
	MB 240-41857/6	100	102	96	81
	MB 240-42171/5	86	87	92	96
	LCS 240-41857/4	106	110	98	89
	LCS 240-42171/4	84	80	83	90
MSA-MW20S-042012 MS	240-10494-3 MS	108	111	100	89
	240-10350-A-5 MS	86	84	90	93
MSA-MW20S-042012 MSD	240-10494-3 MSD	108	110	100	89
	240-10350-C-5 MSD	86	83	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4988.D

Lab ID: LCS 240-41857/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.58	96	72-116	
1,1,1-Trichloroethane	10.0	11.0	110	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.96	90	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	14.3	143	74-151	
1,1-Dichloroethane	10.0	9.72	97	82-115	
1,1-Dichloroethene	10.0	11.1	111	78-131	
1,1-Dichloropropene	10.0	9.91	99	83-114	
1,2,3-Trichlorobenzene	10.0	8.96	90	54-126	
1,2,3-Trichloropropane	10.0	9.75	98	73-129	
1,2,3-Trimethylbenzene	10.0	9.13	91	70-130	
1,2,4-Trichlorobenzene	10.0	7.90	79	48-135	
1,2,4-Trimethylbenzene	10.0	8.94	89	76-120	
1,2-Dibromo-3-Chloropropane	10.0	7.90	79	42-136	
1,2-Dichlorobenzene	10.0	9.36	94	81-110	
1,2-Dichloroethane	10.0	11.0	110	71-127	
1,2-Dichloropropane	10.0	9.86	99	81-115	
1,3-Dichlorobenzene	10.0	9.49	95	80-110	
1,3-Dichloropropane	10.0	9.49	95	79-116	
1,4-Dichlorobenzene	10.0	9.19	92	82-110	
2,2-Dichloropropane	10.0	10.1	101	50-129	
2-Chloroethyl vinyl ether	10.0	9.05 J	91	52-131	
2-Chlorotoluene	10.0	9.40	94	76-116	
2-Hexanone	20.0	14.2	71	55-133	
Bromobenzene	10.0	9.99	100	76-115	
Bromochloromethane	10.0	10.8	108	77-120	
4-Chlorotoluene	10.0	9.67	97	77-115	
p-Isopropyltoluene	10.0	9.02	90	74-120	
Acetone	20.0	18.1	91	43-136	
Benzene	10.0	9.62	96	83-112	
Bromoform	10.0	7.33	73	40-131	
Bromomethane	10.0	12.0	120	11-185	
Carbon disulfide	10.0	9.10	91	62-142	
Carbon tetrachloride	10.0	11.0	110	66-128	
Chlorobenzene	10.0	9.83	98	85-110	
Chloroethane	10.0	9.46	95	25-153	
Chloroform	10.0	10.4	104	79-117	
Chloromethane	10.0	9.29	93	44-126	
cis-1,2-Dichloroethene	10.0	9.80	98	80-113	
cis-1,3-Dichloropropene	10.0	9.24	92	61-115	
Hexachlorobutadiene	10.0	6.58	66	36-134	
Dibromomethane	10.0	11.4	114	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX4988.D

Lab ID: LCS 240-41857/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.4	104	72-121	
Dichlorodifluoromethane	10.0	10.8	108	19-129	
Ethylbenzene	10.0	9.59	96	83-112	
1,2-Dibromoethane	10.0	9.87	99	79-113	
Diisopropyl ether	10.0	9.52 J	95	77-118	
Naphthalene	10.0	7.58	76	32-141	
m-Xylene & p-Xylene	20.0	19.6	98	83-113	
n-Butylbenzene	10.0	7.80	78	66-125	
Isopropylbenzene	10.0	9.41	94	75-114	
n-Propylbenzene	10.0	9.45	95	74-121	
2-Butanone	20.0	15.7	79	60-126	
4-Methyl-2-pentanone	20.0	16.5	83	63-128	
sec-Butylbenzene	10.0	8.62	86	70-117	
Methyl tert-butyl ether	10.0	9.36	94	52-144	
Methylene Chloride	10.0	9.93	99	66-131	
o-Xylene	10.0	9.42	94	83-113	
Styrene	10.0	9.44	94	79-114	
tert-Butylbenzene	10.0	8.64	86	71-115	
Tetrachloroethene	10.0	11.2	112	79-114	
Toluene	10.0	9.87	99	84-111	
trans-1,2-Dichloroethene	10.0	10.3	103	83-117	
trans-1,3-Dichloropropene	10.0	8.77	88	58-117	
Trichloroethene	10.0	11.0	110	76-117	
Trichlorofluoromethane	10.0	14.3	143	49-157	
Vinyl acetate	10.0	7.66	77	46-161	
Vinyl chloride	10.0	9.37	94	53-127	
tert-Butyl alcohol	200	128	64	70-130	*
Xylenes, Total	30.0	29.0	97	83-112	
Dibromochloromethane	10.0	8.49	85	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.29	93	72-116	
1,1,1-Trichloroethane	10.0	9.17	92	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.61	86	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.47	95	74-151	
1,1-Dichloroethane	10.0	9.12	91	82-115	
1,1-Dichloroethene	10.0	9.37	94	78-131	
1,1-Dichloropropene	10.0	8.82	88	83-114	
1,2,3-Trichlorobenzene	10.0	9.27	93	54-126	
1,2,3-Trichloropropane	10.0	8.58	86	73-129	
1,2,3-Trimethylbenzene	10.0	9.34	93	70-130	
1,2,4-Trichlorobenzene	10.0	9.24	92	48-135	
1,2,4-Trimethylbenzene	10.0	9.09	91	76-120	
1,2-Dibromo-3-Chloropropane	10.0	8.48	85	42-136	
1,2-Dichlorobenzene	10.0	8.87	89	81-110	
1,2-Dichloroethane	10.0	9.10	91	71-127	
1,2-Dichloropropane	10.0	9.15	92	81-115	
1,3-Dichlorobenzene	10.0	9.09	91	80-110	
1,3-Dichloropropane	10.0	8.52	85	79-116	
1,4-Dichlorobenzene	10.0	8.91	89	82-110	
2,2-Dichloropropane	10.0	9.51	95	50-129	
2-Chloroethyl vinyl ether	10.0	8.76 J	88	52-131	
2-Chlorotoluene	10.0	8.59	86	76-116	
2-Hexanone	20.0	17.5	88	55-133	
Bromobenzene	10.0	9.12	91	76-115	
Bromochloromethane	10.0	9.21	92	77-120	
4-Chlorotoluene	10.0	8.82	88	77-115	
p-Isopropyltoluene	10.0	9.20	92	74-120	
Acetone	20.0	16.4	82	43-136	
Benzene	10.0	9.16	92	83-112	
Bromoform	10.0	8.16	82	40-131	
Bromomethane	10.0	7.64	76	11-185	
Carbon disulfide	10.0	8.61	86	62-142	
Carbon tetrachloride	10.0	9.19	92	66-128	
Chlorobenzene	10.0	8.95	90	85-110	
Chloroethane	10.0	8.17	82	25-153	
Chloroform	10.0	8.84	88	79-117	
Chloromethane	10.0	7.91	79	44-126	
cis-1,2-Dichloroethene	10.0	9.23	92	80-113	
cis-1,3-Dichloropropene	10.0	8.36	84	61-115	
Hexachlorobutadiene	10.0	8.77	88	36-134	
Dibromomethane	10.0	9.18	92	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	9.60	96	72-121	
Dichlorodifluoromethane	10.0	5.86	59	19-129	
Ethylbenzene	10.0	9.06	91	83-112	
1,2-Dibromoethane	10.0	8.75	88	79-113	
Diisopropyl ether	10.0	8.74 J	87	77-118	
Naphthalene	10.0	8.79	88	32-141	
m-Xylene & p-Xylene	20.0	18.0	90	83-113	
n-Butylbenzene	10.0	8.83	88	66-125	
Isopropylbenzene	10.0	9.08	91	75-114	
n-Propylbenzene	10.0	9.50	95	74-121	
2-Butanone	20.0	16.7	84	60-126	
4-Methyl-2-pentanone	20.0	17.3	87	63-128	
sec-Butylbenzene	10.0	8.78	88	70-117	
Methyl tert-butyl ether	10.0	8.66	87	52-144	
Methylene Chloride	10.0	8.84	88	66-131	
o-Xylene	10.0	9.15	92	83-113	
Styrene	10.0	9.27	93	79-114	
tert-Butylbenzene	10.0	8.95	90	71-115	
Tetrachloroethene	10.0	9.17	92	79-114	
Toluene	10.0	8.87	89	84-111	
trans-1,2-Dichloroethene	10.0	9.08	91	83-117	
trans-1,3-Dichloropropene	10.0	8.11	81	58-117	
Trichloroethene	10.0	9.17	92	76-117	
Trichlorofluoromethane	10.0	9.25	93	49-157	
Vinyl acetate	10.0	8.12	81	46-161	
Vinyl chloride	10.0	8.25	83	53-127	
tert-Butyl alcohol	200	167	84	70-130	
Xylenes, Total	30.0	27.2	91	83-112	
Dibromochloromethane	10.0	8.13	81	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5009.D

Lab ID: 240-10494-3 MS Client ID: MSA-MW20S-042012 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	667	67 U	580	87	64-118	
1,1,1-Trichloroethane	667	67 U	633	95	68-121	
1,1,2,2-Tetrachloroethane	667	67 U	575	86	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	667	67 U	807	121	70-152	
1,1-Dichloroethane	667	67 U	589	88	79-116	
1,1-Dichloroethene	667	17 J	680	99	74-135	
1,1-Dichloropropene	667	67 U	584	88	80-114	
1,2,3-Trichlorobenzene	667	67 U	525	79	45-129	
1,2,3-Trichloropropane	667	67 U	637	96	67-132	
1,2,3-Trimethylbenzene	667	330 U	556	83	70-130	
1,2,4-Trichlorobenzene	667	67 U	468	70	38-138	
1,2,4-Trimethylbenzene	667	67 U	531	80	67-124	
1,2-Dibromo-3-Chloropropane	667	130 U	503	76	32-139	
1,2-Dichlorobenzene	667	67 U	576	86	75-111	
1,2-Dichloroethane	667	67 U	713	107	68-129	
1,2-Dichloropropane	667	67 U	601	90	78-115	
1,3-Dichlorobenzene	667	67 U	569	85	73-110	
1,3-Dichloropropane	667	67 U	609	91	74-118	
1,4-Dichlorobenzene	667	67 U	556	83	75-110	
2,2-Dichloropropane	667	67 U	529	79	38-127	
2-Chloroethyl vinyl ether	667	670 U	96.7 J	15	10-150	
2-Chlorotoluene	667	67 U	566	85	69-117	
2-Hexanone	1330	670 U	980	74	47-139	
Bromobenzene	667	67 U	611	92	71-116	
Bromochloromethane	667	67 U	673	101	73-121	
4-Chlorotoluene	667	67 U	589	88	71-116	
p-Isopropyltoluene	667	67 U	524	79	64-122	
Acetone	1330	670 U	1210	91	33-145	
Benzene	667	23 J	615	89	72-121	
Bromoform	667	67 U	447	67	32-128	
Bromomethane	667	67 U	587	88	10-186	
Carbon disulfide	667	67 U	505	76	57-147	
Carbon tetrachloride	667	67 U	615	92	59-129	
Chlorobenzene	667	250	873	93	80-110	
Chloroethane	667	67 U	547	82	21-165	
Chloroform	667	67 U	638	96	76-118	
Chloromethane	667	67 U	574	86	33-132	
cis-1,2-Dichloroethene	667	1700	2320	91	70-120	
cis-1,3-Dichloropropene	667	67 U	545	82	51-110	
Hexachlorobutadiene	667	67 U	367	55	27-132	
Dibromomethane	667	67 U	720	108	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5009.D

Lab ID: 240-10494-3 MS Client ID: MSA-MW20S-042012 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	667	67 U	623	93	67-120	
Dichlorodifluoromethane	667	67 U	611	92	17-128	
Ethylbenzene	667	67 U	595	89	75-116	
1,2-Dibromoethane	667	67 U	638	96	74-113	
Diisopropyl ether	667	670 U	587 J	88	73-118	
Naphthalene	667	67 U	479	72	15-158	
m-Xylene & p-Xylene	1330	130 U	1190	90	75-117	
n-Butylbenzene	667	67 U	444	67	56-127	
Isopropylbenzene	667	67 U	559	84	68-116	
n-Propylbenzene	667	67 U	547	82	64-124	
2-Butanone	1330	670 U	1040	78	54-129	
4-Methyl-2-pentanone	1330	670 U	1090	82	56-131	
sec-Butylbenzene	667	67 U	493	74	60-119	
Methyl tert-butyl ether	667	330 U	583	88	46-144	
Methylene Chloride	667	67 U	606	91	63-128	
o-Xylene	667	67 U	587	88	76-116	
Styrene	667	67 U	580	87	71-117	
tert-Butylbenzene	667	67 U	521	78	61-119	
Tetrachloroethene	667	67 U	680	102	70-117	
Toluene	667	12 J	612	90	78-114	
trans-1,2-Dichloroethene	667	25 J	656	95	80-119	
trans-1,3-Dichloropropene	667	67 U	517	78	46-116	
Trichloroethene	667	510	1200	103	66-120	
Trichlorofluoromethane	667	67 U	740	111	46-157	
Vinyl acetate	667	130 U	479	72	43-157	
Vinyl chloride	667	920	1460	81	49-130	
tert-Butyl alcohol	13300	3300 U	8930	67	70-130	F
Xylenes, Total	2000	130 U	1780	89	76-116	
Dibromochloromethane	667	67 U	516	77	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5010.D

Lab ID: 240-10494-3 MSD Client ID: MSA-MW20S-042012 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	667	644	97	10	30	64-118	
1,1,1-Trichloroethane	667	680	102	7	30	68-121	
1,1,2,2-Tetrachloroethane	667	611	92	6	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	667	733	110	10	30	70-152	
1,1-Dichloroethane	667	625	94	6	30	79-116	
1,1-Dichloroethene	667	707	103	4	30	74-135	
1,1-Dichloropropene	667	603	90	3	30	80-114	
1,2,3-Trichlorobenzene	667	610	92	15	30	45-129	
1,2,3-Trichloropropane	667	657	99	3	30	67-132	
1,2,3-Trimethylbenzene	667	586	88	5	30	70-130	
1,2,4-Trichlorobenzene	667	525	79	11	30	38-138	
1,2,4-Trimethylbenzene	667	558	84	5	30	67-124	
1,2-Dibromo-3-Chloropropane	667	562	84	11	30	32-139	
1,2-Dichlorobenzene	667	620	93	7	30	75-111	
1,2-Dichloroethane	667	760	114	6	30	68-129	
1,2-Dichloropropane	667	654	98	8	30	78-115	
1,3-Dichlorobenzene	667	603	91	6	30	73-110	
1,3-Dichloropropane	667	644	97	6	30	74-118	
1,4-Dichlorobenzene	667	591	89	6	30	75-110	
2,2-Dichloropropane	667	565	85	7	30	38-127	
2-Chloroethyl vinyl ether	667	98.7 J	15	2	30	10-150	
2-Chlorotoluene	667	595	89	5	30	69-117	
2-Hexanone	1330	1040	78	6	30	47-139	
Bromobenzene	667	645	97	5	30	71-116	
Bromochloromethane	667	740	111	9	30	73-121	
4-Chlorotoluene	667	612	92	4	30	71-116	
p-Isopropyltoluene	667	543	82	4	30	64-122	
Acetone	1330	1360	102	12	30	33-145	
Benzene	667	667	97	8	30	72-121	
Bromoform	667	487	73	9	30	32-128	
Bromomethane	667	733	110	22	30	10-186	
Carbon disulfide	667	537	81	6	30	57-147	
Carbon tetrachloride	667	635	95	3	30	59-129	
Chlorobenzene	667	920	100	5	30	80-110	
Chloroethane	667	611	92	11	30	21-165	
Chloroform	667	687	103	7	30	76-118	
Chloromethane	667	603	91	5	30	33-132	
cis-1,2-Dichloroethene	667	2470	113	6	30	70-120	
cis-1,3-Dichloropropene	667	605	91	11	30	51-110	
Hexachlorobutadiene	667	403	60	9	30	27-132	
Dibromomethane	667	773	116	7	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXX5010.D

Lab ID: 240-10494-3 MSD Client ID: MSA-MW20S-042012 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	667	693	104	11	30	67-120	
Dichlorodifluoromethane	667	552	83	10	30	17-128	
Ethylbenzene	667	631	95	6	30	75-116	
1,2-Dibromoethane	667	680	102	6	30	74-113	
Diisopropyl ether	667	637 J	96	8	30	73-118	
Naphthalene	667	555	83	15	30	15-158	
m-Xylene & p-Xylene	1330	1250	94	5	30	75-117	
n-Butylbenzene	667	469	70	5	30	56-127	
Isopropylbenzene	667	589	88	5	30	68-116	
n-Propylbenzene	667	563	85	3	30	64-124	
2-Butanone	1330	1130	85	8	30	54-129	
4-Methyl-2-pentanone	1330	1170	88	8	30	56-131	
sec-Butylbenzene	667	505	76	2	30	60-119	
Methyl tert-butyl ether	667	639	96	9	30	46-144	
Methylene Chloride	667	654	98	8	30	63-128	
o-Xylene	667	623	93	6	30	76-116	
Styrene	667	615	92	6	30	71-117	
tert-Butylbenzene	667	512	77	2	30	61-119	
Tetrachloroethene	667	707	106	4	30	70-117	
Toluene	667	647	95	6	30	78-114	
trans-1,2-Dichloroethene	667	687	99	5	30	80-119	
trans-1,3-Dichloropropene	667	573	86	10	30	46-116	
Trichloroethene	667	1260	112	5	30	66-120	
Trichlorofluoromethane	667	740	111	0	30	46-157	
Vinyl acetate	667	522	78	9	30	43-157	
Vinyl chloride	667	1520	90	4	30	49-130	
tert-Butyl alcohol	13300	10700	80	18	30	70-130	
Xylenes, Total	2000	1870	94	5	30	76-116	
Dibromochloromethane	667	556	83	7	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	1.0 U	9.57	96	64-118	
1,1,1-Trichloroethane	10.0	1.0 U	9.42	94	68-121	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.56	96	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	11.6	116	70-152	
1,1-Dichloroethane	10.0	1.0 U	9.26	93	79-116	
1,1-Dichloroethene	10.0	1.0 U	10.0	100	74-135	
1,1-Dichloropropene	10.0	1.0 U	9.55	96	80-114	
1,2,3-Trichlorobenzene	10.0	1.0 U	9.86	99	45-129	
1,2,3-Trichloropropane	10.0	1.0 U	9.72	97	67-132	
1,2,3-Trimethylbenzene	10.0	5.0 U	9.43	94	70-130	
1,2,4-Trichlorobenzene	10.0	1.0 U	9.37	94	38-138	
1,2,4-Trimethylbenzene	10.0	1.0 U	9.37	94	67-124	
1,2-Dibromo-3-Chloropropane	10.0	2.0 U	9.54	95	32-139	
1,2-Dichlorobenzene	10.0	1.0 U	9.15	92	75-111	
1,2-Dichloroethane	10.0	1.0 U	9.37	94	68-129	
1,2-Dichloropropane	10.0	1.0 U	9.68	97	78-115	
1,3-Dichlorobenzene	10.0	1.0 U	9.16	92	73-110	
1,3-Dichloropropane	10.0	1.0 U	9.44	94	74-118	
1,4-Dichlorobenzene	10.0	1.0 U	9.01	90	75-110	
2,2-Dichloropropane	10.0	1.0 U	9.23	92	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	(0)	10-150	F
2-Chlorotoluene	10.0	1.0 U	8.96	90	69-117	
2-Hexanone	20.0	10 U	21.3	107	47-139	
Bromobenzene	10.0	1.0 U	9.39	94	71-116	
Bromochloromethane	10.0	1.0 U	9.28	93	73-121	
4-Chlorotoluene	10.0	1.0 U	8.98	90	71-116	
p-Isopropyltoluene	10.0	1.0 U	9.57	96	64-122	
Acetone	20.0	10 U	17.7	89	33-145	
Benzene	10.0	1.0 U	9.36	94	72-121	
Bromoform	10.0	1.0 U	8.55	86	32-128	
Bromomethane	10.0	1.0 U	4.44	44	10-186	
Carbon disulfide	10.0	1.0 U	8.83	88	57-147	
Carbon tetrachloride	10.0	1.0 U	9.67	97	59-129	
Chlorobenzene	10.0	1.0 U	9.37	94	80-110	
Chloroethane	10.0	1.0 U	6.84	68	21-165	
Chloroform	10.0	1.0 U	9.03	90	76-118	
Chloromethane	10.0	1.0 U	7.92	79	33-132	
cis-1,2-Dichloroethene	10.0	1.0 U	9.38	94	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	8.26	83	51-110	
Hexachlorobutadiene	10.0	1.0 U	8.51	85	27-132	
Dibromomethane	10.0	1.0 U	9.68	97	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	1.0 U	9.64	96	67-120	
Dichlorodifluoromethane	10.0	1.0 U	7.19	72	17-128	
Ethylbenzene	10.0	1.0 U	9.51	95	75-116	
1,2-Dibromoethane	10.0	1.0 U	9.96	100	74-113	
Diisopropyl ether	10.0	10 U	8.79 J	88	73-118	
Naphthalene	10.0	1.0 U	9.96	100	15-158	
m-Xylene & p-Xylene	20.0	2.0 U	19.0	95	75-117	
n-Butylbenzene	10.0	1.0 U	9.11	91	56-127	
Isopropylbenzene	10.0	1.0 U	9.45	95	68-116	
n-Propylbenzene	10.0	1.0 U	9.58	96	64-124	
2-Butanone	20.0	10 U	19.4	97	54-129	
4-Methyl-2-pentanone	20.0	10 U	20.9	105	56-131	
sec-Butylbenzene	10.0	1.0 U	9.33	93	60-119	
Methyl tert-butyl ether	10.0	5.0 U	9.03	90	46-144	
Methylene Chloride	10.0	1.0 U	8.65	87	63-128	
o-Xylene	10.0	1.0 U	9.39	94	76-116	
Styrene	10.0	1.0 U	9.60	96	71-117	
tert-Butylbenzene	10.0	1.0 U	9.33	93	61-119	
Tetrachloroethene	10.0	1.0 U	10.0	100	70-117	
Toluene	10.0	1.0 U	9.36	94	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	9.18	92	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	8.16	82	46-116	
Trichloroethene	10.0	1.0 U	9.41	94	66-120	
Trichlorofluoromethane	10.0	1.0 U	8.71	87	46-157	
Vinyl acetate	10.0	2.0 U	8.93	89	43-157	
Vinyl chloride	10.0	1.0 U	9.08	91	49-130	
tert-Butyl alcohol	200	50 U	217	109	70-130	
Xylenes, Total	30.0	2.0 U	28.4	95	76-116	
Dibromochloromethane	10.0	1.0 U	8.56	86	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.67	97	1	30	64-118	
1,1,1-Trichloroethane	10.0	9.09	91	4	30	68-121	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	5	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.92	99	16	30	70-152	
1,1-Dichloroethane	10.0	9.28	93	0	30	79-116	
1,1-Dichloroethene	10.0	9.69	97	3	30	74-135	
1,1-Dichloropropene	10.0	9.22	92	4	30	80-114	
1,2,3-Trichlorobenzene	10.0	8.21	82	18	30	45-129	
1,2,3-Trichloropropane	10.0	9.80	98	1	30	67-132	
1,2,3-Trimethylbenzene	10.0	9.03	90	4	30	70-130	
1,2,4-Trichlorobenzene	10.0	7.84	78	18	30	38-138	
1,2,4-Trimethylbenzene	10.0	9.00	90	4	30	67-124	
1,2-Dibromo-3-Chloropropane	10.0	9.69	97	2	30	32-139	
1,2-Dichlorobenzene	10.0	8.74	87	5	30	75-111	
1,2-Dichloroethane	10.0	9.04	90	4	30	68-129	
1,2-Dichloropropane	10.0	9.25	93	5	30	78-115	
1,3-Dichlorobenzene	10.0	8.99	90	2	30	73-110	
1,3-Dichloropropane	10.0	9.43	94	0	30	74-118	
1,4-Dichlorobenzene	10.0	8.88	89	1	30	75-110	
2,2-Dichloropropane	10.0	8.87	89	4	30	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	(0)	NC	30	10-150	F
2-Chlorotoluene	10.0	9.37	94	4	30	69-117	
2-Hexanone	20.0	20.5	103	4	30	47-139	
Bromobenzene	10.0	9.57	96	2	30	71-116	
Bromochloromethane	10.0	8.92	89	4	30	73-121	
4-Chlorotoluene	10.0	9.06	91	1	30	71-116	
p-Isopropyltoluene	10.0	8.93	89	7	30	64-122	
Acetone	20.0	13.9	70	24	30	33-145	
Benzene	10.0	9.16	92	2	30	72-121	
Bromoform	10.0	8.51	85	0	30	32-128	
Bromomethane	10.0	5.19	52	16	30	10-186	
Carbon disulfide	10.0	8.03	80	9	30	57-147	
Carbon tetrachloride	10.0	9.13	91	6	30	59-129	
Chlorobenzene	10.0	9.23	92	2	30	80-110	
Chloroethane	10.0	6.73	67	2	30	21-165	
Chloroform	10.0	8.90	89	1	30	76-118	
Chloromethane	10.0	8.81	88	11	30	33-132	
cis-1,2-Dichloroethene	10.0	9.27	93	1	30	70-120	
cis-1,3-Dichloropropene	10.0	7.99	80	3	30	51-110	
Hexachlorobutadiene	10.0	6.53	65	26	30	27-132	
Dibromomethane	10.0	9.52	95	2	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	10.0	9.34	93	3	30	67-120	
Dichlorodifluoromethane	10.0	5.82	58	21	30	17-128	
Ethylbenzene	10.0	9.29	93	2	30	75-116	
1,2-Dibromoethane	10.0	9.55	96	4	30	74-113	
Diisopropyl ether	10.0	8.71 J	87	1	30	73-118	
Naphthalene	10.0	8.36	84	17	30	15-158	
m-Xylene & p-Xylene	20.0	18.3	92	4	30	75-117	
n-Butylbenzene	10.0	8.35	84	9	30	56-127	
Isopropylbenzene	10.0	9.07	91	4	30	68-116	
n-Propylbenzene	10.0	9.61	96	0	30	64-124	
2-Butanone	20.0	17.6	88	10	30	54-129	
4-Methyl-2-pentanone	20.0	20.2	101	3	30	56-131	
sec-Butylbenzene	10.0	8.71	87	7	30	60-119	
Methyl tert-butyl ether	10.0	8.88	89	2	30	46-144	
Methylene Chloride	10.0	8.38	84	3	30	63-128	
o-Xylene	10.0	9.08	91	3	30	76-116	
Styrene	10.0	9.26	93	4	30	71-117	
tert-Butylbenzene	10.0	9.04	90	3	30	61-119	
Tetrachloroethene	10.0	9.57	96	4	30	70-117	
Toluene	10.0	9.29	93	1	30	78-114	
trans-1,2-Dichloroethene	10.0	8.99	90	2	30	80-119	
trans-1,3-Dichloropropene	10.0	8.50	85	4	30	46-116	
Trichloroethene	10.0	9.19	92	2	30	66-120	
Trichlorofluoromethane	10.0	8.33	83	4	30	46-157	
Vinyl acetate	10.0	9.09	91	2	30	43-157	
Vinyl chloride	10.0	8.71	87	4	30	49-130	
tert-Butyl alcohol	200	159	79	31	30	70-130	F
Xylenes, Total	30.0	27.4	91	4	30	76-116	
Dibromochloromethane	10.0	8.69	87	2	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD8260 240-39613/4 Date Analyzed: 04/09/2012 11:26

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX0992.D Heated Purge: (Y/N) N

Calibration ID: 7930

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		2023865	5.13	1264122	7.80	691088	10.05
UPPER LIMIT		4047730	5.63	2528244	8.30	1382176	10.55
LOWER LIMIT		1011933	4.63	632061	7.30	345544	9.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-39613/14		2014325	5.13	1243566	7.80	646887	10.04
CCVIS 240-41857/2		1657236	5.13	1149455	7.80	631644	10.05

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: CCVIS 240-41857/2 Date Analyzed: 04/27/2012 09:48

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXX4986.D Heated Purge: (Y/N) N

Calibration ID: 7932

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1657236	5.13	1149455	7.80	631644	10.05
UPPER LIMIT		3314472	5.63	2298910	8.30	1263288	10.55
LOWER LIMIT		828618	4.63	574728	7.30	315822	9.55
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-41857/3		1701441	5.13	1135876	7.80	553520	10.05
LCS 240-41857/4		1735205	5.12	1189359	7.80	645165	10.04
MB 240-41857/6		1689303	5.13	1120643	7.80	529855	10.05
240-10494-3	MSA-MW20S-042012	1596722	5.13	1080496	7.80	506306	10.05
240-10494-4	MSA-MW20I-042012	1581062	5.13	1096004	7.80	548704	10.04
240-10494-6	MSA-MW17I-042012	1566163	5.13	1081995	7.80	520446	10.05
240-10494-1	TB-042012	1498944	5.13	1004108	7.80	506669	10.05
240-10494-2	MSA-MW35S-042012	1534141	5.13	1028122	7.80	506249	10.04
240-10494-5	MSA-MW17S-042012	1512820	5.13	1045116	7.80	509983	10.05
240-10494-3 MS	MSA-MW20S-042012 MS	1597014	5.13	1083469	7.80	602393	10.05
240-10494-3 MSD	MSA-MW20S-042012 MSD	1594815	5.13	1100398	7.80	619776	10.04

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD8260 240-42092/4 Date Analyzed: 04/29/2012 16:26

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5241.D Heated Purge: (Y/N) N

Calibration ID: 8426

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1530000	5.70	1036987	8.39	499405	10.64
UPPER LIMIT		3060000	6.20	2073974	8.89	998810	11.14
LOWER LIMIT		765000	5.20	518494	7.89	249703	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42092/14		1382789	5.70	929711	8.39	462842	10.64
CCVIS 240-42171/2		1827438	5.70	1228317	8.39	614323	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: CCVIS 240-42171/2 Date Analyzed: 04/30/2012 11:50

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5270.D Heated Purge: (Y/N) N

Calibration ID: 8428

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1827438	5.70	1228317	8.39	614323	10.64
UPPER LIMIT		3654876	6.20	2456634	8.89	1228646	11.14
LOWER LIMIT		913719	5.20	614159	7.89	307162	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42171/3		1675303	5.70	1143405	8.39	543922	10.64
LCS 240-42171/4		1858112	5.70	1240826	8.39	615173	10.64
MB 240-42171/5		1636782	5.70	1107392	8.39	536650	10.64
240-10494-7	MSA-MW20D-042012	1777176	5.70	1192983	8.39	557255	10.64
240-10350-A-5 MS		1710874	5.70	1135916	8.39	559548	10.64
240-10350-C-5 MSD		1786806	5.70	1151558	8.39	541302	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: 20420001.D DFTPP Injection Date: 04/20/2012

Instrument ID: A4HP7 DFTPP Injection Time: 11:18

Analysis Batch No.: 40988

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	61.3	
68	Less than 2.0% of mass 69	0.1	(0.2)1
69	Mass 69 relative abundance	46.9	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	51.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.4	
275	10.0- 30.0% of mass 198	21.6	
365	Greater than 0.75% of mass 198	1.9	
441	Present, but less than mass 443	7.2	
442	40.0 - 110.0% of mass 198	49.0	
443	15.0 - 24.0% of mass 442	9.7	(19.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-40988/2	20420002.D	04/20/2012	11:37
	STD4 240-40988/3	20420003.D	04/20/2012	11:56
	STD3 240-40988/4	20420004.D	04/20/2012	12:15
	STD2 240-40988/5	20420005.D	04/20/2012	12:34
	STD1 240-40988/6	20420006.D	04/20/2012	12:53
	STD9 240-40988/7	20420007.D	04/20/2012	13:12
	STD8 240-40988/8	20420008.D	04/20/2012	13:31
	STD7 240-40988/9	20420009.D	04/20/2012	13:50
	STD6 240-40988/10	20420010.D	04/20/2012	14:10
	ICV 240-40988/11	20420011.D	04/20/2012	14:29

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 40988

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/20/2012 11:37 Calibration End Date: 04/20/2012 14:10 Calibration ID: 8188

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40988/6	20420006.D
Level 2	STD2 240-40988/5	20420005.D
Level 3	STD3 240-40988/4	20420004.D
Level 4	STD4 240-40988/3	20420003.D
Level 5	STD5 240-40988/2	20420002.D
Level 6	STD6 240-40988/10	20420010.D
Level 7	STD7 240-40988/9	20420009.D
Level 8	STD8 240-40988/8	20420008.D
Level 9	STD9 240-40988/7	20420007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.4580	0.5213 0.4435	0.4975 0.4767	0.4696 0.4763	0.4635	Ave		0.4758				5.1		15.0			
N-Nitrosodimethylamine	0.7762	0.7096 0.7495	0.8297 0.7768	0.7995 0.7542	0.7512	Ave		0.7683				4.7		15.0			
Pyridine	1.2959	1.0333 1.3226	1.1579 1.4062	1.1705 1.3748	1.2428	Ave		1.2505				10.0		15.0			
Ethyl methacrylate	1.0953	1.0002 1.0690	1.1995 1.1449	1.1354 1.1106	1.0666	Ave		1.1027				5.4		15.0			
Benzaldehyde	1.4365 0.7968	1.2617 +++++	1.2404 +++++	1.1680 +++++	0.9978	Ave		1.1502				19.0	*	15.0			
3-Chloropropionitrile	0.9723	0.9387 0.9321	1.0355 0.9983	0.9809 0.9606	0.9272	Ave		0.9682				3.8		15.0			
Malononitrile	1.4758	1.4899 1.2535	1.6039 1.1422	1.5609 0.9814	1.5566	Qua	-0.153	1.7553	-0.031						0.9990		0.9900
Phenol	1.7818	1.6123 1.7753	1.6862 1.9381	1.7203 1.8531	1.6871	Ave		1.7568				5.9		15.0			
Aniline	2.1342	1.7597 2.2964	2.0070 2.3514	2.0167 2.2299	2.0154	Ave		2.1013				9.1		15.0			
Bis(2-chloroethyl)ether	1.4736	1.4167 1.3370	1.4991 1.5779	1.4155 1.5731	1.3915	Ave		1.4606				5.9		15.0			
2-Chlorophenol	1.4938	1.3643 1.4535	1.4947 1.6574	1.4653 1.5517	1.4240	Ave		1.4881				5.9		15.0			
1,3-Dichlorobenzene	1.5578	1.5091 1.5419	1.5822 1.6611	1.5794 1.6321	1.4970	Ave		1.5701				3.6		15.0			
1,4-Dichlorobenzene	1.6212	1.5221 1.5745	1.6466 1.7497	1.5967 1.6724	1.5462	Ave		1.6162				4.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-40988/11 Calibration Date: 04/20/2012 14:29

Instrument ID: A4HP7 Calib Start Date: 04/20/2012 11:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/20/2012 14:10

Lab File ID: 20420011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4758	0.4703		9.88	10.0	-1.2	50.0
N-Nitrosodimethylamine	Ave	0.7683	0.7632		9.93	10.0	-0.7	50.0
Pyridine	Ave	1.250	1.328		10.6	10.0	6.2	50.0
Ethyl methacrylate	Ave	1.103	1.088		9.87	10.0	-1.3	50.0
3-Chloropropionitrile	Ave	0.9682	0.9462		9.77	10.0	-2.3	50.0
Malononitrile	Qua		1.426		9.94	10.0	-0.6	50.0
Benzaldehyde	Ave	1.150	0.7026		6.11	10.0	-38.9	50.0
Phenol	Ave	1.757	1.820		10.4	10.0	3.6	20.0
Aniline	Ave	2.101	2.151		10.2	10.0	2.3	50.0
Bis(2-chloroethyl)ether	Ave	1.461	1.467		10.0	10.0	0.4	50.0
2-Chlorophenol	Ave	1.488	1.508		10.1	10.0	1.3	50.0
1,3-Dichlorobenzene	Ave	1.570	1.591		10.1	10.0	1.3	50.0
1,4-Dichlorobenzene	Ave	1.616	1.669		10.3	10.0	3.3	20.0
Benzyl alcohol	Ave	0.8736	0.9081		10.4	10.0	3.9	50.0
1,2-Dichlorobenzene	Ave	1.498	1.549		10.3	10.0	3.4	50.0
2-Methylphenol	Ave	1.342	1.375		10.2	10.0	2.4	50.0
bis (2-chloroisopropyl) ether	Ave	2.252	2.262		10.0	10.0	0.5	50.0
3 & 4 Methylphenol	Ave	1.386	1.437		10.4	10.0	3.7	50.0
N-Nitrosodi-n-propylamine	Ave	1.033	1.066	0.0500	10.3	10.0	3.2	50.0
Acetophenone	Ave	2.012	2.078		10.3	10.0	3.3	50.0
Hexachloroethane	Ave	0.5865	0.5942		10.1	10.0	1.3	50.0
Nitrobenzene	Ave	0.3776	0.3780		10.0	10.0	0.1	50.0
Isophorone	Ave	0.6703	0.6832		10.2	10.0	1.9	50.0
2,4-Dimethylphenol	Ave	0.3866	0.3785		9.79	10.0	-2.1	50.0
2-Nitrophenol	Ave	0.2014	0.2043		10.1	10.0	1.4	20.0
1,3,5-Trichlorobenzene	Ave	0.3355	0.3385		10.1	10.0	0.9	50.0
Bis(2-chloroethoxy)methane	Ave	0.3928	0.3896		9.92	10.0	-0.8	50.0
Benzoic acid	Qua		0.2082		20.0	20.0	0.0	50.0
2,4-Dichlorophenol	Ave	0.2842	0.2972		10.5	10.0	4.6	20.0
1,2,4-Trichlorobenzene	Ave	0.3274	0.3340		10.2	10.0	2.0	50.0
Naphthalene	Ave	1.094	1.129		10.3	10.0	3.1	50.0
4-Chloroaniline	Ave	0.4452	0.4655		10.5	10.0	4.6	50.0
Hexachlorobutadiene	Ave	0.1704	0.1803		10.6	10.0	5.8	20.0
1,2,3-Trichlorobenzene	Ave	0.3072	0.3134		10.2	10.0	2.0	50.0
Caprolactam	Qua		0.1203		9.97	10.0	-0.3	50.0
4-Chloro-3-methylphenol	Ave	0.3278	0.3366		10.3	10.0	2.7	20.0
2-Methylnaphthalene	Ave	0.7250	0.7315		10.1	10.0	0.9	50.0
1-Methylnaphthalene	Ave	0.7008	0.6947		9.91	10.0	-0.9	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5176	0.5262		10.2	10.0	1.7	50.0
Hexachlorocyclopentadiene	Ave	0.3099	0.3262	0.0500	10.5	10.0	5.3	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: 20426001.D DFTPP Injection Date: 04/26/2012

Instrument ID: A4HP7 DFTPP Injection Time: 10:33

Analysis Batch No.: 41676

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	57.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	45.0	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	49.5	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	22.6	
365	Greater than 0.75% of mass 198	2.1	
441	Present, but less than mass 443	7.3	
442	40.0 - 110.0% of mass 198	48.9	
443	15.0 - 24.0% of mass 442	9.8	(20.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-41676/2	20426002.D	04/26/2012	10:49
	CCV 240-41676/3	20426003.D	04/26/2012	11:08
	MB 240-41330/20-A	20426004.D	04/26/2012	11:26
	LCS 240-41330/21-A	20426005.D	04/26/2012	11:45
MSA-MW20D-042012	240-10494-7	20426014.D	04/26/2012	14:32
	240-10487-W-12-A MS	20426031.D	04/26/2012	19:48
	240-10487-AA-12-A MSD	20426032.D	04/26/2012	20:07

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41676/2 Calibration Date: 04/26/2012 10:49

Instrument ID: A4HP7 Calib Start Date: 04/20/2012 11:37

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/20/2012 14:10

Lab File ID: 20426002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.4758	0.4616		9.70	10.0	-3.0	50.0
N-Nitrosodimethylamine	Ave	0.7683	0.7538		9.81	10.0	-1.9	50.0
Pyridine	Ave	1.250	1.299		10.4	10.0	3.9	50.0
Ethyl methacrylate	Ave	1.103	1.038		9.41	10.0	-5.9	50.0
3-Chloropropionitrile	Ave	0.9682	0.9281		9.59	10.0	-4.1	50.0
Malononitrile	Qua		1.400		9.71	10.0	-2.9	50.0
Benzaldehyde	Ave	1.150	0.7018		6.10	10.0	-39.0	50.0
Phenol	Ave	1.757	1.713		9.75	10.0	-2.5	20.0
Aniline	Ave	2.101	2.169		10.3	10.0	3.2	50.0
Bis(2-chloroethyl)ether	Ave	1.461	1.325		9.07	10.0	-9.3	50.0
2-Chlorophenol	Ave	1.488	1.513		10.2	10.0	1.7	50.0
1,3-Dichlorobenzene	Ave	1.570	1.596		10.2	10.0	1.6	50.0
1,4-Dichlorobenzene	Ave	1.616	1.640		10.1	10.0	1.5	50.0
Benzyl alcohol	Ave	0.8736	0.8899		10.2	10.0	1.9	50.0
1,2-Dichlorobenzene	Ave	1.498	1.533		10.2	10.0	2.3	50.0
2-Methylphenol	Ave	1.342	1.362		10.2	10.0	1.5	50.0
bis (2-chloroisopropyl) ether	Ave	2.252	2.060		9.15	10.0	-8.5	50.0
3 & 4 Methylphenol	Ave	1.386	1.410		10.2	10.0	1.7	50.0
N-Nitrosodi-n-propylamine	Ave	1.033	0.9917	0.0500	9.61	10.0	-3.9	50.0
Acetophenone	Ave	2.012	2.031		10.1	10.0	0.9	50.0
Hexachloroethane	Ave	0.5865	0.5691		9.70	10.0	-3.0	50.0
Nitrobenzene	Ave	0.3776	0.3709		9.82	10.0	-1.8	50.0
Isophorone	Ave	0.6703	0.6652		9.92	10.0	-0.8	50.0
2-Nitrophenol	Ave	0.2014	0.2103		10.4	10.0	4.5	20.0
2,4-Dimethylphenol	Ave	0.3866	0.3942		10.2	10.0	2.0	50.0
1,3,5-Trichlorobenzene	Ave	0.3355	0.3463		10.3	10.0	3.2	50.0
Bis(2-chloroethoxy)methane	Ave	0.3928	0.3762		9.58	10.0	-4.2	50.0
Benzoic acid	Qua		0.2356		22.1	20.0	10.5	50.0
2,4-Dichlorophenol	Ave	0.2842	0.3100		10.9	10.0	9.1	20.0
1,2,4-Trichlorobenzene	Ave	0.3274	0.3420		10.4	10.0	4.5	50.0
Naphthalene	Ave	1.094	1.102		10.1	10.0	0.7	50.0
4-Chloroaniline	Ave	0.4452	0.4470		10.0	10.0	0.4	50.0
Hexachlorobutadiene	Ave	0.1704	0.1837		10.8	10.0	7.8	20.0
1,2,3-Trichlorobenzene	Ave	0.3072	0.3150		10.3	10.0	2.5	50.0
Caprolactam	Qua		0.1206		9.99	10.0	-0.1	50.0
4-Chloro-3-methylphenol	Ave	0.3278	0.3284		10.0	10.0	0.2	20.0
2-Methylnaphthalene	Ave	0.7250	0.7276		10.0	10.0	0.4	50.0
1-Methylnaphthalene	Ave	0.7008	0.6908		9.86	10.0	-1.4	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5176	0.5274		10.2	10.0	1.9	50.0
Hexachlorocyclopentadiene	Ave	0.3099	0.3411	0.0500	11.0	10.0	10.0	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: 20426004.D Lab Sample ID: MB 240-41330/20-A

Matrix: Water Date Extracted: 04/24/2012 09:55

Instrument ID: A4HP7 Date Analyzed: 04/26/2012 11:26

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-41330/21-A	20426005.D	04/26/2012 11:45
MSA-MW20D-042012	240-10494-7	20426014.D	04/26/2012 14:32
	240-10487-W-12-A MS	20426031.D	04/26/2012 19:48
	240-10487-AA-12-A MSD	20426032.D	04/26/2012 20:07

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41330/20-A

Matrix: Water | Lab File ID: 20426004.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/24/2012 09:55

Sample wt/vol: 1000(mL) | Date Analyzed: 04/26/2012 11:26

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41676 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	65		28-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	68		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	60		27-111
4165-62-2	Phenol-d5 (Surr)	62		10-110
1718-51-0	Terphenyl-d14 (Surr)	80		37-119

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: 20425001.D DFTPP Injection Date: 04/25/2012

Instrument ID: A4HP9 DFTPP Injection Time: 09:15

Analysis Batch No.: 41468

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	48.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	81.7	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	52.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.8	
365	Greater than 0.75% of mass 198	2.5	
441	Present, but less than mass 443	4.8	
442	40.0 - 110.0% of mass 198	50.8	
443	15.0 - 24.0% of mass 442	9.4	(18.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-41468/2	20425002.D	04/25/2012	09:33
	STD4 240-41468/3	20425003.D	04/25/2012	09:52
	STD3 240-41468/4	20425004.D	04/25/2012	10:11
	STD2 240-41468/5	20425005.D	04/25/2012	10:31
	STD1 240-41468/6	20425006.D	04/25/2012	10:50
	STD9 240-41468/7	20425007.D	04/25/2012	11:10
	STD8 240-41468/8	20425008.D	04/25/2012	11:30
	STD7 240-41468/9	20425009.D	04/25/2012	11:49
	STD6 240-41468/10	20425010.D	04/25/2012	12:09
	ICV 240-41468/11	20425011.D	04/25/2012	12:28

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 41468

SDG No.:

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/25/2012 09:33 Calibration End Date: 04/25/2012 12:09 Calibration ID: 8278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41468/6	20425006.D
Level 2	STD2 240-41468/5	20425005.D
Level 3	STD3 240-41468/4	20425004.D
Level 4	STD4 240-41468/3	20425003.D
Level 5	STD5 240-41468/2	20425002.D
Level 6	STD6 240-41468/10	20425010.D
Level 7	STD7 240-41468/9	20425009.D
Level 8	STD8 240-41468/8	20425008.D
Level 9	STD9 240-41468/7	20425007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	1.0666	1.1441 1.0236	1.0394 1.0359	1.0891 1.0181	0.9673	Ave		1.0480				5.0		15.0			
N-Nitrosodimethylamine	1.8528	1.8080 1.8338	1.8030 1.8545	1.8275 1.7652	1.7419	Ave		1.8108				2.2		15.0			
Pyridine	2.9642	2.8793 2.9920	2.8224 3.0994	2.8486 2.9777	2.7589	Ave		2.9178				3.8		15.0			
Ethyl methacrylate	2.8067	2.8321 2.7778	2.6178 2.8749	2.9103 2.7186	2.6386	Ave		2.7721				3.8		15.0			
Benzaldehyde	2.9327 2.0517	2.7799 +++++	2.5602 +++++	2.6396 +++++	2.4394	Ave		2.5672				12.0		15.0			
3-Chloropropionitrile	1.1768	1.2653 1.1807	1.1358 1.2025	1.2010 1.1530	1.1444	Ave		1.1824				3.5		15.0			
Malononitrile	2.9426	3.1232 2.5413	3.0900 2.1987	3.1472 1.8400	2.9381	Qua	-0.660	3.6559	-0.071						0.9990		0.9900
2,4-Toluene diamine	0.1571	0.2718 +++++	0.2978 +++++	0.2961 +++++	0.2363	Ave		0.2518				23.0	*	15.0			
Phenol	3.0074	2.7175 3.0457	2.8784 3.1791	2.9889 3.0595	2.7714	Ave		2.9560				5.3		15.0			
Aniline	3.9085	3.5644 3.8870	3.6017 3.9834	3.8949 3.8475	3.5291	Ave		3.7771				4.8		15.0			
Bis(2-chloroethyl)ether	2.9784	2.4079 2.4382	2.3921 2.6804	2.3988 2.5237	2.3334	Ave		2.5191				8.5		15.0			
2-Chlorophenol	1.5638	1.4473 1.5499	1.3624 1.6034	1.4538 1.5975	1.4049	Ave		1.4979				6.2		15.0			
1,3-Dichlorobenzene	1.6598	1.5928 1.6295	1.4645 1.7033	1.5368 1.6690	1.5262	Ave		1.5977				5.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-41468/11 Calibration Date: 04/25/2012 12:28

Instrument ID: A4HP9 Calib Start Date: 04/25/2012 09:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/25/2012 12:09

Lab File ID: 20425011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	1.048	1.047		10.0	10.0	-0.0	50.0
N-Nitrosodimethylamine	Ave	1.811	1.842		10.2	10.0	1.7	50.0
Pyridine	Ave	2.918	2.978		10.2	10.0	2.1	50.0
Ethyl methacrylate	Ave	2.772	2.783		10.0	10.0	0.4	50.0
3-Chloropropionitrile	Ave	1.182	1.187		10.0	10.0	0.4	50.0
Malononitrile	Qua		2.891		10.1	10.0	1.0	50.0
Benzaldehyde	Ave	2.567	1.452		5.65	10.0	-43.5	50.0
Phenol	Ave	2.956	2.940		9.95	10.0	-0.5	20.0
Aniline	Ave	3.777	3.836		10.2	10.0	1.6	50.0
Bis(2-chloroethyl)ether	Ave	2.519	2.434		9.66	10.0	-3.4	50.0
2-Chlorophenol	Ave	1.498	1.510		10.1	10.0	0.8	50.0
1,3-Dichlorobenzene	Ave	1.598	1.593		9.97	10.0	-0.3	50.0
1,4-Dichlorobenzene	Ave	1.648	1.642		9.96	10.0	-0.4	20.0
Benzyl alcohol	Ave	1.301	1.338		10.3	10.0	2.8	50.0
1,2-Dichlorobenzene	Ave	1.542	1.535		9.96	10.0	-0.4	50.0
2-Methylphenol	Ave	1.870	1.888		10.1	10.0	1.0	50.0
bis (2-chloroisopropyl) ether	Ave	2.013	2.016		10.0	10.0	0.2	50.0
3 & 4 Methylphenol	Ave	1.992	2.013		10.1	10.0	1.1	50.0
N-Nitrosodi-n-propylamine	Ave	2.479	2.486	0.0500	10.0	10.0	0.3	50.0
Acetophenone	Ave	3.267	3.263		9.99	10.0	-0.1	50.0
Hexachloroethane	Ave	0.8624	0.8837		10.2	10.0	2.5	50.0
Nitrobenzene	Ave	0.8745	0.8620		9.86	10.0	-1.4	50.0
Isophorone	Ave	1.504	1.502		9.99	10.0	-0.1	50.0
2-Nitrophenol	Ave	0.2150	0.2170		10.1	10.0	0.9	20.0
2,4-Dimethylphenol	Ave	0.6596	0.6486		9.83	10.0	-1.7	50.0
1,3,5-Trichlorobenzene	Ave	0.3808	0.3850		10.1	10.0	1.1	50.0
Bis(2-chloroethoxy)methane	Ave	0.7298	0.7345		10.1	10.0	0.6	50.0
Benzoic acid	Ave	0.2831	0.2837		20.0	20.0	0.2	50.0
2,4-Dichlorophenol	Ave	0.3031	0.3007		9.92	10.0	-0.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3668	0.3672		10.0	10.0	0.1	50.0
Naphthalene	Ave	1.150	1.097		9.54	10.0	-4.6	50.0
4-Chloroaniline	Ave	0.4976	0.4866		9.78	10.0	-2.2	50.0
Hexachlorobutadiene	Ave	0.2296	0.2289		9.97	10.0	-0.3	20.0
1,2,3-Trichlorobenzene	Ave	0.3422	0.3321		9.70	10.0	-3.0	50.0
Caprolactam	Ave	0.1599	0.1662		10.4	10.0	3.9	50.0
4-Chloro-3-methylphenol	Ave	0.5398	0.5423		10.0	10.0	0.5	20.0
2-Methylnaphthalene	Ave	0.7696	0.7538		9.79	10.0	-2.1	50.0
1-Methylnaphthalene	Ave	0.7198	0.7077		9.83	10.0	-1.7	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.6412	0.6455		10.1	10.0	0.7	50.0
Hexachlorocyclopentadiene	Ave	0.4695	0.4746	0.0500	10.1	10.0	1.1	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: 20427001.D DFTPP Injection Date: 04/27/2012

Instrument ID: A4HP9 DFTPP Injection Time: 09:03

Analysis Batch No.: 41841

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	52.0	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	85.3	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	52.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.2	
275	10.0- 30.0% of mass 198	23.4	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	3.9	
442	40.0 - 110.0% of mass 198	46.8	
443	15.0 - 24.0% of mass 442	9.1	(19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-41841/2	20427002.D	04/27/2012	09:27
	MB 240-41464/15-A	20427006.D	04/27/2012	10:43
	LCS 240-41464/16-A	20427007.D	04/27/2012	11:02
MSA-MW35S-042012	240-10494-2	20427020.D	04/27/2012	15:11
MSA-MW20I-042012	240-10494-4	20427022.D	04/27/2012	15:50
MSA-MW17S-042012	240-10494-5	20427023.D	04/27/2012	16:09
MSA-MW17I-042012	240-10494-6	20427024.D	04/27/2012	16:28

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41841/2 Calibration Date: 04/27/2012 09:27

Instrument ID: A4HP9 Calib Start Date: 04/25/2012 09:33

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/25/2012 12:09

Lab File ID: 20427002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	1.048	1.023		9.76	10.0	-2.4	50.0
N-Nitrosodimethylamine	Ave	1.811	1.828		10.1	10.0	0.9	50.0
Pyridine	Ave	2.918	3.098		10.6	10.0	6.2	50.0
Ethyl methacrylate	Ave	2.772	2.846		10.3	10.0	2.7	50.0
3-Chloropropionitrile	Ave	1.182	1.225		10.4	10.0	3.6	50.0
Malononitrile	Qua		2.921		10.2	10.0	2.0	50.0
Benzaldehyde	Ave	2.567	1.711		6.67	10.0	-33.3	50.0
Phenol	Ave	2.956	2.936		9.93	10.0	-0.7	20.0
Aniline	Ave	3.777	3.894		10.3	10.0	3.1	50.0
Bis(2-chloroethyl)ether	Ave	2.519	2.533		10.1	10.0	0.6	50.0
2-Chlorophenol	Ave	1.498	1.446		9.65	10.0	-3.5	50.0
1,3-Dichlorobenzene	Ave	1.598	1.557		9.75	10.0	-2.5	50.0
1,4-Dichlorobenzene	Ave	1.648	1.611		9.78	10.0	-2.2	50.0
Benzyl alcohol	Ave	1.301	1.211		9.31	10.0	-6.9	50.0
1,2-Dichlorobenzene	Ave	1.542	1.521		9.86	10.0	-1.4	50.0
2-Methylphenol	Ave	1.870	1.874		10.0	10.0	0.2	50.0
bis (2-chloroisopropyl) ether	Ave	2.013	2.071		10.3	10.0	2.9	50.0
3 & 4 Methylphenol	Ave	1.992	2.001		10.0	10.0	0.5	50.0
N-Nitrosodi-n-propylamine	Ave	2.479	2.524	0.0500	10.2	10.0	1.8	50.0
Acetophenone	Ave	3.267	3.258		9.97	10.0	-0.3	50.0
Hexachloroethane	Ave	0.8624	0.8552		9.92	10.0	-0.8	50.0
Nitrobenzene	Ave	0.8745	0.8926		10.2	10.0	2.1	50.0
Isophorone	Ave	1.504	1.557		10.4	10.0	3.5	50.0
2-Nitrophenol	Ave	0.2150	0.2178		10.1	10.0	1.3	20.0
1,3,5-Trichlorobenzene	Ave	0.3808	0.3914		10.3	10.0	2.8	50.0
2,4-Dimethylphenol	Ave	0.6596	0.6530		9.90	10.0	-1.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.7298	0.7470		10.2	10.0	2.4	50.0
Benzoic acid	Ave	0.2831	0.2352		16.6	20.0	-16.9	50.0
2,4-Dichlorophenol	Ave	0.3031	0.3085		10.2	10.0	1.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3668	0.3649		9.95	10.0	-0.5	50.0
Naphthalene	Ave	1.150	1.125		9.77	10.0	-2.3	50.0
4-Chloroaniline	Ave	0.4976	0.4764		9.57	10.0	-4.3	50.0
Hexachlorobutadiene	Ave	0.2296	0.2227		9.70	10.0	-3.0	20.0
1,2,3-Trichlorobenzene	Ave	0.3422	0.3378		9.87	10.0	-1.3	50.0
Caprolactam	Ave	0.1599	0.1644		10.3	10.0	2.8	50.0
4-Chloro-3-methylphenol	Ave	0.5398	0.5495		10.2	10.0	1.8	20.0
2-Methylnaphthalene	Ave	0.7696	0.7453		9.68	10.0	-3.2	50.0
1-Methylnaphthalene	Ave	0.7198	0.7085		9.84	10.0	-1.6	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.6412	0.6294		9.82	10.0	-1.8	50.0
Hexachlorocyclopentadiene	Ave	0.4695	0.4478	0.0500	9.54	10.0	-4.6	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: 20430001.D DFTPP Injection Date: 04/30/2012

Instrument ID: A4HP9 DFTPP Injection Time: 13:54

Analysis Batch No.: 42189

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	46.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	76.6	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	51.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.0	
275	10.0- 30.0% of mass 198	23.8	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	5.2	
442	40.0 - 110.0% of mass 198	55.4	
443	15.0 - 24.0% of mass 442	10.4	(18.7)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-42189/2	20430002.D	04/30/2012	14:15
	STD4 240-42189/3	20430003.D	04/30/2012	14:34
	STD3 240-42189/4	20430004.D	04/30/2012	14:54
	STD2 240-42189/5	20430005.D	04/30/2012	15:13
	STD1 240-42189/6	20430006.D	04/30/2012	15:33
	STD9 240-42189/7	20430007.D	04/30/2012	15:53
	STD8 240-42189/8	20430008.D	04/30/2012	16:12
	STD7 240-42189/9	20430009.D	04/30/2012	16:32
	STD6 240-42189/10	20430010.D	04/30/2012	16:52
	ICV 240-42189/11	20430011.D	04/30/2012	17:12
MSA-MW20S-042012	240-10494-3	20430031.D	04/30/2012	23:45

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 42189

SDG No.:

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2012 14:15 Calibration End Date: 04/30/2012 16:52 Calibration ID: 8430

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42189/6	20430006.D
Level 2	STD2 240-42189/5	20430005.D
Level 3	STD3 240-42189/4	20430004.D
Level 4	STD4 240-42189/3	20430003.D
Level 5	STD5 240-42189/2	20430002.D
Level 6	STD6 240-42189/10	20430010.D
Level 7	STD7 240-42189/9	20430009.D
Level 8	STD8 240-42189/8	20430008.D
Level 9	STD9 240-42189/7	20430007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	1.0592	1.1068 1.0605	1.1809 1.1081	1.1070 1.0480	0.9307	Ave		1.0751				6.7		15.0			
N-Nitrosodimethylamine	1.8304	1.8188 1.8259	1.8770 1.9186	1.8053 1.7424	1.6738	Ave		1.8115				4.2		15.0			
Pyridine	2.9114	2.9196 3.0092	2.8916 3.2100	2.9532 2.9592	2.5839	Ave		2.9298				5.9		15.0			
Ethyl methacrylate	2.7267	2.7726 2.7903	2.8812 2.8946	2.7298 2.7236	2.5431	Ave		2.7577				4.0		15.0			
Benzaldehyde	2.9579 1.0883	2.5921 +++++	2.5972 +++++	2.4432 +++++	2.0949	Ave		2.2956				28.0	*	15.0			
3-Chloropropionitrile	1.1803	1.0938 1.1979	1.1469 1.2308	1.1264 1.1265	1.0886	Ave		1.1489				4.4		15.0			
Malononitrile	2.6775	3.1091 2.3829	3.2493 2.0376	3.0435 1.6701	2.7928	Qua	-0.424	3.4105	-0.068						0.9990		0.9900
Phenol	2.9038	2.8193 2.9952	3.0295 3.1959	3.0103 3.0345	2.6632	Ave		2.9565				5.4		15.0			
2,4-Toluene diamine	0.0923	0.3243 +++++	0.3103 +++++	0.3175 +++++	0.2007	Ave		0.2490				41.0	*	15.0			
Aniline	3.6472	3.6731 3.8223	3.7176 4.0567	3.6331 3.7725	3.4078	Ave		3.7163				5.0		15.0			
Bis(2-chloroethyl)ether	2.3522	2.2641 2.4464	2.3930 2.6516	2.3923 2.6215	2.2126	Ave		2.4167				6.4		15.0			
2-Chlorophenol	1.4555	1.3890 1.5506	1.5050 1.6509	1.4770 1.5602	1.3823	Ave		1.4963				6.1		15.0			
1,3-Dichlorobenzene	1.5732	1.4851 1.6478	1.5751 1.7823	1.5869 1.6714	1.4687	Ave		1.5988				6.4		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-42189/11 Calibration Date: 04/30/2012 17:12

Instrument ID: A4HP9 Calib Start Date: 04/30/2012 14:15

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/30/2012 16:52

Lab File ID: 20430011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	1.075	1.056		9.82	10.0	-1.8	50.0
N-Nitrosodimethylamine	Ave	1.812	1.817		10.0	10.0	0.3	50.0
Pyridine	Ave	2.930	2.877		9.82	10.0	-1.8	50.0
Ethyl methacrylate	Ave	2.758	2.737		9.92	10.0	-0.8	50.0
3-Chloropropionitrile	Ave	1.149	1.154		10.0	10.0	0.4	50.0
Malononitrile	Qua		2.632		9.75	10.0	-2.5	50.0
Benzaldehyde	Ave	2.296	1.028		4.48	10.0	-55.2*	50.0
Phenol	Ave	2.956	2.873		9.72	10.0	-2.8	20.0
Aniline	Ave	3.716	3.650		9.82	10.0	-1.8	50.0
Bis(2-chloroethyl)ether	Ave	2.417	2.346		9.71	10.0	-2.9	50.0
2-Chlorophenol	Ave	1.496	1.477		9.87	10.0	-1.3	50.0
1,3-Dichlorobenzene	Ave	1.599	1.584		9.91	10.0	-0.9	50.0
1,4-Dichlorobenzene	Ave	1.690	1.643		9.73	10.0	-2.7	20.0
Benzyl alcohol	Ave	1.290	1.235		9.58	10.0	-4.2	50.0
1,2-Dichlorobenzene	Ave	1.569	1.560		9.95	10.0	-0.5	50.0
2-Methylphenol	Ave	1.841	1.805		9.80	10.0	-2.0	50.0
bis (2-chloroisopropyl) ether	Ave	2.021	1.940		9.60	10.0	-4.0	50.0
3 & 4 Methylphenol	Ave	1.965	1.930		9.82	10.0	-1.8	50.0
N-Nitrosodi-n-propylamine	Ave	2.384	2.341	0.0500	9.82	10.0	-1.8	50.0
Acetophenone	Ave	3.189	3.100		9.72	10.0	-2.8	50.0
Hexachloroethane	Ave	0.8655	0.8430		9.74	10.0	-2.6	50.0
Nitrobenzene	Ave	0.8377	0.8432		10.1	10.0	0.7	50.0
Isophorone	Ave	1.434	1.484		10.4	10.0	3.5	50.0
2-Nitrophenol	Ave	0.2164	0.2179		10.1	10.0	0.7	20.0
2,4-Dimethylphenol	Ave	0.6386	0.6613		10.4	10.0	3.6	50.0
1,3,5-Trichlorobenzene	Ave	0.3865	0.3953		10.2	10.0	2.3	50.0
Bis(2-chloroethoxy)methane	Ave	0.7208	0.7309		10.1	10.0	1.4	50.0
Benzoic acid	Qua		0.2625		19.2	20.0	-4.0	50.0
2,4-Dichlorophenol	Ave	0.3080	0.3030		9.84	10.0	-1.6	20.0
1,2,4-Trichlorobenzene	Ave	0.3661	0.3737		10.2	10.0	2.1	50.0
Naphthalene	Ave	1.143	1.136		9.95	10.0	-0.5	50.0
4-Chloroaniline	Ave	0.4800	0.4611		9.61	10.0	-3.9	50.0
Hexachlorobutadiene	Ave	0.2269	0.2259		9.96	10.0	-0.4	20.0
1,2,3-Trichlorobenzene	Ave	0.3421	0.3434		10.0	10.0	0.4	50.0
Caprolactam	Ave	0.1585	0.1636		10.3	10.0	3.2	50.0
4-Chloro-3-methylphenol	Ave	0.5309	0.5559		10.5	10.0	4.7	20.0
2-Methylnaphthalene	Ave	0.7779	0.7588		9.75	10.0	-2.5	50.0
1-Methylnaphthalene	Ave	0.7170	0.7320		10.2	10.0	2.1	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.6351	0.6290		9.90	10.0	-1.0	50.0
Hexachlorocyclopentadiene	Ave	0.4534	0.4589	0.0500	10.1	10.0	1.2	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab File ID: 20427006.D Lab Sample ID: MB 240-41464/15-A

Matrix: Water Date Extracted: 04/25/2012 08:09

Instrument ID: A4HP9 Date Analyzed: 04/27/2012 10:43

Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-41464/16-A	20427007.D	04/27/2012 11:02
MSA-MW35S-042012	240-10494-2	20427020.D	04/27/2012 15:11
MSA-MW20I-042012	240-10494-4	20427022.D	04/27/2012 15:50
MSA-MW17S-042012	240-10494-5	20427023.D	04/27/2012 16:09
MSA-MW17I-042012	240-10494-6	20427024.D	04/27/2012 16:28
MSA-MW20S-042012	240-10494-3	20430031.D	04/30/2012 23:45

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name:	TestAmerica Canton	Job No.:	240-10494-1
SDG No.:			
Client Sample ID:		Lab Sample ID:	MB 240-41464/15-A
Matrix:	Water	Lab File ID:	20427006.D
Analysis Method:	8270C	Date Collected:	
Extract. Method:	3520C	Date Extracted:	04/25/2012 08:09
Sample wt/vol:	1000(mL)	Date Analyzed:	04/27/2012 10:43
Con. Extract Vol.:	2(mL)	Dilution Factor:	1
Injection Volume:	1(uL)	Level: (low/med)	Low
% Moisture:		GPC Cleanup:(Y/N)	N
Analysis Batch No.:	41841	Units:	ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	69		28-110
367-12-4	2-Fluorophenol (Surr)	80		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	65		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	77		27-111
4165-62-2	Phenol-d5 (Surr)	79		10-110
1718-51-0	Terphenyl-d14 (Surr)	85		37-119

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MSA-MW35S-042012	240-10494-2	53	62	54	54	69	70
MSA-MW20S-042012	240-10494-3	64	66	68	58	72	72
MSA-MW20I-042012	240-10494-4	67	72	65	56	69	72
MSA-MW17S-042012	240-10494-5	64	68	62	58	66	70
MSA-MW17I-042012	240-10494-6	67	70	67	60	63	76
MSA-MW20D-042012	240-10494-7	44	48	44	44	60	69
	MB 240-41330/20-A	61	62	60	65	68	80
	MB 240-41464/15-A	80	79	77	69	65	85
	LCS 240-41330/21-A	76	76	67	72	81	81
	LCS 240-41464/16-A	83	86	78	72	76	79
	240-10487-W-12-A MS	65	65	48	62	83	63
	240-10487-AA-12-A MSD	67	63	60	71	83	66

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20426005.D

Lab ID: LCS 240-41330/21-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.8	64	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20427007.D

Lab ID: LCS 240-41464/16-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	14.0	70	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20426031.D

Lab ID: 240-10487-W-12-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.4	19 U	11.5 J	59	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20426032.D

Lab ID: 240-10487-AA-12-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.2	9.99 J	52	14	30	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD6 240-40988/10 Date Analyzed: 04/20/2012 14:10

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20420010.D Heated Purge: (Y/N) N

Calibration ID: 8188

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		278041	3.47	1151968	4.36	703518	5.63
UPPER LIMIT		556082	3.97	2303936	4.86	1407036	6.13
LOWER LIMIT		139021	2.97	575984	3.86	351759	5.13
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-40988/11		228587	3.47	953048	4.36	591000	5.62
CCV 240-41676/2 CCVIS		228305	3.36	939939	4.24	592945	5.51

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD6 240-40988/10 Date Analyzed: 04/20/2012 14:10

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20420010.D Heated Purge: (Y/N) N

Calibration ID: 8188

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1128751	6.71	1095128	8.68	847095	10.06
UPPER LIMIT		2257502	7.21	2190256	9.18	1694190	10.56
LOWER LIMIT		564376	6.21	547564	8.18	423548	9.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-40988/11		952061	6.71	926423	8.69	698575	10.07
CCV 240-41676/2 CCVIS		938191	6.58	930871	8.53	703191	9.81

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: CCV 240-41676/2 Date Analyzed: 04/26/2012 10:49

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20426002.D Heated Purge: (Y/N) N

Calibration ID: 8192

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		228305	3.36	939939	4.24	592945	5.51
UPPER LIMIT		456610	3.86	1879878	4.74	1185890	6.01
LOWER LIMIT		114153	2.86	469970	3.74	296473	5.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-41676/3		234174	3.36	1026526	4.24	634576	5.50
MB 240-41330/20-A		205721	3.36	830432	4.24	507900	5.50
LCS 240-41330/21-A		206028	3.36	854709	4.24	553663	5.50
240-10494-7	MSA-MW20D-042012	227093	3.36	919379	4.24	600605	5.50
240-10487-W-12-A MS		239058	3.36	1131687	4.26	679042	5.51
240-10487-AA-12-A MSD		296740	3.36	1352514	4.26	766101	5.51

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: CCV 240-41676/2 Date Analyzed: 04/26/2012 10:49

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20426002.D Heated Purge: (Y/N) N

Calibration ID: 8192

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		938191	6.58	930871	8.53	703191	9.81
UPPER LIMIT		1876382	7.08	1861742	9.03	1406382	10.31
LOWER LIMIT		469096	6.08	465436	8.03	351596	9.31
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-41676/3		1087953	6.58	1090938	8.52	833621	9.81
MB 240-41330/20-A		843827	6.58	804542	8.52	617279	9.81
LCS 240-41330/21-A		904302	6.58	903593	8.53	674496	9.82
240-10494-7	MSA-MW20D-042012	1006718	6.58	993439	8.54	761862	9.83
240-10487-W-12-A MS		1167124	6.58	1158291	8.53	884638	9.82
240-10487-AA-12-A MSD		1307115	6.58	1248592	8.53	985545	9.82

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD6 240-41468/10 Date Analyzed: 04/25/2012 12:09

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20425010.D Heated Purge: (Y/N) N

Calibration ID: 8278

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		77941	3.87	343320	4.83	202124	6.13
UPPER LIMIT		155882	4.37	686640	5.33	404248	6.63
LOWER LIMIT		38971	3.37	171660	4.33	101062	5.63
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-41468/11		140274	3.87	573460	4.83	343200	6.13
CCV 240-41841/2 CCVIS		130905	3.73	516365	4.70	305659	5.99

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD6 240-41468/10 Date Analyzed: 04/25/2012 12:09

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20425010.D Heated Purge: (Y/N) N

Calibration ID: 8278

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		364963	7.21	349765	9.17	279023	10.58
UPPER LIMIT		729926	7.71	699530	9.67	558046	11.08
LOWER LIMIT		182482	6.71	174883	8.67	139512	10.08
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-41468/11		614214	7.21	606416	9.17	483834	10.58
CCV 240-41841/2 CCVIS		549412	7.08	511984	9.04	406473	10.36

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: CCV 240-41841/2 Date Analyzed: 04/27/2012 09:27

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20427002.D Heated Purge: (Y/N) N

Calibration ID: 8282

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		130905	3.73	516365	4.70	305659	5.99
UPPER LIMIT		261810	4.23	1032730	5.20	611318	6.49
LOWER LIMIT		65453	3.23	258183	4.20	152830	5.49
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-41464/15-A		112418	3.73	460642	4.69	287861	5.99
LCS 240-41464/16-A		118835	3.73	519774	4.69	321582	5.99
240-10494-2	MSA-MW35S-042012	71312	3.74	304418	4.70	206106	6.00
240-10494-4	MSA-MW20I-042012	84959	3.74	371504	4.71	257637	6.00
240-10494-5	MSA-MW17S-042012	90385	3.74	378521	4.71	252438	6.00
240-10494-6	MSA-MW17I-042012	109491	3.74	459990	4.70	289197	6.00

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: CCV 240-41841/2 Date Analyzed: 04/27/2012 09:27

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20427002.D Heated Purge: (Y/N) N

Calibration ID: 8282

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		549412	7.08	511984	9.04	406473	10.36
UPPER LIMIT		1098824	7.58	1023968	9.54	812946	10.86
LOWER LIMIT		274706	6.58	255992	8.54	203237	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-41464/15-A		522819	7.07	502890	9.02	409418	10.33
LCS 240-41464/16-A		591675	7.07	575945	9.02	441052	10.33
240-10494-2	MSA-MW35S-042012	365812	7.09	347786	9.04	295971	10.38
240-10494-4	MSA-MW20I-042012	485484	7.09	428334	9.04	364570	10.38
240-10494-5	MSA-MW17S-042012	482882	7.09	413184	9.04	375939	10.39
240-10494-6	MSA-MW17I-042012	531031	7.09	463442	9.04	405339	10.38

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD6 240-42189/10 Date Analyzed: 04/30/2012 16:52

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20430010.D Heated Purge: (Y/N) N

Calibration ID: 8430

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		175936	3.80	688882	4.76	410302	6.06
UPPER LIMIT		351872	4.30	1377764	5.26	820604	6.56
LOWER LIMIT		87968	3.30	344441	4.26	205151	5.56
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42189/11		177693	3.80	688166	4.76	419743	6.06
240-10494-3	MSA-MW20S-042012	141202	3.80	529310	4.76	353744	6.05

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: STD6 240-42189/10 Date Analyzed: 04/30/2012 16:52

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20430010.D Heated Purge: (Y/N) N

Calibration ID: 8430

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		743989	7.14	746886	9.10	574184	10.45
UPPER LIMIT		1487978	7.64	1493772	9.60	1148368	10.95
LOWER LIMIT		371995	6.64	373443	8.60	287092	9.95
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42189/11		763529	7.15	748540	9.09	592940	10.44
240-10494-3	MSA-MW20S-042012	669242	7.14	627308	9.08	516747	10.44

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Batch Number: 41464 Batch Start Date: 04/25/12 10:30 Batch Analyst: Matthews, Brandon

Batch Method: 3520C Batch End Date: 04/26/12 04:30

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	InitialAmount	FinalAmount	FirstAdjustpH	EXBNAEXTRALCS 00001	EXBNALCS1 00020
240-10494-I-2	MSA-MW35S-042012	3520C, 8270C	T	5 SU	1020 mL	2 mL	2 SU		
240-10494-J-3	MSA-MW20S-042012	3520C, 8270C	T	7 SU	1050 mL	2 mL	2 SU		
240-10494-H-4	MSA-MW20I-042012	3520C, 8270C	T	7 SU	1030 mL	2 mL	2 SU		
240-10494-K-5	MSA-MW17S-042012	3520C, 8270C	T	7 SU	1050 mL	2 mL	2 SU		
240-10494-H-6	MSA-MW17I-042012	3520C, 8270C	T	5 SU	1050 mL	2 mL	2 SU		
MB 240-41464/15		3520C, 8270C		7 SU	1000 mL	2 mL	2 SU		
LCS 240-41464/16		3520C, 8270C		7 SU	1000 mL	2 mL	2 SU	0.1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXBNASURRW 00012	EXRESTEKSPKW 00010				
240-10494-I-2	MSA-MW35S-042012	3520C, 8270C	T	1 mL					
240-10494-J-3	MSA-MW20S-042012	3520C, 8270C	T	1 mL					
240-10494-H-4	MSA-MW20I-042012	3520C, 8270C	T	1 mL					
240-10494-K-5	MSA-MW17S-042012	3520C, 8270C	T	1 mL					
240-10494-H-6	MSA-MW17I-042012	3520C, 8270C	T	1 mL					
MB 240-41464/15		3520C, 8270C		1 mL					
LCS 240-41464/16		3520C, 8270C		1 mL	1 mL				

Batch Notes	
Acid used for pH adjust Lot #	178762
Filter Paper Lot Number	337125
Na2SO4 Lot Number	275335
Prep Solvent Lot #	440225
Person's name who did the prep	bpm

Basis	Basis Description
T	Total/NA

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: YPID Start Date: 04/26/2012 14:19

Analysis Batch Number: 41736 End Date: 04/27/2012 10:25

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/26/2012 14:19	1		RTX-VRX 0.45(mm)
CCV 240-41736/5 CCVRT		04/26/2012 15:37	1	YF042605.D	RTX-VRX 0.45(mm)
MB 240-41736/6		04/26/2012 16:15	1	YF042606.D	RTX-VRX 0.45(mm)
LCS 240-41736/7		04/26/2012 16:54	1	YF042607.D	RTX-VRX 0.45(mm)
240-10494-2	MSA-MW35S-042012	04/26/2012 17:33	1	YF042608.D	RTX-VRX 0.45(mm)
240-10494-2 MS	MSA-MW35S-042012 MS	04/26/2012 18:12	1	YF042609.D	RTX-VRX 0.45(mm)
240-10494-2 MSD	MSA-MW35S-042012 MSD	04/26/2012 18:50	1	YF042610.D	RTX-VRX 0.45(mm)
240-10494-3	MSA-MW20S-042012	04/26/2012 19:28	5	YF042611.D	RTX-VRX 0.45(mm)
240-10494-5	MSA-MW17S-042012	04/26/2012 20:06	1	YF042612.D	RTX-VRX 0.45(mm)
CCV 240-41736/13		04/26/2012 20:44	1	YF042613.D	RTX-VRX 0.45(mm)
ZZZZZ		04/26/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		04/26/2012 21:58	1		RTX-VRX 0.45(mm)
ZZZZZ		04/26/2012 22:36	1		RTX-VRX 0.45(mm)
ZZZZZ		04/26/2012 23:13	1		RTX-VRX 0.45(mm)
ZZZZZ		04/26/2012 23:50	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 00:28	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 01:05	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 01:42	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 02:20	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 02:57	1		RTX-VRX 0.45(mm)
CCV 240-41736/24		04/27/2012 03:35	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 04:12	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 04:50	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 05:27	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 06:04	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 06:41	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 07:19	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 07:56	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 08:33	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 09:11	1		RTX-VRX 0.45(mm)
ZZZZZ		04/27/2012 09:48	1		RTX-VRX 0.45(mm)
CCV 240-41736/35		04/27/2012 10:25	1		RTX-VRX 0.45(mm)

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Sample No.: CCV 240-41736/5 Date Analyzed: 04/26/2012 15:37

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF042605.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.76		
UPPER LIMIT				9.86		
LOWER LIMIT				9.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-41736/5 CCVRT		04/26/2012 15:37	YF042605.D	9.76		
MB 240-41736/6		04/26/2012 16:15	YF042606.D	9.75		
LCS 240-41736/7		04/26/2012 16:54	YF042607.D	9.76		
240-10494-2	MSA-MW35S-042012	04/26/2012 17:33	YF042608.D	9.75		
240-10494-2 MS	MSA-MW35S-042012 MS	04/26/2012 18:12	YF042609.D	9.76		
240-10494-2 MSD	MSA-MW35S-042012 MSD	04/26/2012 18:50	YF042610.D	9.76		
240-10494-3	MSA-MW20S-042012	04/26/2012 19:28	YF042611.D	9.75		
240-10494-5	MSA-MW17S-042012	04/26/2012 20:06	YF042612.D	9.75		
CCV 240-41736/13		04/26/2012 20:44	YF042613.D	9.76		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41736/5 Calibration Date: 04/26/2012 15:37

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042605.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	317525		847	800	5.9	15.0
C6-C12	Ave	336931	368263		874	800	9.3	15.0
Trifluorotoluene (Surr)	Ave	420494	343125		8.16	10.0	-18.4*	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41736/13 Calibration Date: 04/26/2012 20:44

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042613.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	308864		824	800	3.0	15.0
C6-C12	Ave	336931	352097		836	800	4.5	15.0
Trifluorotoluene (Surr)	Ave	420494	318399		7.57	10.0	-24.3*	15.0

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: MB 240-41736/6

Matrix: Water Date Extracted: 04/26/2012 16:15

Lab File ID:(1) YF042606.D Lab File ID:(2)

Date Analyzed:(1) 04/26/2012 16:15 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-41736/7	04/26/2012 16:54	
MSA-MW35S-042012	240-10494-2	04/26/2012 17:33	
MSA-MW35S-042012 MS	240-10494-2 MS	04/26/2012 18:12	
MSA-MW35S-042012 MSD	240-10494-2 MSD	04/26/2012 18:50	
MSA-MW20S-042012	240-10494-3	04/26/2012 19:28	
MSA-MW17S-042012	240-10494-5	04/26/2012 20:06	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41736/6

Matrix: Water Lab File ID: YF042606.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/26/2012 16:15

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41736 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	35.8	U	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	64		10-150

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MSA-MW35S-042012	240-10494-2	64
MSA-MW20S-042012	240-10494-3	66
MSA-MW17S-042012	240-10494-5	63
	MB 240-41736/6	64
	LCS 240-41736/7	77
MSA-MW35S-042012 MS	240-10494-2 MS	74
MSA-MW35S-042012 MSD	240-10494-2 MSD	74

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042607.D

Lab ID: LCS 240-41736/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	896	112	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042609.D

Lab ID: 240-10494-2 MS Client ID: MSA-MW35S-042012 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	53 J	964	114	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042610.D

Lab ID: 240-10494-2 MSD Client ID: MSA-MW35S-042012 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	960	113	0	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: A2HP6R Start Date: 04/26/2012 12:11

Analysis Batch Number: 41709 End Date: 04/26/2012 22:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-41709/4 IC		04/26/2012 12:11	1	P6B04264.D	RTX-5 0.53(mm)
STD2 240-41709/5 IC		04/26/2012 12:42	1	P6B04265.D	RTX-5 0.53(mm)
STD3 240-41709/6 IC		04/26/2012 13:13	1	P6B04266.D	RTX-5 0.53(mm)
STD4 240-41709/7 IC		04/26/2012 13:45	1	P6B04267.D	RTX-5 0.53(mm)
STD5 240-41709/8 IC		04/26/2012 14:16	1	P6B04268.D	RTX-5 0.53(mm)
ICV 240-41709/9		04/26/2012 14:47	1	P6B04269.D	RTX-5 0.53(mm)
STD1 240-41709/10 IC		04/26/2012 15:18	1		RTX-5 0.53(mm)
STD2 240-41709/11 IC		04/26/2012 15:49	1		RTX-5 0.53(mm)
STD3 240-41709/12 IC		04/26/2012 16:20	1		RTX-5 0.53(mm)
STD4 240-41709/13 IC		04/26/2012 16:51	1		RTX-5 0.53(mm)
STD5 240-41709/14 IC		04/26/2012 17:23	1		RTX-5 0.53(mm)
ICV 240-41709/15		04/26/2012 17:54	1		RTX-5 0.53(mm)
240-10494-2	MSA-MW35S-042012	04/26/2012 18:25	1	P6B04276.D	RTX-5 0.53(mm)
240-10494-3	MSA-MW20S-042012	04/26/2012 18:56	1	P6B04277.D	RTX-5 0.53(mm)
240-10494-5	MSA-MW17S-042012	04/26/2012 19:27	1	P6B04278.D	RTX-5 0.53(mm)
MB 240-41325/4-A		04/26/2012 19:58	1	P6B04279.D	RTX-5 0.53(mm)
LCS 240-41325/5-A		04/26/2012 20:29	1	P6B04280.D	RTX-5 0.53(mm)
CCV 240-41709/21		04/26/2012 20:59	1	P6B04281.D	RTX-5 0.53(mm)
CCV 240-41709/24		04/26/2012 22:33	1	P6B04284.D	RTX-5 0.53(mm)

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 41709

SDG No.:

Instrument ID: A2HP6R GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8411

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41709/4	P6B04264.D
Level 2	STD2 240-41709/5	P6B04265.D
Level 3	STD3 240-41709/6	P6B04266.D
Level 4	STD4 240-41709/7	P6B04267.D
Level 5	STD5 240-41709/8	P6B04268.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	165214 152606	162088	159915	149941	Ave		157952.561				4.1		20.0			
n-Nonane	187792 185823	189585	191915	181619	Ave		187346.556				2.1		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICV 240-41709/9 Calibration Date: 04/26/2012 14:47

Instrument ID: A2HP6R Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6B04269.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	157953	151308		479	500	-4.2	20.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41709/21 Calibration Date: 04/26/2012 20:59

Instrument ID: A2HP6R Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6B04281.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	157953	165415		524	500	4.7	15.0
n-Nonane	Ave	187347	200753		53.6	50.0	7.2	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: CCV 240-41709/24 Calibration Date: 04/26/2012 22:33

Instrument ID: A2HP6R Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6B04284.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	157953	155244		491	500	-1.7	15.0
n-Nonane	Ave	187347	190512		50.8	50.0	1.7	15.0

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: MB 240-41325/4-A

Matrix: Water Date Extracted: 04/24/2012 09:45

Lab File ID:(1) P6B04279.D Lab File ID:(2)

Date Analyzed:(1) 04/26/2012 19:58 Date Analyzed:(2)

Instrument ID:(1) A2HP6R Instrument ID:(2)

GC Column:(1) RTX-5 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MSA-MW35S-042012	240-10494-2	04/26/2012 18:25	
MSA-MW20S-042012	240-10494-3	04/26/2012 18:56	
MSA-MW17S-042012	240-10494-5	04/26/2012 19:27	
	LCS 240-41325/5-A	04/26/2012 20:29	

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-41325/4-A

Matrix: Water Lab File ID: P6B04279.D

Analysis Method: 8015B Date Collected:

Extraction Method: 3520C Date Extracted: 04/24/2012 09:45

Sample wt/vol: 1000(mL) Date Analyzed: 04/26/2012 19:58

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: RTX-5 ID: 0.53(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 41709 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	57		10-110

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-5 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	C91 #
MSA-MW35S-042012	240-10494-2	51
MSA-MW20S-042012	240-10494-3	53
MSA-MW17S-042012	240-10494-5	64
	MB 240-41325/4-A	57
	LCS 240-41325/5-A	56

C9 = n-Nonane

QC LIMITS
10-110

Column to be used to flag recovery values

FORM II 8015B

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P6B04280.D

Lab ID: LCS 240-41325/5-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	1930	77	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

DIESEL RANGE ORGANICS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Batch Number: 41325 Batch Start Date: 04/24/12 11:25 Batch Analyst: Matthews, Brandon

Batch Method: 3520C Batch End Date: 04/25/12 05:25

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	EXDIESELSPKW 00015	EXTPHSURR 00011
240-10494-L-2	MSA-MW35S-042012	3520C, 8015B	T	1050 mL	5 mL	5	2		1 mL
240-10494-K-3	MSA-MW20S-042012	3520C, 8015B	T	1030 mL	5 mL	7	2		1 mL
240-10494-J-5	MSA-MW17S-042012	3520C, 8015B	T	1010 mL	5 mL	7	2		1 mL
MB 240-41325/4		3520C, 8015B		1000 mL	5 mL	7	2		1 mL
LCS 240-41325/5		3520C, 8015B		1000 mL	5 mL	7	2	1 mL	1 mL

Batch Notes	
Batch Comment	s/s bm
Na2SO4 Lot Number	275338
Prep Solvent Lot #	440234

Basis	Basis Description
T	Total/NA

Case Narrative

TestAmerica West Sacramento Project Number G2D240431

General Comments
One of the ambers for sample MSA-MW17S-042012 was received broken.

WATER, 8330/8330A, RDX
Sample(s): 2, 4
There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

WATER, 6850, Perchlorate
Sample(s): 1, 2, 3, 4, 5, 6
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MR8L91AC
SMCS: MR8L91AD

There were no other anomalies associated with this project.

Sample Summary

TestAmerica West Sacramento Project Number G2D240431

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MR6HT	1	MSA-MW35S-042012	4/20/2012 09:55 AM	4/24/2012 09:00 AM
MR6HV	2	MSA-MW20S-042012	4/20/2012 10:20 AM	4/24/2012 09:00 AM
MR6HW	3	MSA-MW20I-042012	4/20/2012 11:55 AM	4/24/2012 09:00 AM
MR6H0	4	MSA-MW17S-042012	4/20/2012 12:00 PM	4/24/2012 09:00 AM
MR6H1	5	MSA-MW17I-042012	4/20/2012 01:25 PM	4/24/2012 09:00 AM
MR6H2	6	MSA-MW20D-042012	4/20/2012 01:42 PM	4/24/2012 09:00 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

G2D240431

PARAMETER	ANALYTICAL METHOD
Nitroaromatics and Nitramines by HPLC	SW846 8330/8330A
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

QC DATA ASSOCIATION SUMMARY

G2D240431

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6850		2118065	2118042
002	WATER	SW846 8330/8330A		2116029	
	WATER	SW846 6850		2118065	2118042
003	WATER	SW846 6850		2118065	2118042
004	WATER	SW846 8330/8330A		2116029	
	WATER	SW846 6850		2118065	2118042
005	WATER	SW846 6850		2118065	2118042
006	WATER	SW846 6850		2118065	2118042

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 1

Inst ID: LC10 Batch ID: 04192012C
Test: SOP WS-LC-0009
Method: Method 8330
ICAL Date: See Calibration Report

Eluents: Water: M0104 2012
MeOH: K186I8
ACN: K133804
50:50 H2O:MeOH+0.4% H3PO4 4457 - 376

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
19-APR-2012	08:43	RN	1	8330 PRIMER	A-000001	--	--	--	
19-APR-2012	09:23	RN	1	8330 PRIMER	A-000002	--	--	--	
19-APR-2012	10:27	RN	2	8330 PRIMER	A-000003	--	--	--	
19-APR-2012	11:08	RN	81	BLANK	A-000004	--	--	--	
19-APR-2012	11:48	RN	11	STD 01 HP8330L1 00001 5ng/mL	A-000005	--	--	--	
19-APR-2012	12:28	RN	12	STD 02 HP8330L2 00001 10ng/mL	A-000006	--	--	--	
19-APR-2012	13:08	RN	13	STD 03 HP8330L3 00001 20ng/mL	A-000007	--	--	--	
19-APR-2012	13:48	RN	14	STD 04 HP8330L4 00001 50ng/mL	A-000008	--	--	--	
19-APR-2012	14:28	RN	15	STD 05 HP8330L5 00001 100ng/mL	A-000009	--	--	--	
19-APR-2012	15:09	RN	16	STD 06 HP8330L6 00001200ng/mL	A-000010	--	--	--	
19-APR-2012	15:49	RN	17	STD 07 HP8330L7 00001 500ng/mL	A-000011	--	--	--	
19-APR-2012	16:29	RN	18	STD 08 HP8330L8 00001 1000ng/m	A-000012	--	--	--	
19-APR-2012	17:09	RN	81	BLANK	A-000013	--	--	--	
19-APR-2012	17:49	RN	19	STD MRL 11GCSV0468 8330 5-50ng	A-000014	--	--	--	
19-APR-2012	18:30	RN	20	STD ICV HPEGDNIC 000001 200ng/	A-000015	--	--	--	
19-APR-2012	19:10	RN	21	STD ICV HP8330IC 00001 200ng/m	A-000016	--	--	--	
19-APR-2012	19:50	RN	22	EGDN LOD CHECK MB	A-000017	10 g	80 mL	1	
19-APR-2012	20:30	RN	23	EGDN LOD CHECK	A-000018	10 g	80 mL	1	
19-APR-2012	21:10	RN	31	MR0W01AA 2104025 MB	A-000019	10 g	80 mL	1	
19-APR-2012	21:50	RN	32	MR0W01AC 2104025 LCS	A-000020	10 g	80 mL	1	
19-APR-2012	22:30	RN	33	MRVL61AA 2104025 D060464-1	A-000021	9.94 g	80 mL	1	
19-APR-2012	23:10	RN	34	MRVL71AA 2104025 D060464-2	A-000022	10.3 g	80 mL	1	
19-APR-2012	23:51	RN	35	MRVL81AA 2104025 D060464-3	A-000023	9.84 g	80 mL	1	
20-APR-2012	00:31	RN	36	MRVL91AA 2104025 D060464-4	A-000024	10.28 g	80 mL	1	
20-APR-2012	01:11	RN	37	MRVMA1AA 2104025 D060464-5	A-000025	10.12 g	80 mL	1	
20-APR-2012	01:51	RN	38	MRVMC1AA 2104025 D060464-6	A-000026	9.9 g	80 mL	1	
20-APR-2012	02:31	RN	3	STD 05 HP8330L5 00001 100ng/mL	A-000027	--	--	--	
20-APR-2012	03:11	RN	39	MRVMD1AA 2104025 D060464-7	A-000028	10.19 g	80 mL	1	
20-APR-2012	03:52	RN	40	MRVME1AA 2104025 D060464-8	A-000029	10.05 g	80 mL	1	
20-APR-2012	04:32	RN	41	MRVMF1AA 2104025 D060464-9	A-000030	10.29 g	80 mL	1	
20-APR-2012	05:12	RN	42	MRVMG1AA 2104025 D060464-10	A-000031	9.91 g	80 mL	1	
20-APR-2012	05:52	RN	43	MRVMH1AA 2104025 D060464-11	A-000032	9.95 g	80 mL	1	

GC-LC Log 2011-12-14 ERS

Sequence Checked: 4-20-12

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 8

Inst ID: LC10 Batch ID: 04272012 Eluents: Water: M040520|2
Test: SOP WS-LC-0009 MeOH: K18G18
Method: Method 8330 ACN: K43804
ICAL Date: See Calibration Report 50:50 H2O:MeOH+0.4% H3PO4 4457 - 39E

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
27-APR-2012	09:36	RN	1	8330 PRIMER	A-000001	--	--	--	
27-APR-2012	10:16	RN	1	8330 PRIMER	A-000002	--	--	--	
27-APR-2012	10:57	RN	2	STD 06 HP8330L6 00001200ng/mL	A-000003	--	--	--	
27-APR-2012	11:46	RN	1	8330 PRIMER	A-000004	--	--	--	
27-APR-2012	12:27	RN	2	STD 06 HP8330L6 00001200ng/mL	A-000005	--	--	--	
27-APR-2012	13:07	RN	11	MR6711AA 2116039 MB	A-000006	10 g	80 mL	1	
27-APR-2012	13:47	RN	12	MR6711AC 2116039 LCS	A-000007	10 g	80 mL	1	
27-APR-2012	14:28	RN	13	MR4L61AA 2116039 D190492-1	A-000008	10.15 g	80 mL	1	
27-APR-2012	15:08	RN	14	MR4L81AA 2116039 D190492-2	A-000009	10.31 g	80 mL	1	
27-APR-2012	15:48	RN	15	MR4L81AC 2116039 D190492-2S	A-000010	10.08 g	80 mL	1	
27-APR-2012	16:29	RN	16	MR4L81AD 2116039 D190492-2D	A-000011	10.06 g	80 mL	1	
27-APR-2012	17:09	RN	17	MR4L91AA 2116039 D190492-3	A-000012	9.95 g	80 mL	1	
27-APR-2012	17:49	RN	18	MR4MA1AA 2116039 D190492-4	A-000013	10.24 g	80 mL	1	
27-APR-2012	18:29	RN	19	MR4MC1AA 2116039 D190492-5	A-000014	10.18 g	80 mL	1	
27-APR-2012	19:09	RN	20	MR4MD1AA 2116039 D190492-6	A-000015	10.1 g	80 mL	1	
27-APR-2012	19:49	RN	3	STD 05 HP8330L5 00001 100ng/mL	A-000016	--	--	--	
27-APR-2012	20:29	RN	21	MR6621AA 2116029 MB	A-000017	1000 mL	20 mL	1	
27-APR-2012	21:09	RN	22	MR6621AC 2116029 LCS	A-000018	1000 mL	20 mL	1	
27-APR-2012	21:49	RN	23	MR5RF1AA 2116029 D230414-1	A-000019	942.69 mL	20 mL	1	
27-APR-2012	22:29	RN	24	MR6HL1AA 2116029 D240430-1	A-000020	980.36 mL	20 mL	1	
27-APR-2012	23:09	RN	25	MR6HV1AC 2116029 D240431-2	A-000021	975.2 mL	20 mL	1	
27-APR-2012	23:49	RN	26	MR6H01AC 2116029 D240431-4	A-000022	947.89 mL	20 mL	1	
28-APR-2012	00:29	RN	27	MR6K81AC 2116029 D240447-1	A-000023	987.86 mL	20 mL	1	
28-APR-2012	01:09	RN	28	MR6LE1AC 2116029 D240447-2	A-000024	981.17 mL	20 mL	1	
28-APR-2012	01:50	RN	3	STD 05 HP8330L5 00001 100ng/mL	A-000025	--	--	--	
28-APR-2012	02:30	RN	51	8330 L LOD CHECK EGDN MB	A-000026	1000 mL	20 mL	1	
28-APR-2012	03:10	RN	52	8330 L LOD CHECK EGDN	A-000027	1000 mL	20 mL	1	
28-APR-2012	03:50	RN	31	MR7WD2AA 2117026 MB	A-000028	1000 mL	20 mL	1	
28-APR-2012	04:31	RN	32	MR7WD2AC 2117026 LCS	A-000029	1000 mL	20 mL	1	
28-APR-2012	05:11	RN	33	MR61D2AA 2117026 D240470-1	A-000030	875.25 mL	20 mL	1	
28-APR-2012	05:51	RN	34	MR61E2AA 2117026 D240470-2	A-000031	982.76 mL	20 mL	1	
28-APR-2012	06:31	RN	35	MR61F2AA 2117026 D240470-3	A-000032	976.17 mL	20 mL	1	

GC-LC Log 2011-12-14 ERS Sequence Checked: RN 4/30/12

TestAmerica West Sacramento
GC/LC INSTRUMENT LOG

Page# 9

Inst ID: LC10 Batch ID: 04272012 Test: SOP WS-LC-0009
Method : Method 8330
ICAL Date: See Calibration Report

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
28-APR-2012	07:12	RN	36	MR61F2AC 2117026 D240470-3S	A-000033	974.98 mL	20 mL	1	
28-APR-2012	07:52	RN	37	MR61F2AD 2117026 D240470-3D	A-000034	936.37 mL	20 mL	1	
28-APR-2012	08:32	RN	4	STD_05 HP8330L5_00001 100ng/mL	A-000035	--	--	--	

GC-LC Log 2011-12-14 ERS

Sequence Checked: MB 4/30/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

GC/HPLC ICAL Checklist

Instrument ID: LC10 ICAL ID: 04192012C Method: 8330A/B

Analytes Included in curve (with dates): 8330 All + NG, PETN, 35DNA+EGDN

A. Included Sections of ICAL	Analyst	Reviewer	N/A
1. ICAL Summary included (for both columns if applicable).	✓	✓	
2. ICAL Runlog included.	✓	✓	
3. ICAL's are in chronological order.	✓	✓	
4. PEM meets requirements and is included for 8081.			✓
5. Alkane Marker included for 8015 TPH			✓
6. ICAL Raw Data included for all analytes.	✓	✓	
B. ICAL Summary			
1. All analytes meet %RSD or linear regression requirements	✓	✓	
2. ICAL meets requirements stated in SOP.	✓	✓	
2. Any levels dropped are reviewed and appropriate.			✓
3. All analytes in ICAL are in the ICAL summary.	✓	✓	
4. RFs are calculated correctly. Perform Manual calculation.	✓	✓	
C. ICAL Analysis			
1. Manual Integrations reviewed and appropriate.			✓
2. All peaks correctly identified.	✓	✓	
3. No analytes have saturated peaks.	✓	✓	
4. RT windows set correctly (8015 TPH).			✓
5. ICV meets requirements and is run after the ICAL.	✓	✓	
6. Standards used in ICAL are current.	✓	✓	
7. ICAL is copied to source method.	✓	✓	

Curve Valid for:	Yes	No	Criteria
Standard SOP	✓		RSD ≤20%, r≥ 0.995 (intercept <1/2RL for 8081,8082, NQ, 8310) and (<RL for 8330) and r>0.990 (intercept <RL for 8015), ICV≤15%, PEM ≤15%
DOD QSM V3	✓		RSD ≤20%, r≥ 0.995, ICV≤20%, PEM ≤15%
AFCEE 3.1	✓		RSD ≤20%, r≥ 0.995, ICV≤15%, PEM ≤15%
AFCEE 4.0	✓		RSD ≤20%, r≥ 0.995, ICV≤20% (8081, 8082, 8015) and ICV≤25% (8330,8310), PEM ≤15%

Analyst: Robyn Thomas Date: 4/20/12

Reviewer: J. Schaefer Date: 4/23/12

Comments:
MRL for EGDN was analyzed after samples had already been analyzed. As RPDs were passing + S/N was greater than 5:1 on 10RL and on RL that analyzed after samples there is no further action.

Q:\FORMS\Checklists\QA-575 GC_HPLC ICAL Checklist

QA-575 GC/HPLC ICAL Checklist
4/16/2008 DAW

TestAmerica West Sacramento

INITIAL CALIBRATION DATA

Start Cal Date : 19-APR-2012 11:48
End Cal Date : 19-APR-2012 16:29
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\terastation\share\GCdata\LC10.I\04192012C.B\8330AB.M
Last Edit : 20-Apr-2012 11:10 tap
Curve Type : Average

Calibration File Names:
Level 1: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000005.d
Level 2: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000006.d
Level 3: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000007.d
Level 4: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000008.d
Level 5: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000009.d
Level 6: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000010.d
Level 7: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000011.d
Level 8: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000012.d

Compound	5.000 Level 1	10.000 Level 2	20.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD
	500 000 Level 7	1000.000 Level 8						
2 HMX	126	128	127	127	130	128		
	121	106					124	6.381
3 RDX	114	103	95.55000	91.70000	92.85000	87.82000		
	79.85000	64.39000					91.13250	16.312
4 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
	[illegible]	[illegible]					[illegible]	[illegible]
5 [illegible]	100	89.25000	88.50000	87.00000	85.61000	80.92600		
	82.43200	68.57300					89.18637	11.173
6 1,3,5-Trinitrobenzene	178	172	168	167	171	167		
	157	136					164	7.806
7 1,3-Dinitrobenzene	177	177	172	171	176	171		
	159	136					167	8.317
8 3,5-Dinitroaniline	121	116	114	113	114	112		
	105	89.54500					111	8.747
9 TETRYL	103	104	100	99	102	102		
	99	95.04200					101	2.796

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 27-APR-2012 19:49 File ID: 04272012.B/A-000016.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.218	0.000	12982	104.7	4.7					
2	RDX	100	7.482	0.000	9294	102.0	2.0					
3	Picric ACID	200	8.545	0.000	19541	219.1	9.6	8.545	0.000	29748	215.0	7.5
4	1,3,5-Trinitrobenz	100	9.732	0.000	17130	104.2	4.2					
5	1,3-Dinitrobenzene	100	12.285	0.000	17751	106.0	6.0					
6	3,5-Dinitroaniline	100	12.995	0.000	11528	104.2	4.2					
7	TETRYL	100	13.308	0.000	10149	100.9	0.90					
8	Nitrobenzene	100	13.932	0.000	8133	106.4	6.4					
9	2,4,6-Trinitrotolu	100	15.332	0.000	10511	103.4	3.4					
10	4-AM-2,6-DNT	100	15.838	0.000	8359	102.8	2.8					
11	3,4-Dinitrotoluene	100	16.295	0.000	6075	103.4	3.4	16.295	0.000	11531	105.6	5.6
12	2-AM-4,6-DNT	100	16.775	0.000	9232	102.4	2.4					
13	2,6-Dinitrotoluene	100	18.258	0.000	6606	103.0	3.0					
14	2,4-Dinitrotoluene	100	18.892	0.000	10811	102.5	2.5					
15	2-Nitrotoluene	100	21.988	0.000	4714	100.3	0.30					
16	4-Nitrotoluene	100	23.562	0.000	5733	100.6	0.60					
17	3-Nitrotoluene	100	25.318	0.000	5632	100.3	0.30					
18	PETN	100						27.298	0.000	4047	103.2	3.2
19	Nitroglycerin	100						14.472	0.000	7297	110.0	10
20	EGDN	100						8.142	0.000	10770	114.4	14

IDN 4/30/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/27/2012 20:24

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 28-APR-2012 01:50 File ID: 04272012.B/A-000025.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

			Side A					Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.215	0.000	13003	104.8	4.8					
2	RDX	100	7.471	0.000	9266	101.7	1.7					
3	Picric ACID	200	8.528	0.000	19592	219.7	9.9	8.531	0.000	29693	214.6	7.3
4	1,3,5-Trinitrobenz	100	9.718	0.000	17157	104.4	4.4					
5	1,3-Dinitrobenzene	100	12.271	0.000	17794	106.3	6.3					
6	3,5-Dinitroaniline	100	12.981	0.000	11516	104.0	4.0					
7	TETRYL	100	13.295	0.000	10100	100.4	0.40					
8	Nitrobenzene	100	13.915	0.000	7976	104.3	4.3					
9	2,4,6-Trinitrotolu	100	15.315	0.000	10516	103.5	3.5					
10	4-AM-2,6-DNT	100	15.815	0.000	8393	103.2	3.2					
11	3,4-Dinitrotoluene	100	16.278	0.000	6070	103.3	3.3	16.278	0.000	10761	98.52	-1.5
12	2-AM-4,6-DNT	100	16.755	0.000	9260	102.7	2.7					
13	2,6-Dinitrotoluene	100	18.235	0.000	6601	103.0	3.0					
14	2,4-Dinitrotoluene	100	18.868	0.000	10845	102.8	2.8					
15	2-Nitrotoluene	100	21.951	0.000	4644	98.82	-1.2					
16	4-Nitrotoluene	100	23.551	0.000	5648	99.10	-0.90					
17	3-Nitrotoluene	100	25.291	0.000	5557	98.99	-1.0					
18	PETN	100						27.261	0.000	4027	102.7	2.7
19	Nitroglycerin	100						14.451	0.000	6893	103.9	3.9
20	EGDN	100						8.134	0.000	10947	116.2	16

4/30/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/28/2012 02:25

METHOD BLANK REPORT

HPLC

Client Lot #...: G2D240431 **Work Order #...:** MR6621AA **Matrix.....:** WATER
MB Lot-Sample #: G2D250000-029

Prep Date.....: 04/25/12
Analysis Date..: 04/27/12 **Prep Batch #...:** 2116029
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
RDX	ND	0.10	ug/L	SW846 8330/8330A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	98	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: G2D240431 **Work Order #...:** MR6621AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D250000-029
Prep Date.....: 04/25/12 **Analysis Date..:** 04/27/12
Prep Batch #...: 2116029
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
RDX	**114**	**(68 - 122)**	**SW846 8330/8330A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	101	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: G2D240431 **Work Order #...:** MR6621AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D250000-029
Prep Date.....: 04/25/12 **Analysis Date..:** 04/27/12
Prep Batch #...: 2116029
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
RDX	**1.00**	**1.14**	**ug/L**	**114**	**SW846 8330/8330A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	101	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

P.41

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
01MAY12-perc-056.d	Blank No IS	P2-A5		Sample	5/1/2012 18:28
01MAY12-perc-057.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/1/2012 18:44
01MAY12-perc-058.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-B2	1	Calibration	5/1/2012 19:01
01MAY12-perc-059.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/1/2012 19:17
01MAY12-perc-060.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/1/2012 19:33
01MAY12-perc-061.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/1/2012 19:49
01MAY12-perc-062.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/1/2012 20:05
01MAY12-perc-063.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/1/2012 20:22
01MAY12-perc-064.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/1/2012 20:38
01MAY12-perc-065.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/1/2012 20:54
01MAY12-perc-066.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/1/2012 21:10
01MAY12-perc-067.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/1/2012 21:27
01MAY12-perc-068.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/1/2012 21:43
01MAY12-perc-069.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/1/2012 21:59
01MAY12-perc-070.d	G2D270000-MB, 2118065, 2.00mL/2.00mL, 6850-L	P1-C3		Sample	5/1/2012 22:15
01MAY12-perc-071.d	G2D270000-LCS, 2118065, 2.00mL/2.00mL	P1-C4	LCS_5	QC	5/1/2012 22:31
01MAY12-perc-072.d	G2D270000-SMCS, 2118065, 2.00mL/2.00mL	P1-C5	LCS_5	QC	5/1/2012 22:48
01MAY12-perc-073.d	G2D230413-1, 2118065, 2.00mL/2.00mL,	P1-C6		Sample	5/1/2012 23:04
01MAY12-perc-074.d	G2D230413-1MS, 2118065, 2.00mL/2.00mL,	P1-C7	MS_5	QC	5/1/2012 23:20
01MAY12-perc-075.d	G2D230413-1SD, 2118065, 2.00mL/2.00mL,	P1-C8	MS_5	QC	5/1/2012 23:36
01MAY12-perc-076.d	G2D230413-2, 2118065, 2.00mL/2.00mL,	P1-C9		Sample	5/1/2012 23:53
01MAY12-perc-077.d	G2D230413-3, 2118065, 2.00mL/2.00mL,	P1-D1		Sample	5/2/2012 00:09
01MAY12-perc-078.d	G2D230413-4, 2118065, 2.00mL/2.00mL,	P1-D2		Sample	5/2/2012 00:25
01MAY12-perc-079.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/2/2012 00:41
01MAY12-perc-080.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/2/2012 00:57
01MAY12-perc-081.d	G2D240430-2, 2118065, 2.00mL/2.00mL,	P1-D3		Sample	5/2/2012 01:14

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373 - 5600 Page 1303 of 1533
05/10/2012 37 of 262



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

01MAY12-perc-082.d	G2D240430-3, 2118065, 2.00mL/2.00mL,	P1-D4		Sample	5/2/2012 01:30
01MAY12-perc-083.d	G2D240430-4, 2118065, 2.00mL/2.00mL,	P1-D5		Sample	5/2/2012 01:46
01MAY12-perc-084.d	G2D240430-5, 2118065, 2.00mL/2.00mL,	P1-D6		Sample	5/2/2012 02:02
01MAY12-perc-085.d	G2D240430-6, 2118065, 2.00mL/2.00mL,	P1-D7		Sample	5/2/2012 02:19
01MAY12-perc-086.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/2/2012 02:35
01MAY12-perc-087.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/2/2012 02:51
01MAY12-perc-088.d	G2D240431-1, 2118065, 2.00mL/2.00mL,	P1-D8		Sample	5/2/2012 03:07
01MAY12-perc-089.d	G2D240431-2, 2118065, 2.00mL/2.00mL,	P1-D9		Sample	5/2/2012 03:23
01MAY12-perc-090.d	G2D240431-3, 2118065, 2.00mL/2.00mL,	P1-E1		Sample	5/2/2012 03:40
01MAY12-perc-091.d	G2D240431-4, 2118065, 2.00mL/2.00mL,	P1-E2		Sample	5/2/2012 03:56
01MAY12-perc-092.d	G2D240431-5, 2118065, 2.00mL/2.00mL,	P1-E3		Sample	5/2/2012 04:12
01MAY12-perc-093.d	G2D240431-6, 2118065, 2.00mL/2.00mL,	P1-E4		Sample	5/2/2012 04:28
01MAY12-perc-094.d	G2D260448-1, 2118065, 2.00mL/2.00mL,	P1-E5		Sample	5/2/2012 04:45
01MAY12-perc-095.d	G2D260448-2, 2118065, 2.00mL/2.00mL,	P1-E6		Sample	5/2/2012 05:01
01MAY12-perc-096.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/2/2012 05:17
01MAY12-perc-097.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/2/2012 05:33
01MAY12-perc-098.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/2/2012 05:49

TestAmerica West Sacramento (916) 373 - 5600 Page 1304 of 1533
05/10/2012 38 of 262

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

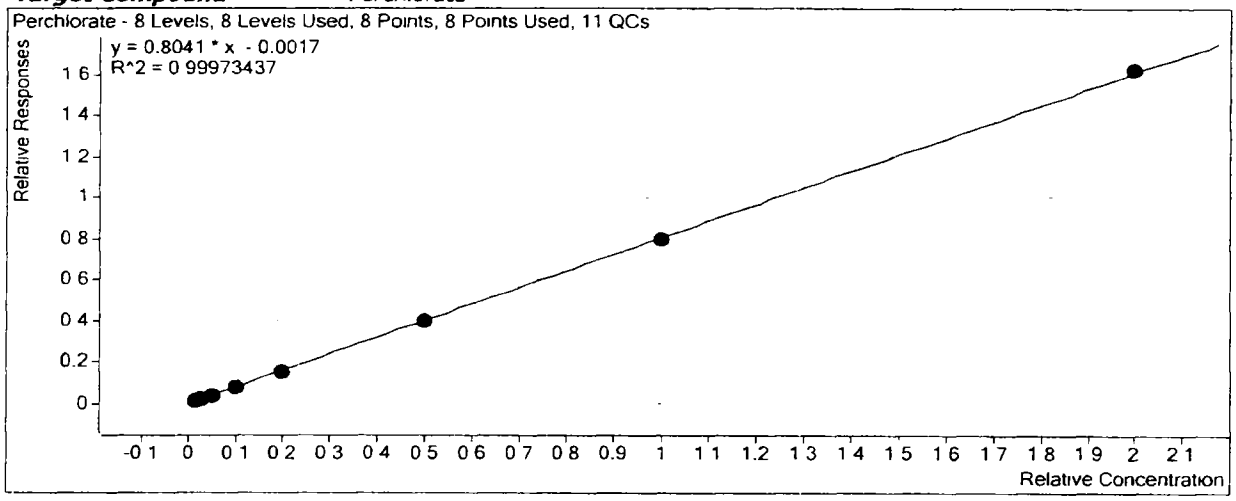
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml		
Analysis Time	5/2/2012 1:20 PM	**Analyst Name**	lores
Report Time	5/4/2012 8:43 AM	**Reporter Name**	lores
Last Calib Update	5/2/2012 1:20 PM	**Batch State**	Processed

Calibration Info **Linear fit, Origin ignored, 1/x weighting**

MB 5/4/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
01MAY12-perc-058.d	1	☑	2024	0.7610	0.1500
01MAY12-perc-059.d	2	☑	3466	0.7138	0.3000
01MAY12-perc-060.d	3	☑	6606	0.7922	0.5000
01MAY12-perc-061.d	4	☑	12750	0.7716	1.0000
01MAY12-perc-062.d	5	☑	25058	0.7644	2.0000
01MAY12-perc-063.d	6	☑	60391	0.7864	5.0000
01MAY12-perc-064.d	7	☑	110901	0.8001	10.0000
01MAY12-perc-065.d	8	☑	203743	0.8114	20.0000
01MAY12-perc-069.d	CCV3	☑	5908	0.7369	0.5000
01MAY12-perc-097.d	CCV3	☑	4973	0.7512	0.5000
01MAY12-perc-079.d	CCV5	☑	17581	0.7975	2.0000
01MAY12-perc-096.d	CCV5	☑	13730	0.7938	2.0000
01MAY12-perc-068.d	CCV6	☑	59556	0.7711	5.0000
01MAY12-perc-086.d	CCV6	☑	44696	0.7756	5.0000
01MAY12-perc-067.d	ICV	☑	58970	0.8080	5.0000
01MAY12-perc-071.d	LCS_5	☑	43164	0.7480	5.0000
01MAY12-perc-072.d	LCS_5	☑	39168	0.7825	5.0000
01MAY12-perc-074.d	MS_5	☑	33667	0.7131	5.0000
01MAY12-perc-075.d	MS_5	☑	32053	0.7792	5.0000

Target Compound	*Perchlorate-(35Cl18O4)*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
01MAY12-perc-058.d	1	☑	177321	17732.1197	10.0000
01MAY12-perc-059.d	2	☑	161838	16183.8183	10.0000
01MAY12-perc-060.d	3	☑	166787	16678.6788	10.0000
01MAY12-perc-061.d	4	☑	165236	16523.6408	10.0000
01MAY12-perc-062.d	5	☑	163902	16390.1534	10.0000
01MAY12-perc-063.d	6	☑	153583	15358.3285	10.0000
01MAY12-perc-064.d	7	☑	138613	13861.3292	10.0000
01MAY12-perc-065.d	8	☑	125554	12555.3707	10.0000
01MAY12-perc-069.d	CCV3	☑	160345	16034.5472	10.0000
01MAY12-perc-097.d	CCV3	☑	132396	13239.6449	10.0000
01MAY12-perc-079.d	CCV5	☑	110225	11022.4840	10.0000
01MAY12-perc-096.d	CCV5	☑	86491	8649.0562	10.0000
01MAY12-perc-068.d	CCV6	☑	154478	15447.7901	10.0000
01MAY12-perc-086.d	CCV6	☑	115259	11525.8779	10.0000
01MAY12-perc-067.d	ICV	☑	145967	14596.6980	10.0000
01MAY12-perc-071.d	LCS_5	☑	115418	11541.7940	10.0000
01MAY12-perc-072.d	LCS_5	☑	100114	10011.3995	10.0000
01MAY12-perc-074.d	MS_5	☑	94419	9441.8545	10.0000
01MAY12-perc-075.d	MS_5	☑	82277	8227.7281	10.0000

Batch Data Path	D \Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch.xml

Analysis Information

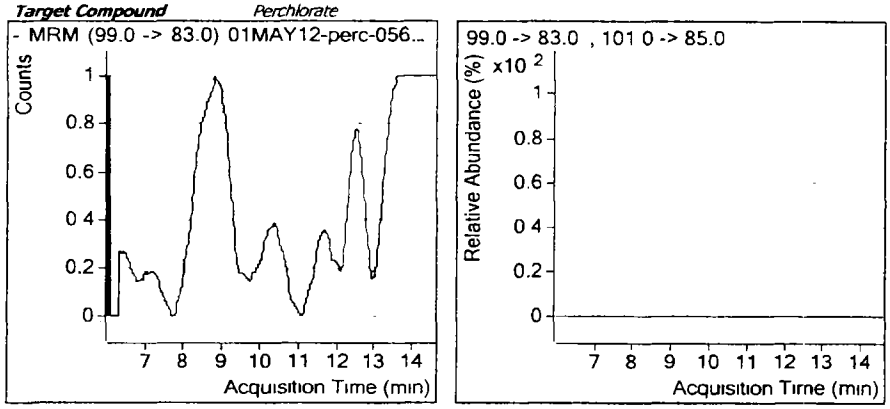
Acquisition Date - Time	5/1/2012 18 28
Analyst	lores
Data File	01MAY12-perc-056 d
Acquisition Method	PercMRM_2 m
Sample Name	Blank No IS
Sample Identification	BLANK
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-A5
Exp. Concentration	
Injection Volume	50

Perchlorate = ND

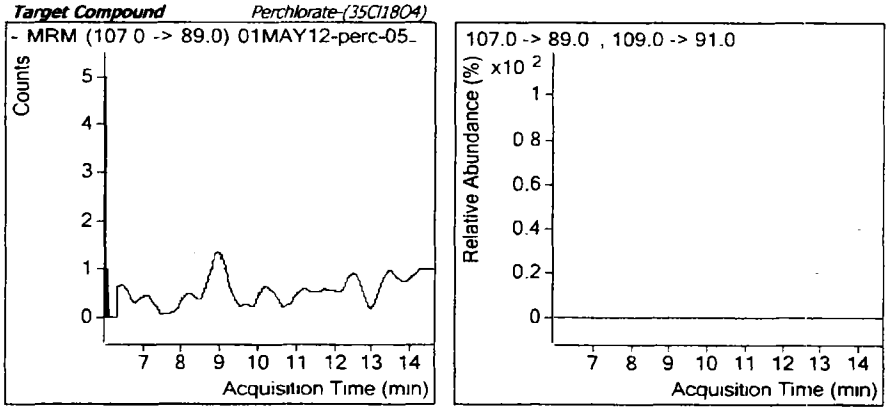
m 5/4/12

Compound Graphics

Target Compound *Perchlorate*



Target Compound *Perchlorate-(35Cl18O4)*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 18:44
Analyst	lores
Data File	01MAY12-perc-057 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

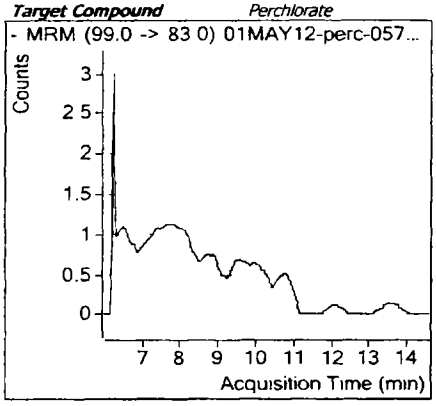
Quantitation Results

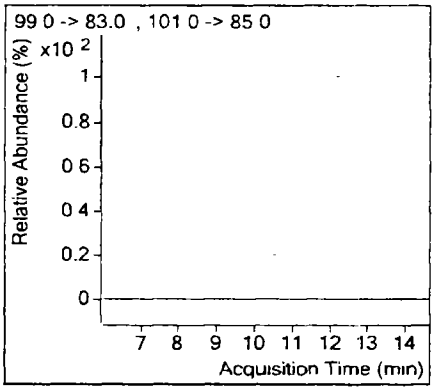
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.054	157836	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	49302	109	91	3.20	2.30	3.80	In Control

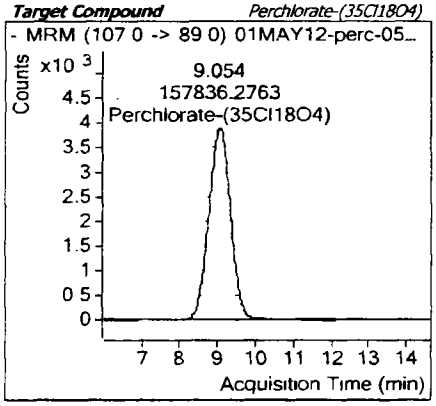
Compound Graphics

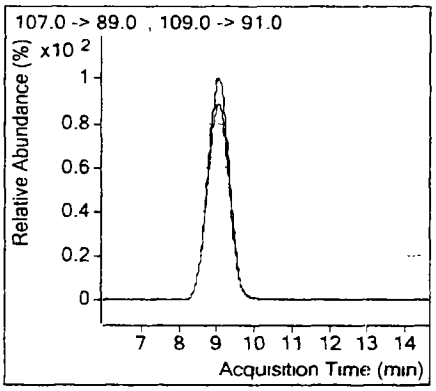
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 19 01
Analyst	lores
Data File	01MAY12-perc-058 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L1_00001 12LCMS0064, 0 15ng/mL
Sample Identification	Std001
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B2
Exp Concentration	0 15
Injection Volume	50

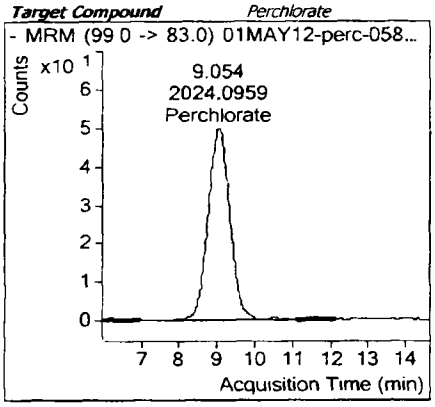
Quantitation Results

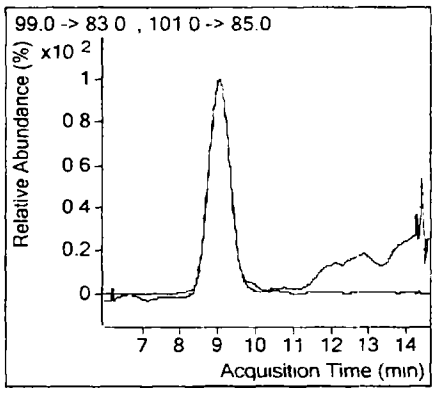
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 054	2024	99	83	**0.16278**	**0.16278**	1
Perchlorate-(35Cl18O4)	ISTD	9 055	177321	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	698	101	85	2 90	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	55144	109	91	3 22	2 30	3 80	In Control

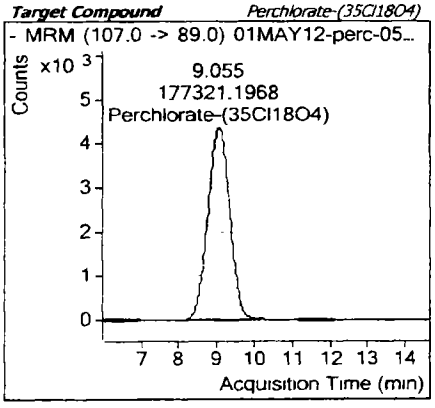
Compound Graphics

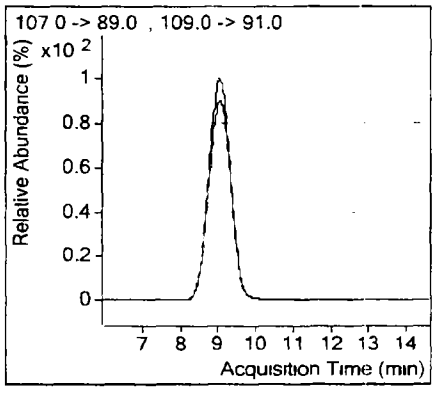
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mb 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D.\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 19.17
Analyst	lores
Data File	01MAY12-perc-059 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L2_00001 12LCMS0065, 0 30ng/mL
Sample Identification	Std002
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B3
Exp. Concentration	0 30
Injection Volume	50

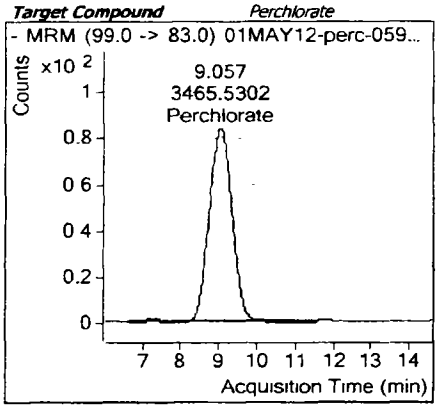
Quantitation Results

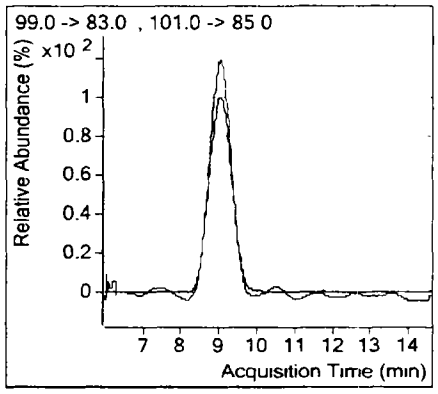
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 057	3466	99	83	**0.28712**	**0.28712**	1
Perchlorate-(35Cl18O4)	ISTD	9 050	161838	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1349	101	85	2 57	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	49807	109	91	3 25	2 30	3 80	In Control

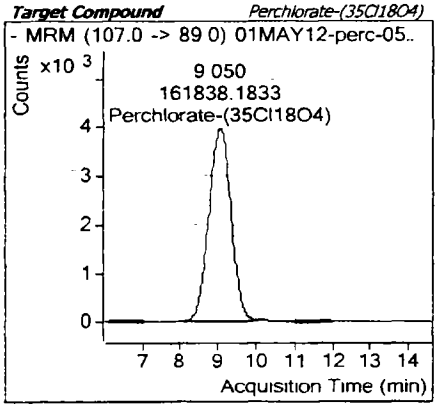
Compound Graphics

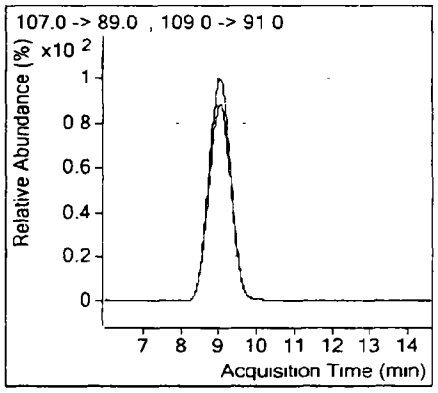
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D \Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 19:33
Analyst	lores
Data File	01MAY12-perc-060 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	Std003
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B4
Exp. Concentration	0 50
Injection Volume	50

Quantitation Results

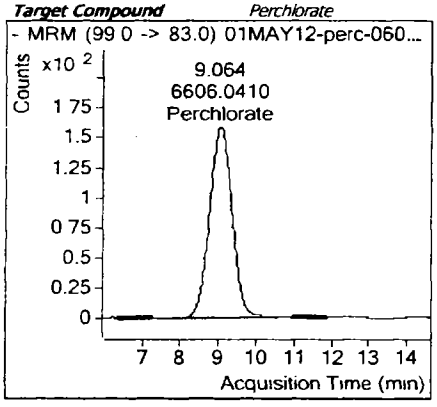
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 064	6606	99	83	**0.51340**	**0.51340**	1
Perchlorate-(35Cl18O4)	ISTD	9 048	166787	107	89			1

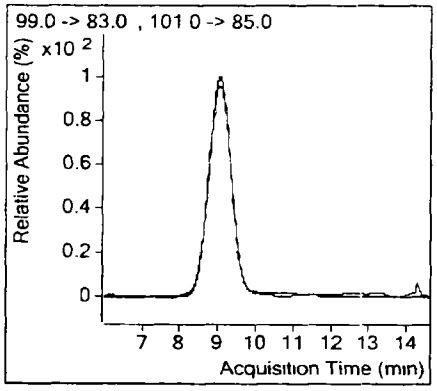
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2255	101	85	2 93	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	52722	109	91	3 16	2 30	3 80	In Control

Compound Graphics

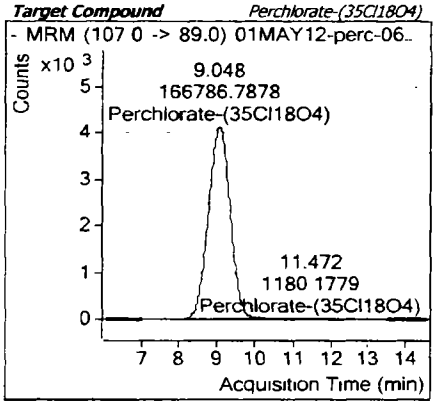
m 5/4/12

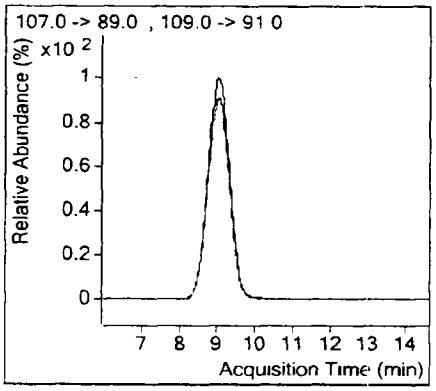
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 19.49
Analyst	lores
Data File	01MAY12-perc-061 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L4_00001 12LCMS0067, 1 0ng/mL
Sample Identification	Std004
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B5
Exp. Concentration	1 00
Injection Volume	50

Quantitation Results

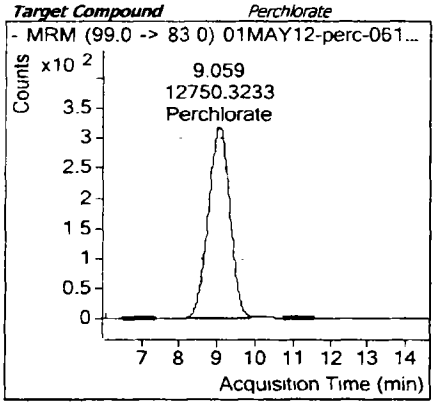
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 059	12750	99	83	**0.98046**	**0.98046**	1
Perchlorate-(35Cl18O4)	ISTD	9 049	165236	107	89			1

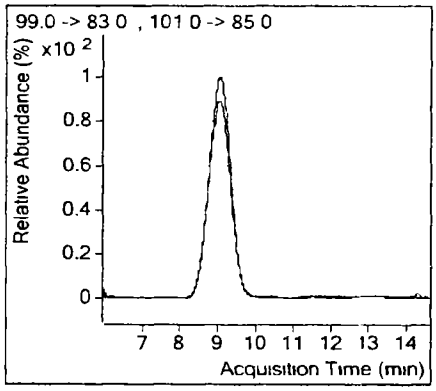
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	4067	101	85	3 14	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	51771	109	91	3 19	2 30	3 80	In Control

Compound Graphics

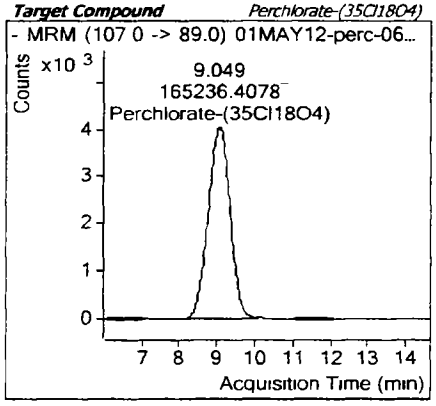
m 5/4/12

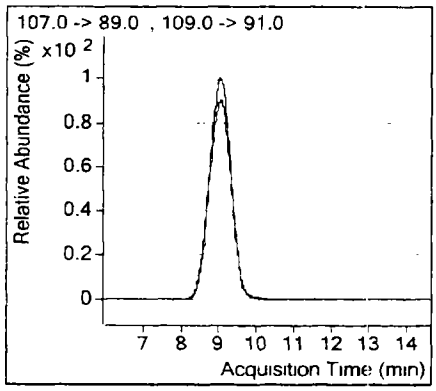
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 20:05
Analyst	lores
Data File	01MAY12-perc-062 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	Std005
Sample Information	IC-Pak Anion HR 75x4 6mm T=40*C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B6
Exp. Concentration	2 00
Injection Volume	50

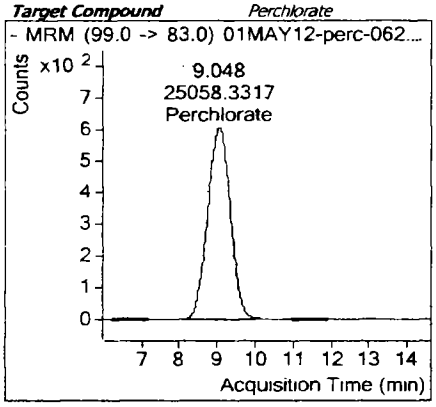
Quantitation Results

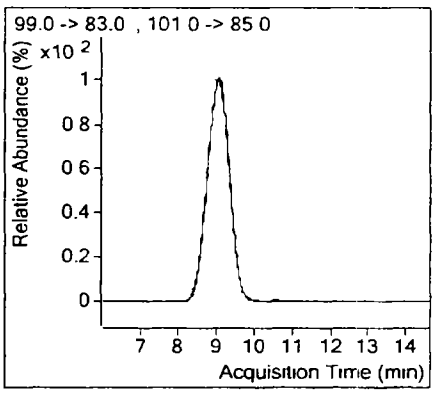
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 048	25058	99	83	**1.92218**	**1.92218**	1
Perchlorate-(35Cl18O4)	ISTD	9 046	163902	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8672	101	85	2 89	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	51351	109	91	3 19	2 30	3 80	In Control

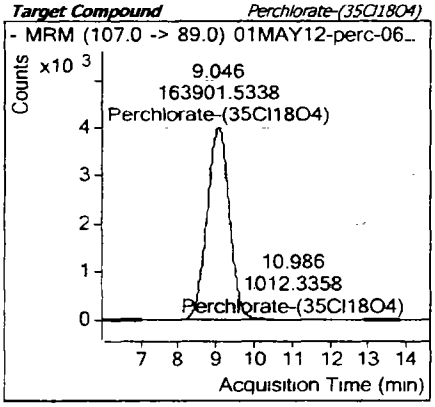
Compound Graphics

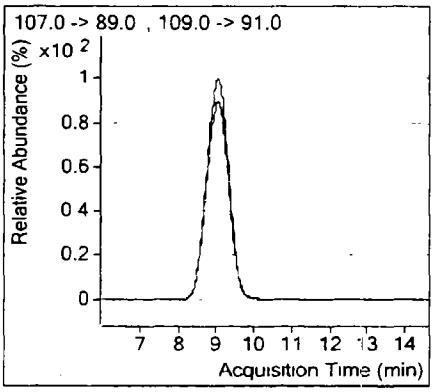
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 20.22
Analyst	lores
Data File	01MAY12-perc-063 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	Std006
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B7
Exp. Concentration	5 00
Injection Volume	50

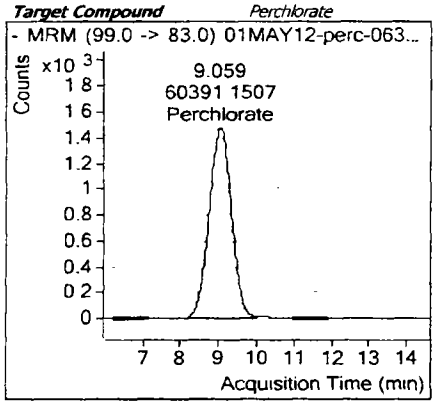
Quantitation Results

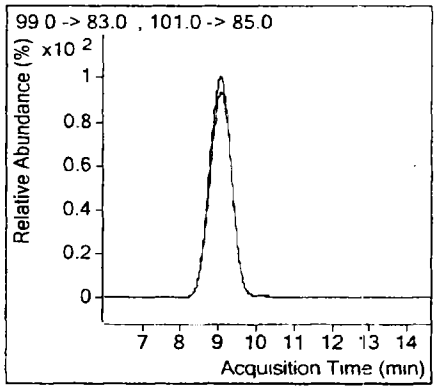
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 059	60391	99	83	**4.91101**	**4.91101**	1
Perchlorate-(35Cl18O4)	ISTD	9 052	153583	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19781	101	85	3 05	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	47836	109	91	3 21	2 30	3 80	In Control

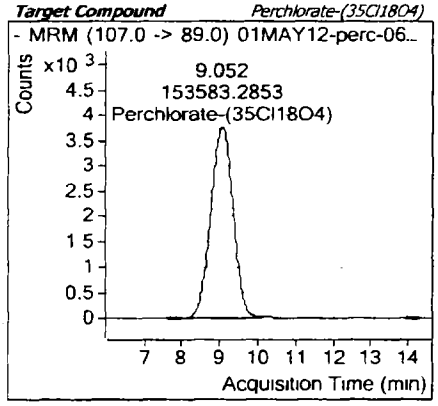
Compound Graphics

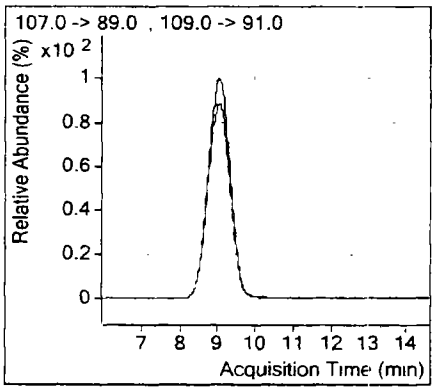
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 20 38
Analyst	lores
Data File	01MAY12-perc-064 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L7_00001 12LCMS0070, 10ng/mL
Sample Identification	Std007
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B8
Exp. Concentration	10 00
Injection Volume	50

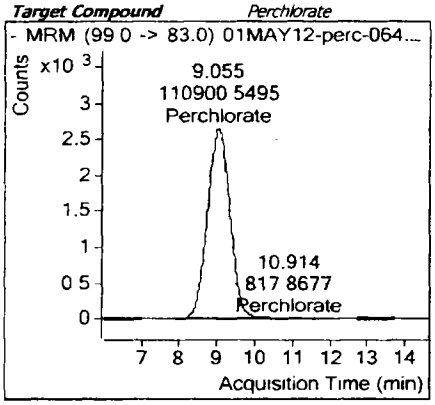
Quantitation Results

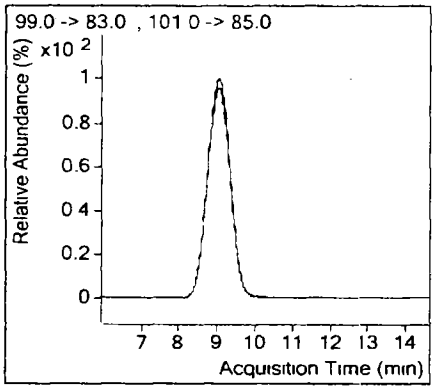
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 055	110901	99	83	**9.97088**	**9.97088**	1
Perchlorate-(35Cl18O4)	ISTD	9 044	138613	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	37032	101	85	2 99	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	43375	109	91	3 20	2 30	3 80	In Control

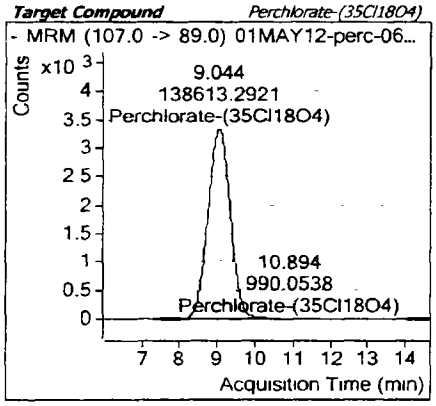
Compound Graphics

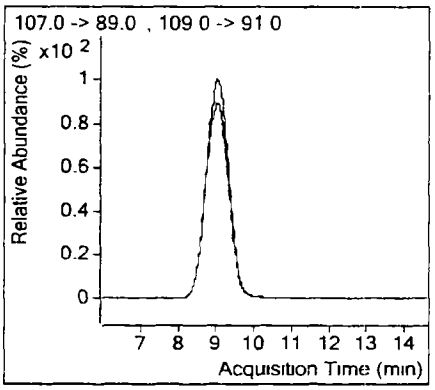
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D.\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 20:54
Analyst	lores
Data File	01MAY12-perc-065 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L8_00001 12LCMS0071, 20ng/mL
Sample Identification	Std008
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B9
Exp. Concentration	20 00
Injection Volume	50

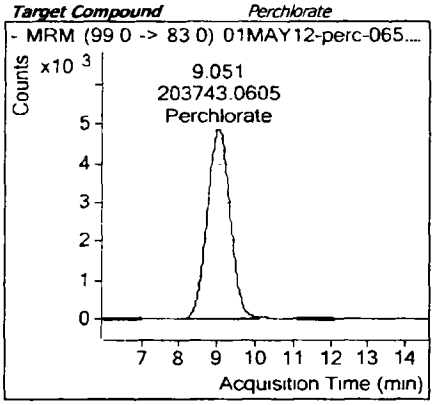
Quantitation Results

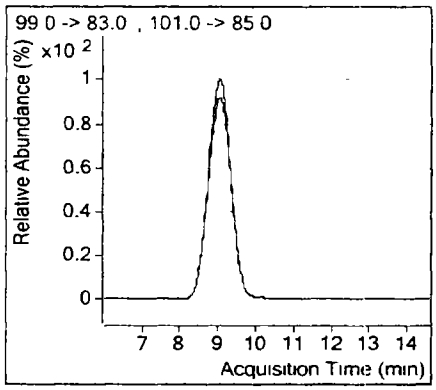
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 051	203743	99	83	**20.20217**	**20.20217**	1
Perchlorate-(35Cl18O4)	ISTD	9 045	125554	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	66241	101	85	3 08	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	38450	109	91	3 27	2 30	3 80	In Control

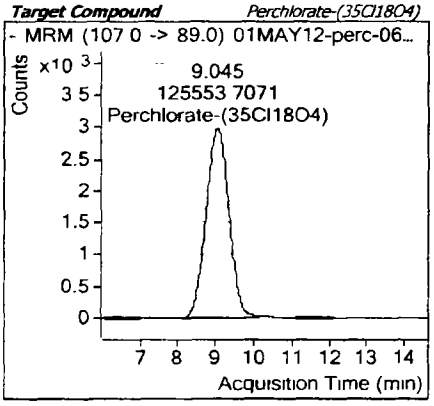
Compound Graphics

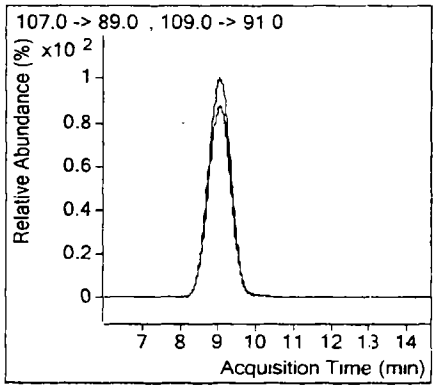
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/1/2012 21.10
Analyst	lores
Data File	01MAY12-perc-066 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40*C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

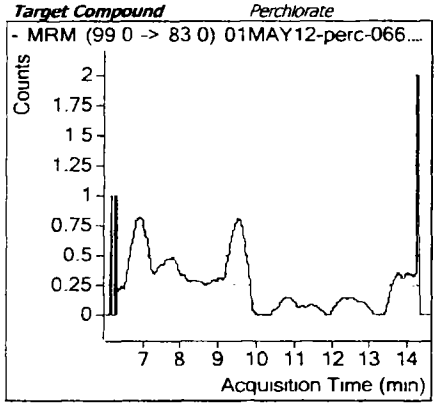
Quantitation Results

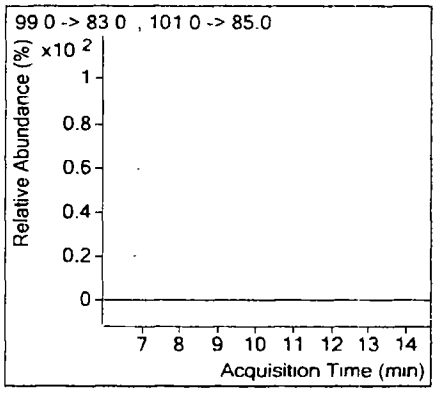
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9 041	152657	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	47995	109	91	3 18	2 30	3 80	In Control

Compound Graphics

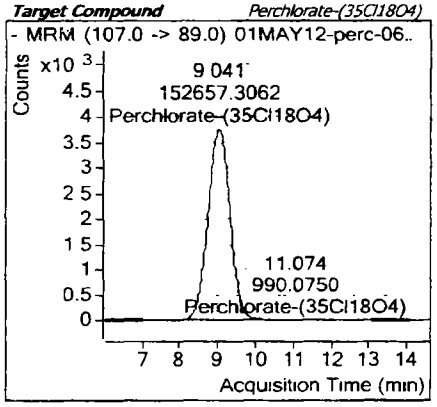
Target Compound *Perchlorate*

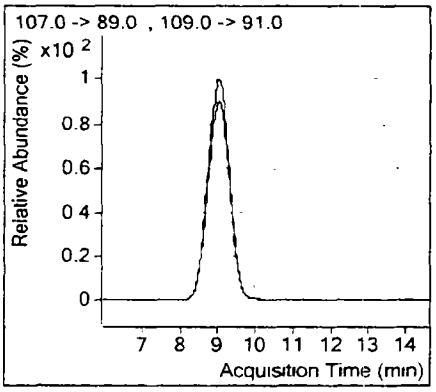




m 5/4/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 21 27
Analyst	lores
Data File	01MAY12-perc-067 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850IC_00001 12LCMS0073, 5 0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5 00
Injection Volume	50

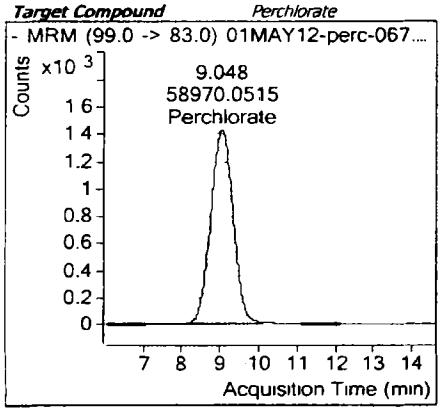
Quantitation Results

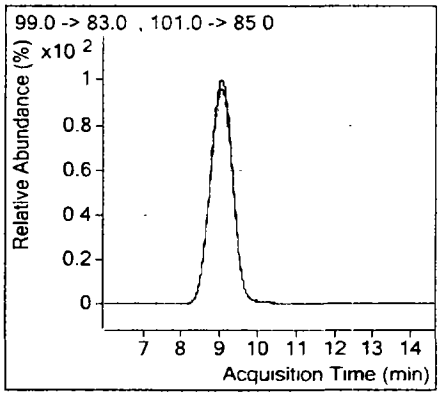
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 048	58970	99	83	**5.04510**	**5.04510**	1
Perchlorate-(35Cl18O4)	ISTD	9 040	145967	107	89			1
							0.9 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19719	101	85	2 99	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	45637	109	91	3 20	2 30	3 80	In Control

Compound Graphics

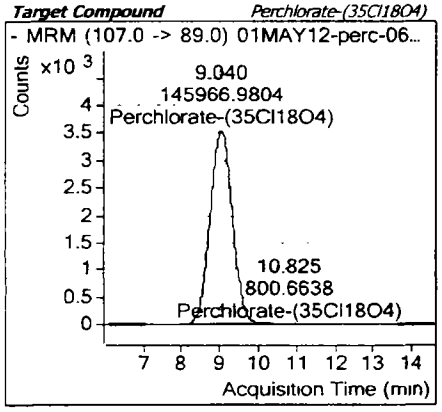
Target Compound *Perchlorate*

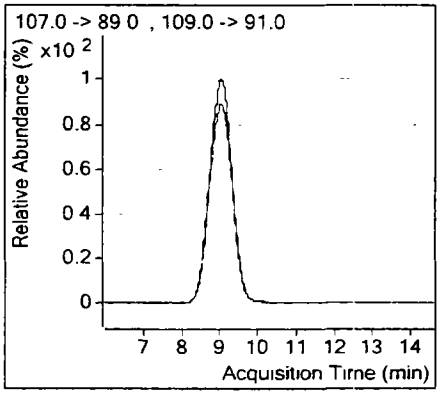




ms 5/4/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D \Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 21:43
Analyst	lores
Data File	01MAY12-perc-068 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5 00
Injection Volume	50

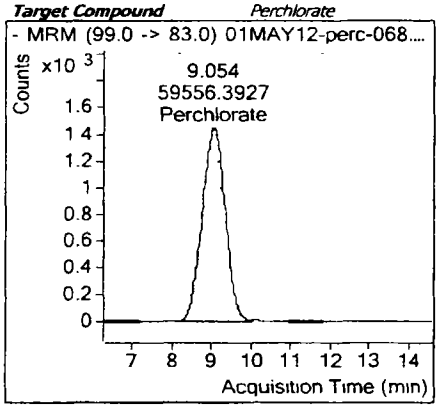
Quantitation Results

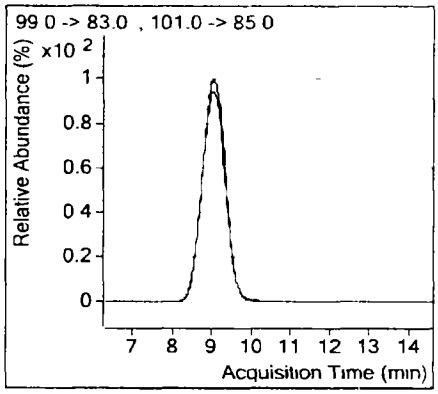
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 054	59556	99	83	**4.81549**	**4.81549**	1
Perchlorate-(35Cl18O4)	ISTD	9 042	154478	107	89			1
							-3.7 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19632	101	85	3 03	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	48483	109	91	3 19	2 30	3 80	In Control

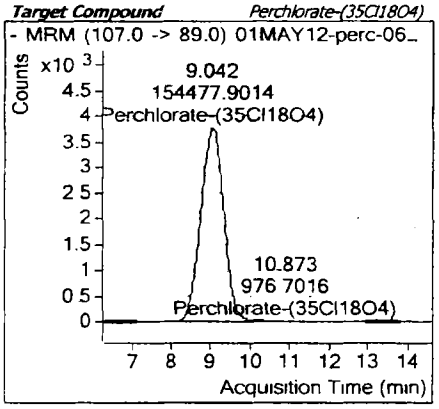
Compound Graphics

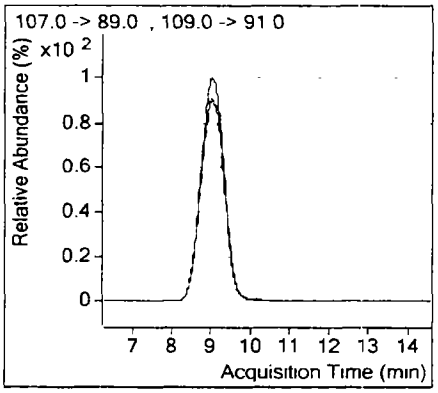
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/1/2012 21:59
Analyst	lores
Data File	01MAY12-perc-069 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0 50
Injection Volume	50

Quantitation Results

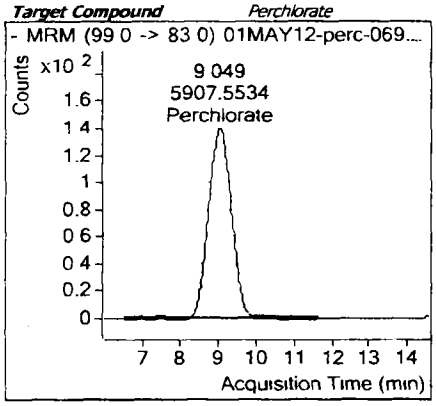
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 049	5908	99	83	**0.47901**	**0.47901**	1
Perchlorate-(35Cl18O4)	ISTD	9 045	160345	107	89			1
							-4.2 % Deviation	

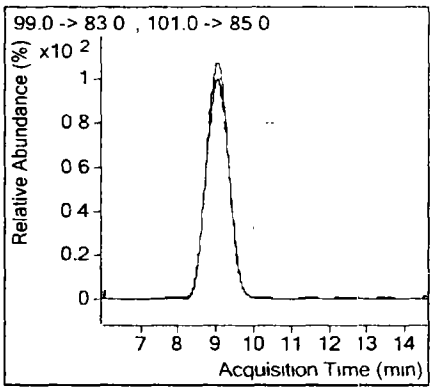
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2147	101	85	2 75	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	49139	109	91	3 26	2 30	3 80	In Control

Compound Graphics

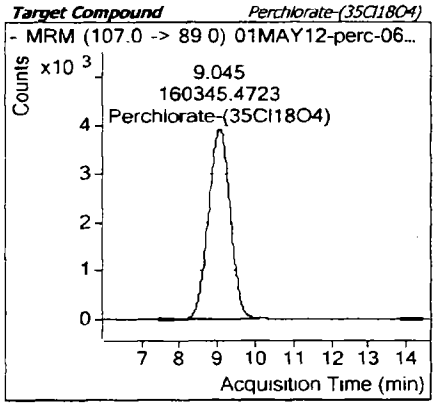
m 5/4/12

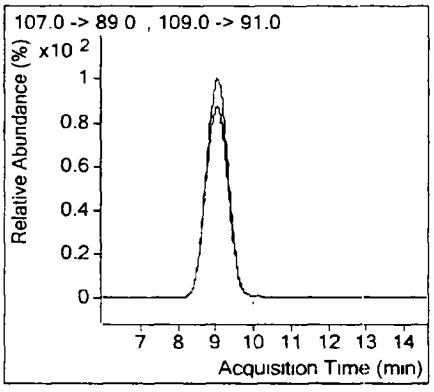
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D.\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/2/2012 00:41
Analyst	lores
Data File	01MAY12-perc-079 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2 00
Injection Volume	50

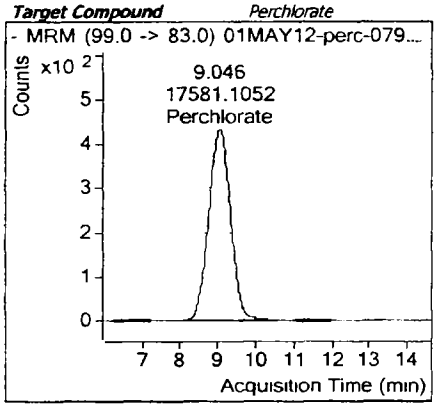
Quantitation Results

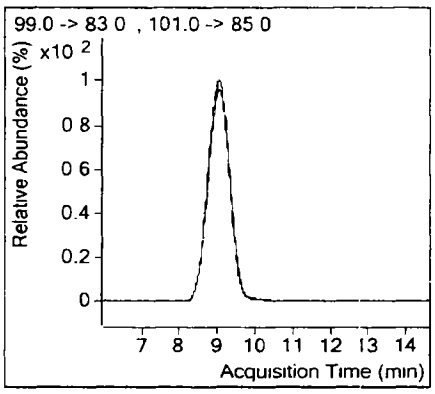
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 046	17581	99	83	**2.00446**	**2.00446**	1
Perchlorate-(35Cl18O4)	ISTD	9 038	110225	107	89			1
							0.2 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	5728	101	85	3 07	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	34772	109	91	3 17	2 30	3 80	In Control

Compound Graphics

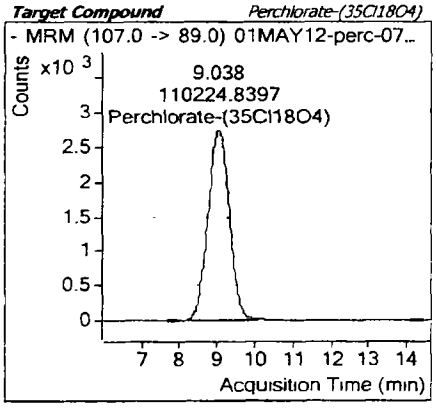
Target Compound *Perchlorate*

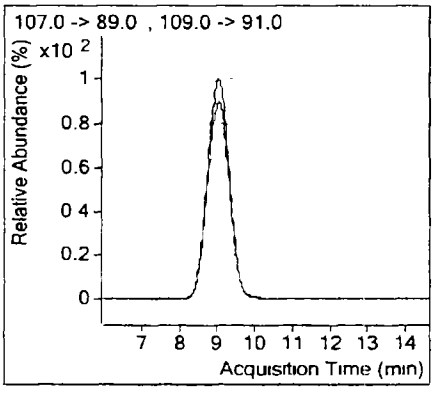




m 5/4/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 00 57
Analyst	lores
Data File	01MAY12-perc-080 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

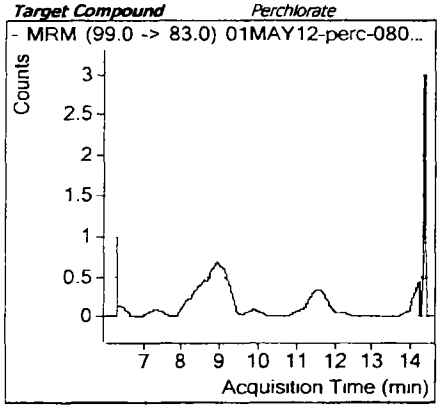
Quantitation Results

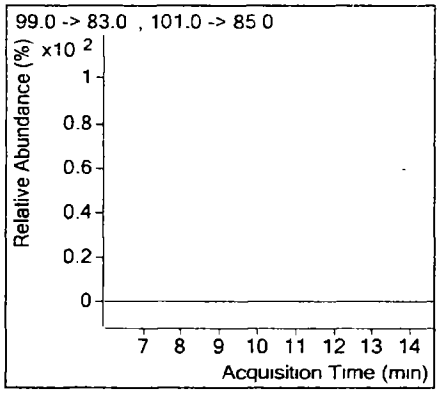
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9 038	141415	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	45217	109	91	3 13	2 30	3 80	In Control

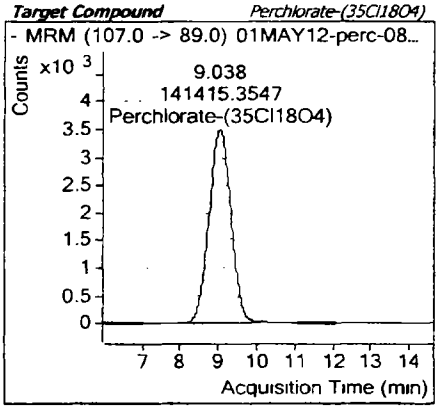
Compound Graphics

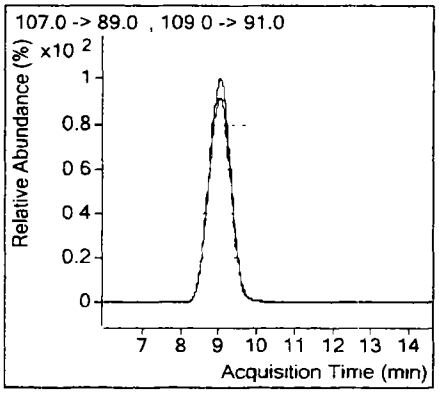
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 02 35
Analyst	lores
Data File	01MAY12-perc-086 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5 00
Injection Volume	50

Quantitation Results

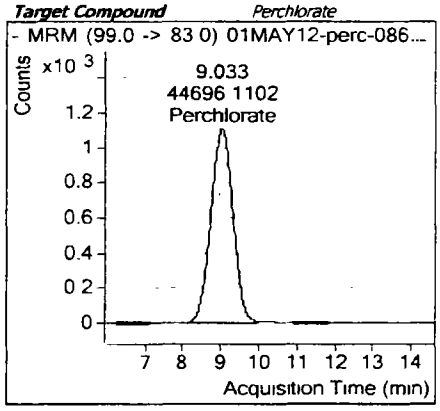
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 033	44696	99	83	**4.84354**	**4.84354**	1
Perchlorate-(35Cl18O4)	ISTD	9 036	115259	107	89			1
							-3.1 % Deviation	

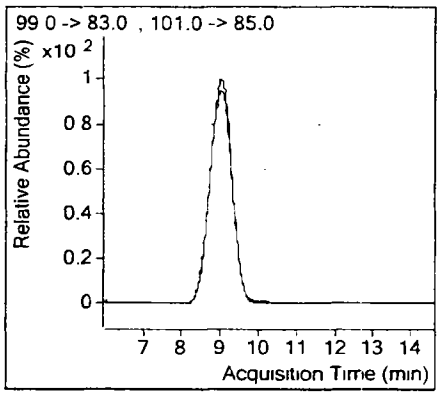
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	15095	101	85	2 96	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	36892	109	91	3 12	2 30	3 80	In Control

Compound Graphics

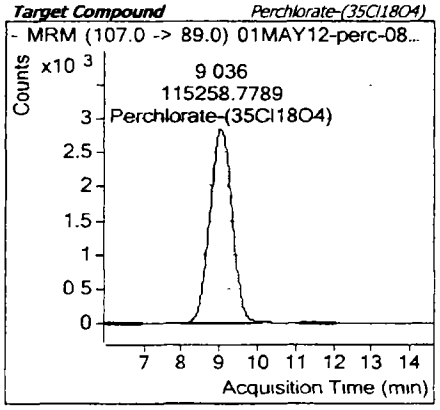
m 5/4/12

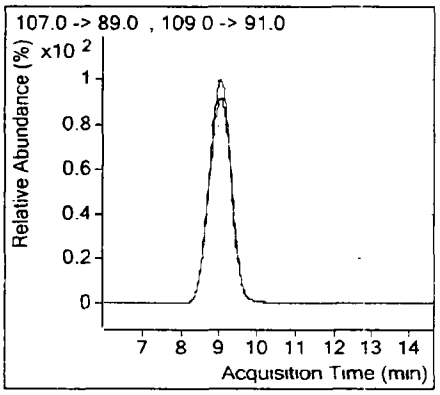
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/2/2012 02:51
Analyst	lores
Data File	01MAY12-perc-087 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

Quantitation Results

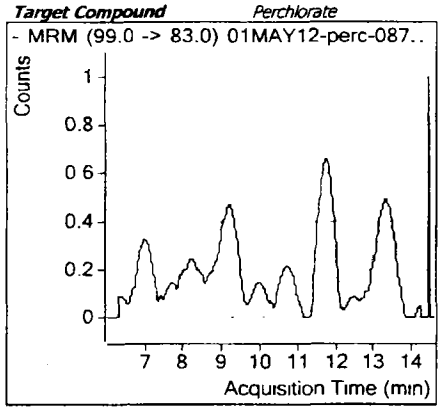
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9 051	141532	107	89			1
							Perchlorate = ND	

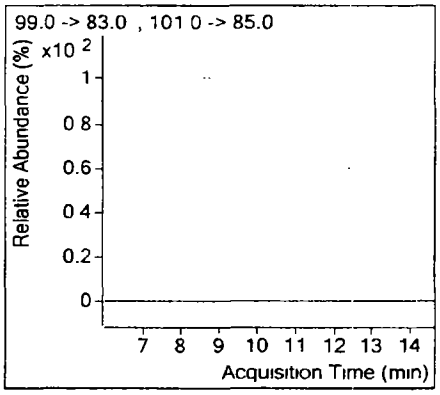
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	44265	109	91	3 20	2 30	3 80	In Control

Compound Graphics

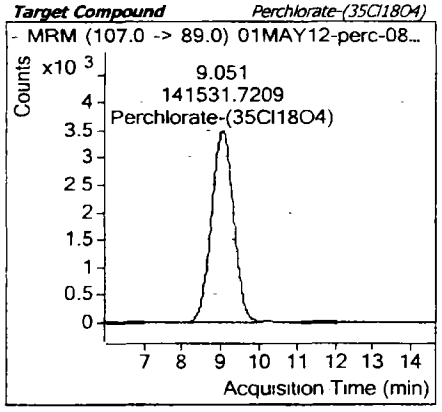
m 5/4/12

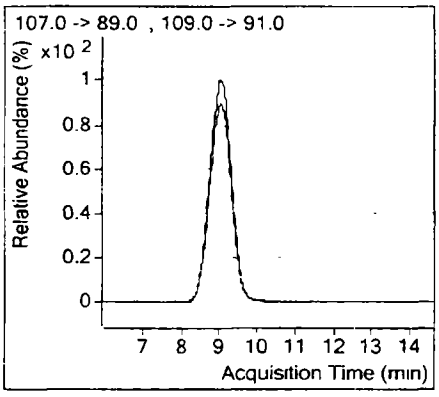
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D.\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 05.17
Analyst	lores
Data File	01MAY12-perc-096 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp Concentration	2 00
Injection Volume	50

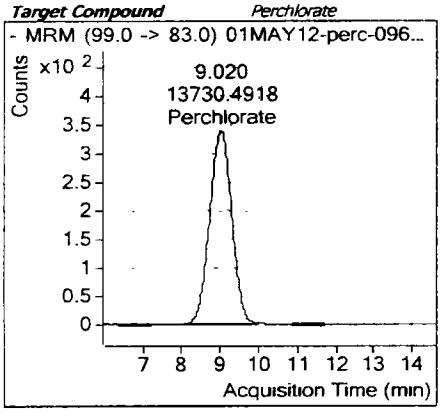
Quantitation Results

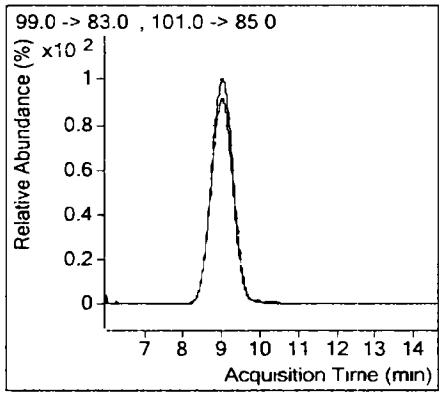
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 020	13730	99	83	**1.99512**	**1.99512**	1
Perchlorate-(35Cl18O4)	ISTD	9 015	86491	107	89			1
							-0.2 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	4357	101	85	3 15	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	28325	109	91	3 05	2 30	3 80	In Control

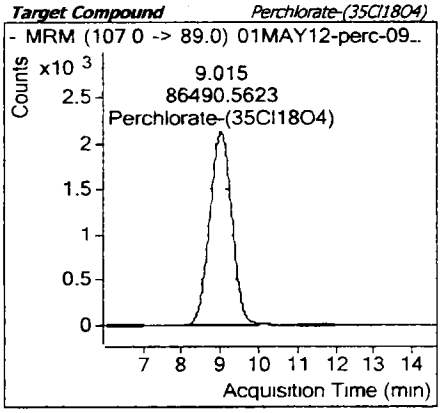
Compound Graphics

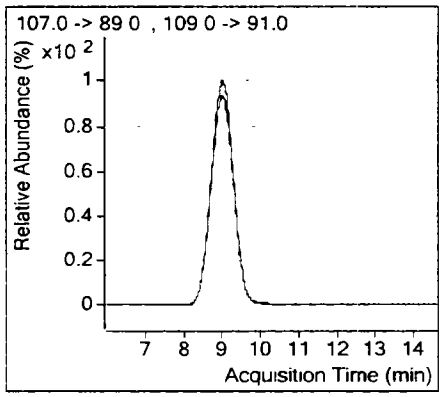
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 05.33
Analyst	lores
Data File	01MAY12-perc-097 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp Concentration	0 50
Injection Volume	50

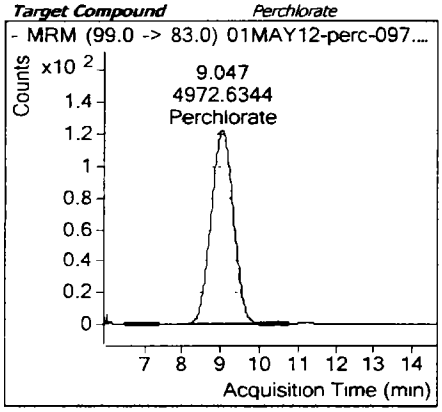
Quantitation Results

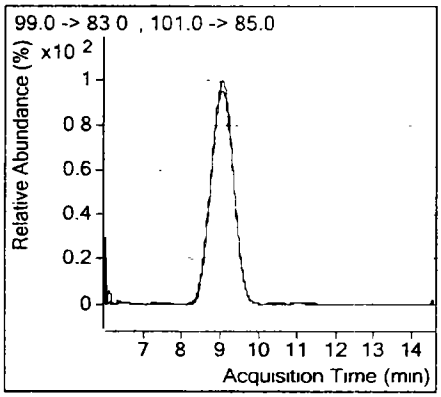
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 047	4973	99	83		**0.48791**	**0.48791**	1
Perchlorate-(35Cl18O4)	ISTD	9 041	132396	107	89				1
								-2.4 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1656	101	85	3 00	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	41873	109	91	3 16	2 30	3 80	In Control

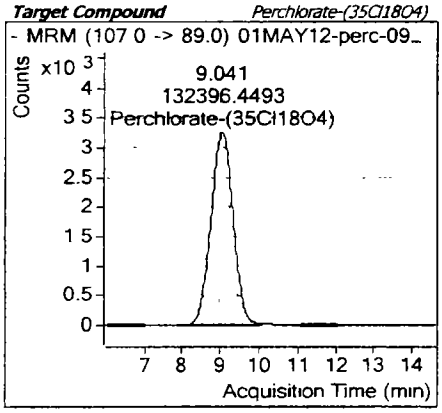
Compound Graphics

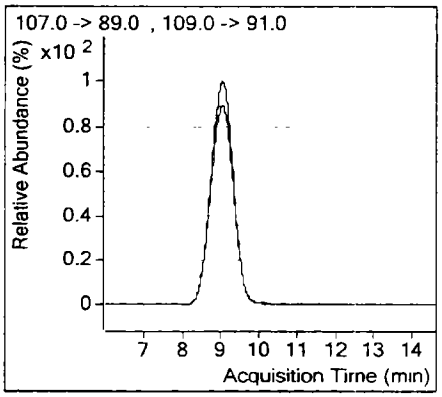
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/2/2012 05:49
Analyst	lores
Data File	01MAY12-perc-098 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

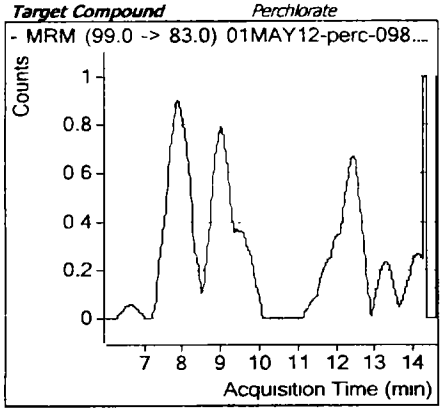
Quantitation Results

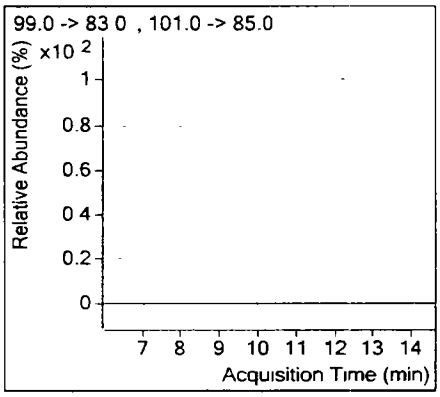
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.039	139974	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	44549	109	91	3.14	2.30	3.80	In Control

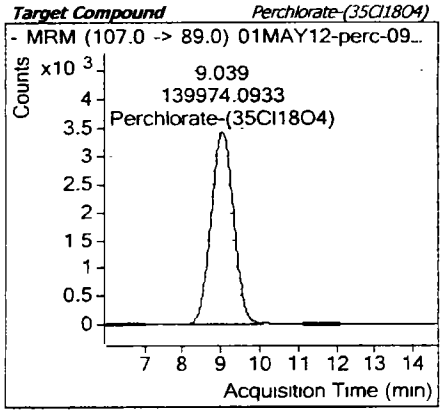
Compound Graphics

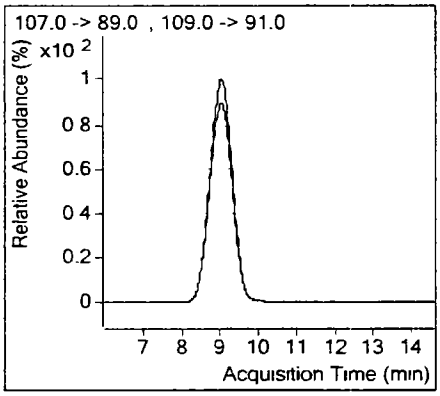
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





no 5/4/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Quantitation Results

Compound *Perchlorate*

Data File	Compound	Sample Type	Exp Conc	Response	Accuracy	Final Conc.
01MAY12-perc-056.d	Perchlorate	Sample				
01MAY12-perc-057.d	Perchlorate	Sample				
01MAY12-perc-058.d	Perchlorate	Calibration	0.1500	2024	108.5	
01MAY12-perc-059.d	Perchlorate	Calibration	0.3000	3466	95.7	
01MAY12-perc-060.d	Perchlorate	Calibration	0.5000	6606	102.7	
01MAY12-perc-061.d	Perchlorate	Calibration	1.0000	12750	98.0	
01MAY12-perc-062.d	Perchlorate	Calibration	2.0000	25058	96.1	
01MAY12-perc-063.d	Perchlorate	Calibration	5.0000	60391	98.2	
01MAY12-perc-064.d	Perchlorate	Calibration	10.0000	110901	99.7	
01MAY12-perc-065.d	Perchlorate	Calibration	20.0000	203743	101.0	
01MAY12-perc-066.d	Perchlorate	Sample				
01MAY12-perc-067.d	Perchlorate	QC	5.0000	58970	100.9	
01MAY12-perc-068.d	Perchlorate	QC	5.0000	59556	96.3	
01MAY12-perc-069.d	Perchlorate	QC	0.5000	5908	95.8	
01MAY12-perc-070.d	Perchlorate	Sample				
01MAY12-perc-071.d	Perchlorate	QC	5.0000	43164	93.4	
01MAY12-perc-072.d	Perchlorate	QC	5.0000	39168	97.7	
01MAY12-perc-073.d	Perchlorate	Sample				
01MAY12-perc-074.d	Perchlorate	QC	5.0000	33667	89.1	
01MAY12-perc-075.d	Perchlorate	QC	5.0000	32053	97.3	
01MAY12-perc-076.d	Perchlorate	Sample				
01MAY12-perc-077.d	Perchlorate	Sample		1593		
01MAY12-perc-078.d	Perchlorate	Sample		5015		
01MAY12-perc-079.d	Perchlorate	QC	2.0000	17581	100.2	
01MAY12-perc-080.d	Perchlorate	Sample				
01MAY12-perc-081.d	Perchlorate	Sample		291		

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373 - 5600 Page 1368 of 1533

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

01MAY12-perc-082.d	Perchlorate	Sample			
01MAY12-perc-083.d	Perchlorate	Sample			
01MAY12-perc-084.d	Perchlorate	Sample			
01MAY12-perc-085.d	Perchlorate	Sample			
01MAY12-perc-086.d	Perchlorate	QC	5.0000	44696	96.9
01MAY12-perc-087.d	Perchlorate	Sample			
01MAY12-perc-088.d	Perchlorate	Sample			
01MAY12-perc-089.d	Perchlorate	Sample			
01MAY12-perc-090.d	Perchlorate	Sample			
01MAY12-perc-091.d	Perchlorate	Sample			
01MAY12-perc-092.d	Perchlorate	Sample		1116	
01MAY12-perc-093.d	Perchlorate	Sample			
01MAY12-perc-094.d	Perchlorate	Sample		39819	
01MAY12-perc-094.d	Perchlorate	Sample			
01MAY12-perc-095.d	Perchlorate	Sample		46741	
01MAY12-perc-095.d	Perchlorate	Sample			
01MAY12-perc-096.d	Perchlorate	QC	2.0000	13730	99.8
01MAY12-perc-097.d	Perchlorate	QC	0.5000	4973	97.6
01MAY12-perc-098.d	Perchlorate	Sample			

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Quantitation Results

Compound *Perchlorate-(35Cl18O4)*

Data File	Compound	Sample Type	Exp Conc	Response	Accuracy	Final Conc.
01MAY12-perc-056.d	Perchlorate-(35Cl18O4)	Sample				
01MAY12-perc-057.d	Perchlorate-(35Cl18O4)	Sample		157836		
01MAY12-perc-058.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	177321		
01MAY12-perc-059.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	161838		
01MAY12-perc-060.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	166787		
01MAY12-perc-061.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	165236		
01MAY12-perc-062.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	163902		
01MAY12-perc-063.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	153583		
01MAY12-perc-064.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	138613		
01MAY12-perc-065.d	Perchlorate-(35Cl18O4)	Calibration	10.0000	125554	156604.3	Averge ICAL IS area response
01MAY12-perc-066.d	Perchlorate-(35Cl18O4)	Sample		152657	-2.5	% Dev from average
01MAY12-perc-067.d	Perchlorate-(35Cl18O4)	QC	10.0000	145967	-6.8	
01MAY12-perc-068.d	Perchlorate-(35Cl18O4)	QC	10.0000	154478	-1.4	
01MAY12-perc-069.d	Perchlorate-(35Cl18O4)	QC	10.0000	160345	2.4	
01MAY12-perc-070.d	Perchlorate-(35Cl18O4)	Sample		136706	-12.7	
01MAY12-perc-071.d	Perchlorate-(35Cl18O4)	QC	10.0000	115418	-26.3	
01MAY12-perc-072.d	Perchlorate-(35Cl18O4)	QC	10.0000	100114	-36.1	
01MAY12-perc-073.d	Perchlorate-(35Cl18O4)	Sample		115111	-26.5	
01MAY12-perc-074.d	Perchlorate-(35Cl18O4)	QC	10.0000	94419	-39.7	
01MAY12-perc-075.d	Perchlorate-(35Cl18O4)	QC	10.0000	82277	-47.5	
01MAY12-perc-076.d	Perchlorate-(35Cl18O4)	Sample		85745	-45.2	
01MAY12-perc-077.d	Perchlorate-(35Cl18O4)	Sample		86638	-44.7	
01MAY12-perc-078.d	Perchlorate-(35Cl18O4)	Sample		89017	-43.2	
01MAY12-perc-079.d	Perchlorate-(35Cl18O4)	QC	10.0000	110225	-29.6	
01MAY12-perc-080.d	Perchlorate-(35Cl18O4)	Sample		141415	-9.7	
01MAY12-perc-081.d	Perchlorate-(35Cl18O4)	Sample		144503	-7.7	

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373 - 5600

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

01MAY12-perc-082.d	Perchlorate-(35Cl18O4)	Sample		98177	-37.3
01MAY12-perc-083.d	Perchlorate-(35Cl18O4)	Sample		86008	-45.1
01MAY12-perc-084.d	Perchlorate-(35Cl18O4)	Sample		85731	-45.3
01MAY12-perc-085.d	Perchlorate-(35Cl18O4)	Sample		100531	-35.8
01MAY12-perc-086.d	Perchlorate-(35Cl18O4)	QC	10.0000	115259	-26.4
01MAY12-perc-087.d	Perchlorate-(35Cl18O4)	Sample		141532	-9.6
01MAY12-perc-088.d	Perchlorate-(35Cl18O4)	Sample		130753	-16.5
01MAY12-perc-089.d	Perchlorate-(35Cl18O4)	Sample		98397	-37.2
01MAY12-perc-090.d	Perchlorate-(35Cl18O4)	Sample		90586	-42.2
01MAY12-perc-091.d	Perchlorate-(35Cl18O4)	Sample		88297	-43.6
01MAY12-perc-092.d	Perchlorate-(35Cl18O4)	Sample		83733	-46.5
01MAY12-perc-093.d	Perchlorate-(35Cl18O4)	Sample		96986	-38.1
01MAY12-perc-094.d	Perchlorate-(35Cl18O4)	Sample		82908	-47.1
01MAY12-perc-095.d	Perchlorate-(35Cl18O4)	Sample		84118	-46.3
01MAY12-perc-096.d	Perchlorate-(35Cl18O4)	QC	10.0000	86491	-44.8
01MAY12-perc-097.d	Perchlorate-(35Cl18O4)	QC	10.0000	132396	-15.5
01MAY12-perc-098.d	Perchlorate-(35Cl18O4)	Sample		139974	-10.6

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240431 **Work Order #...:** MR8L91AA **Matrix.....:** WATER
MB Lot-Sample #: G2D270000-065

Prep Date.....: 04/27/12
Analysis Date..: 05/01/12 **Prep Batch #...:** 2118065
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240431 **Work Order #...:** MR8L91AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	93	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240431 **Work Order #...:** MR8L91AC **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	**5.00**	**4.67**	**ug/L**	**93**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240431 **Work Order #...:** MR8L91AD **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	**98**	**(80 - 120)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240431 **Work Order #...:** MR8L91AD **Matrix.....:** WATER
LCS Lot-Sample#: G2D270000-065
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	**5.00**	**4.89**	**ug/L**	**98**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240431 **Work Order #...:** MR5QT1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G2D230413-001 MR5QT1AD-MSD
Date Sampled...: 04/18/12 **Date Received..:** 04/20/12
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	**89**	**(80 - 120)**			**SW846 6850**
	97	**(80 - 120)**	**8.8**	**(0-15)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D240431 **Work Order #...:** MR5QT1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G2D230413-001 MR5QT1AD-MSD
Date Sampled...: 04/18/12 **Date Received..:** 04/20/12
Prep Date.....: 04/27/12 **Analysis Date..:** 05/01/12
Prep Batch #...: 2118065
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	**ND**	**5.00**	**4.46**	**ug/L**	**89**		**SW846 6850**
	ND	**5.00**	**4.87**	**ug/L**	**97**	**8.8**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

TETRA TECH **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT	JOB NUMBER		
Lockheed MSA	SDG 240-10494-1		
SUBJECT			
Sample Calculations			
BASED ON	DRAWING NUMBER		
BY	CHECKED BY	APPROVED BY	DATE
Ann Cognetti			May 16, 2012

I. VOC; Sample MSA-MW35S-042012; cis-1,2-dichloroethene

$$\frac{249772}{153141} * \frac{10 ug/L}{0.2548} = 6.4 ug/L$$

II. SVOC; Sample MSA-MW35S-042012; 1,4-dioxane

$$\frac{30710}{71312} * \frac{4 ng/uL}{1.0480} * \frac{2mL}{1020mL} * 1000 = 3.2 ug/L$$

III. GRO, Sample MSA-MW20S-042012;

$$\frac{134332010}{299875.299} * 5 = 2239.8 ug/L$$

IV. DRO; Sample

$$\frac{25991222}{157952.561} * \frac{5mL}{1050mL} * 1000 = 783.6 ug/L$$

V. Perchlorate - see attached

Sample Calculation

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 Lab Sample ID: 240-10494-2

Matrix: Water Lab File ID: UXX5006.D

Analysis Method: 8260C Date Collected: 04/20/2012 09:55

Sample wt/vol: 5(mL) Date Analyzed: 04/27/2012 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 41857 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	6.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	0.22	J	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	2.4		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	2.0		1.0	0.22
75-65-0	tert-Butyl alcohol	50	U *	50	3.9

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\NCChrom\ChromData\A3UX10\20120427-9453.b\UXX5006.D
Lims ID: 240-10494-C-2 Client ID: MSA-MW35S-042012
Inject. Date: 27-Apr-2012 17:20:30 Dil. Factor: 1.0000
Sample Type: Client
Sample ID: 240-0009453-022
Misc. Info.: P20427A,8260LLUX10,,1904 =P20427A,8260LLUX10,,1904
Operator: 1904 Instrument ID: A3UX10
Vol. Injected: 1.0000 ALS Bottle#: 21
Lims Batch ID: 41857 Lims Sample ID: 22
Detector: MS SCAN

Method: \\NCChrom\ChromData\A3UX10\20120427-9453.b\8260_10.m
Last Update: 29-Apr-2012 12:34:33 Calib Date: 09-Apr-2012 14:40:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\NCChrom\ChromData\A3UX10\20120409-8883.b\UXX1001.D
Limit Group: MSV 8260DOD ICAL
Integrator: RTE ID Type: Deconvolution ID
Process Host: CORP-CTX-18

First Level Reviewer: quayler Date: 29-Apr-2012 11:51:21

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.128	5.126	0.002	99	1534141	10.0	
* 2 Chlorobenzene-d5	117	7.802	7.800	0.002	84	1028122	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.038	10.048	-0.010	95	506249	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.548	4.546	0.002	58	358674	12.8	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.832	4.830	0.002	0	455461	12.8	
$ 7 Toluene-d8 (Surr)	98	6.488	6.487	0.001	93	1354160	11.6	
$ 131 4-Bromofluorobenzene (Surr)	95	8.914	8.912	0.002	96	426059	9.57	
134 Chlorodifluoromethane TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.492					
13 Chloromethane	50		1.622					
14 Vinyl chloride	62	1.720	1.717	0.003	98	89510	1.99	
15 Bromomethane	94		2.001					
16 Chloroethane	64		2.096					
18 Trichlorofluoromethane	101		2.309					
21 1,1-Dichloroethene	96		2.723					
22 Acetone	43	2.737	2.735	0.002	88	14590	1.19	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.746					
26 Carbon disulfide	76	2.927	2.924	0.003	60	19083	0.1731	
30 Methylene Chloride	84		3.113					
31 2-Methyl-2-propanol	59		3.172					
34 Methyl tert-butyl ether	73	3.341	3.350	-0.009	76	22693	0.2211	
33 trans-1,2-Dichloroethene	96		3.350					
36 1,1-Dichloroethane	63	3.684	3.681	0.003	85	56262	0.8440	
37 Vinyl acetate	86		3.717					
38 Isopropyl ether	87		3.741					
40 Tert-butyl ethyl ether	59		4.037					
41 2-Butanone (MEK)	43		4.155					
42 cis-1,2-Dichloroethene	96	4.157	4.166	-0.009	82	249772	6.39	
43 2,2-Dichloropropane	77		4.166					
47 Chlorobromomethane	128		4.356					

Sample Calculation

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 39613

SDG No.:

Instrument ID: A3UX10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/09/2012 10:43 Calibration End Date: 04/09/2012 12:30 Calibration ID: 7930

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0139 0.0113	0.0159	0.0121	0.0128	0.0132	Ave		0.0132				12.0		15.0			
Acrylonitrile	0.0815 0.0870	0.0882	0.0840	0.0861	0.0926	Ave		0.0866				4.4		15.0			
Methyl tert-butyl ether	0.6298 0.6761	0.6642	0.6410	0.6715	0.7312	Ave		0.6690			0.1000	5.3		15.0			
trans-1,2-Dichloroethene	0.2368 0.2297	0.2291	0.2268	0.2326	0.2486	Ave		0.2339			0.1000	3.4		15.0			
Hexane	0.0580 0.0648	0.0554	0.0620	0.0574	0.0625	Ave		0.0600				6.1		15.0			
1,1-Dichloroethane	0.4254 0.4303	0.4217	0.4250	0.4379	0.4668	Ave		0.4345			0.1000	3.9		15.0			
Vinyl acetate	0.0316 0.0484	0.0385	0.0396	0.0459	0.0502	Lin1	-0.011	0.0486							0.9980		0.9950
2-Butanone	0.1052 0.0887	0.0917	0.0897	0.0852	0.0938	Ave		0.0924			0.0500	7.5		15.0			
cis-1,2-Dichloroethene	0.2508 0.2495	0.2545	0.2464	0.2543	0.2736	Ave		0.2548			0.1000	3.8		15.0			
2,2-Dichloropropane	0.2781 0.2817	0.2747	0.2768	0.2805	0.3092	Ave		0.2835				4.5		15.0			
Bromochloromethane	0.1023 0.1073	0.1074	0.1037	0.1113	0.1197	Ave		0.1086				5.8		15.0			
Tetrahydrofuran	0.0749 0.0640	0.0739	0.0637	0.0641	0.0668	Ave		0.0679				7.6		15.0			
Chloroform	0.3657 0.3760	0.3800	0.3621	0.3800	0.4090	Ave		0.3788				4.4		15.0			
1,1,1-Trichloroethane	0.2761 0.3005	0.2886	0.2958	0.3014	0.3241	Ave		0.2977			0.1000	5.4		15.0			
Cyclohexane	0.4772 0.4869	0.4382	0.4655	0.4350	0.4781	Ave		0.4635			0.1000	4.7		15.0			
1,1-Dichloropropene	0.3213 0.3320	0.3151	0.3070	0.3141	0.3435	Ave		0.3222				4.2		15.0			
Carbon tetrachloride	0.2206 0.2597	0.2225	0.2352	0.2404	0.2675	Ave		0.2410			0.1000	8.0		15.0			
1,2-Dichloroethane	0.2598 0.2874	0.2825	0.2743	0.2849	0.3058	Ave		0.2825			0.1000	5.4		15.0			
Benzene	0.9882 0.9961	0.9621	0.9148	0.9557	1.0428	Ave		0.9766			0.5000	4.4		15.0			
Trichloroethene	0.2155 0.2336	0.2156	0.2171	0.2257	0.2465	Ave		0.2257			0.2000	5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 | Lab Sample ID: 240-10494-2

Matrix: Water | Lab File ID: 20427020.D

Analysis Method: 8270C | Date Collected: 04/20/2012 09:55

Extract. Method: 3520C | Date Extracted: 04/25/2012 08:09

Sample wt/vol: 1020(mL) | Date Analyzed: 04/27/2012 15:11

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41841 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	3.2		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		28-110
367-12-4	2-Fluorophenol (Surr)	53		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	54		27-111
4165-62-2	Phenol-d5 (Surr)	62		10-110
1718-51-0	Terphenyl-d14 (Surr)	70		37-119

Report Date: 28-Apr-2012 11:31:51 Chrom Revision: 2.0 08-Feb-2012 11:07:54

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File: \\Ncchrom\ChromData\A4HP9\20120427-9449.b\20427020.D
Lims ID: 240-10494-I-2-A Client ID: MSA-MW35S-042012
Inject. Date: 27-Apr-2012 15:11:30 Dil. Factor: 1.0000
Sample Type: Client
Sample ID: 240-0009449-020
Misc. Info.: 240-10494-I-2-A =240-10494-I-2-A
Operator: 001574 Instrument ID: A4HP9
Vol. Injected: 1.0000 ALS Bottle#: 20
Lims Batch ID: 41841 Lims Sample ID: 20
Detector: MS SCAN

Method: \\Ncchrom\ChromData\A4HP9\20120427-9449.b\8270 _9.m
Last Update: 28-Apr-2012 11:31:51 Calib Date: 25-Apr-2012 15:06:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A4HP9\20120425-9364.b\20425019.D
Limit Group: MSS 8270C ICAL
Integrator: RTE ID Type: Deconvolution ID
Process Host: CORP-CTX-15

First Level Reviewer: ulmanm Date: 27-Apr-2012 14:41:38

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	3.742	3.734	0.008	77	71312	4.00	M
* 2 Naphthalene-d8	136	4.704	4.696	0.008	96	304418	4.00	
* 3 Acenaphthene-d10	164	6.002	5.989	0.013	81	206106	4.00	
* 4 Phenanthrene-d10	188	7.092	7.073	0.019	78	365812	4.00	
* 5 Chrysene-d12	240	9.042	9.018	0.024	79	347786	4.00	
* 6 Perylene-d12	264	10.382	10.326	0.056	95	295971	4.00	
$ 7 2-Fluorophenol	112	2.738	2.733	0.005	89	245167	7.95	
$ 8 Phenol-d5	99	3.438	3.427	0.011	0	444761	9.26	
$ 9 Nitrobenzene-d5	82	4.153	4.148	0.005	85	364708	5.39	
$ 10 2-Fluorobiphenyl (Surr)	172	5.489	5.484	0.005	97	381988	5.35	
$ 11 2,4,6-Tribromophenol	330	6.584	6.568	0.016	74	86304	10.4	
$ 12 Terphenyl-d14	244	8.224	8.219	0.005	81	541701	6.99	
25 1,4-Dioxane	88	1.621	1.627	-0.006	79	30710	1.64	

QC Flag Legend

Review Flags
M - Manually Integrated

Sample Calculation

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 41468

SDG No.:

Instrument ID: A4HP9 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/25/2012 09:33 Calibration End Date: 04/25/2012 12:09 Calibration ID: 8278

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41468/6	20425006.D
Level 2	STD2 240-41468/5	20425005.D
Level 3	STD3 240-41468/4	20425004.D
Level 4	STD4 240-41468/3	20425003.D
Level 5	STD5 240-41468/2	20425002.D
Level 6	STD6 240-41468/10	20425010.D
Level 7	STD7 240-41468/9	20425009.D
Level 8	STD8 240-41468/8	20425008.D
Level 9	STD9 240-41468/7	20425007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	1.0666	1.1441 1.0236	1.0394 1.0359	1.0891 1.0181	0.9673	Ave		1.0480				5.0		15.0			
N-Nitrosodimethylamine	1.8528	1.8080 1.8338	1.8030 1.8545	1.8275 1.7652	1.7419	Ave		1.8108				2.2		15.0			
Pyridine	2.9642	2.8793 2.9920	2.8224 3.0994	2.8486 2.9777	2.7589	Ave		2.9178				3.8		15.0			
Ethyl methacrylate	2.8067	2.8321 2.7778	2.6178 2.8749	2.9103 2.7186	2.6386	Ave		2.7721				3.8		15.0			
Benzaldehyde	2.9327 2.0517	2.7799 +++++	2.5602 +++++	2.6396 +++++	2.4394	Ave		2.5672				12.0		15.0			
3-Chloropropionitrile	1.1768	1.2653 1.1807	1.1358 1.2025	1.2010 1.1530	1.1444	Ave		1.1824				3.5		15.0			
Malononitrile	2.9426	3.1232 2.5413	3.0900 2.1987	3.1472 1.8400	2.9381	Qua	-0.660	3.6559	-0.071						0.9990		0.9900
2,4-Toluene diamine	0.1571	0.2718 +++++	0.2978 +++++	0.2961 +++++	0.2363	Ave		0.2518				23.0	*	15.0			
Phenol	3.0074	2.7175 3.0457	2.8784 3.1791	2.9889 3.0595	2.7714	Ave		2.9560				5.3		15.0			
Aniline	3.9085	3.5644 3.8870	3.6017 3.9834	3.8949 3.8475	3.5291	Ave		3.7771				4.8		15.0			
Bis(2-chloroethyl)ether	2.9784	2.4079 2.4382	2.3921 2.6804	2.3988 2.5237	2.3334	Ave		2.5191				8.5		15.0			
2-Chlorophenol	1.5638	1.4473 1.5499	1.3624 1.6034	1.4538 1.5975	1.4049	Ave		1.4979				6.2		15.0			
1,3-Dichlorobenzene	1.6598	1.5928 1.6295	1.4645 1.7033	1.5368 1.6690	1.5262	Ave		1.5977				5.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW20S-042012 | Lab Sample ID: 240-10494-3

Matrix: Water | Lab File ID: YF042611.D

Analysis Method: 8015B | Date Collected: 04/20/2012 10:20

Sample wt/vol: 5(mL) | Date Analyzed: 04/26/2012 19:28

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 41736 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	2200	B	500	130

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	66		10-150

Report Date: 27-Apr-2012 09:48:56 Chrom Revision: 2.0 08-Feb-2012 11:07:54

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\YPID\20120426-9424.b\YF042611.D		
Lims ID:	240-10494-B-3	Client ID:	MSA-MW20S-042012
Inject. Date:	26-Apr-2012 19:28:41	Dil. Factor:	5.0000
Sample Type:	Client		
Sample ID:	240-0009424-011		
Misc. Info.:			
Operator:	4275	Instrument ID:	YPID
Vol. Injected:	1.0000	ALS Bottle#:	1
Lims Batch ID:	41736	Lims Sample ID:	11
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\YPID\20120426-9424.b\Y80158021.m		
Last Update:	27-Apr-2012 09:48:49	Calib Date:	21-Feb-2012 16:37:39
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\YPID\20120221-7767.b\YF022110.D		
Limit Group:	GCV 8015B GRO ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-17		

First Level Reviewer: bolgrind Date: 27-Apr-2012 09:26:36

Compound	Det	RT	ADJ RT	DLT RT	Response	On-Col Amt ug/l	Flags
* 15 Fluorobenzene	1	0.000	8.477	-8.477	0	0	
$ 16 Trifluorotoluene (Surr)	2	9.752	9.757	-0.005	2765932	6.58	
A 5 C6-C10	2	11.788	4.785 - 18.791		134332010	448.0	

Sample Calculation

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10494-1

SDG No.:

Client Sample ID: MSA-MW35S-042012 | Lab Sample ID: 240-10494-2

Matrix: Water | Lab File ID: P6B04276.D

Analysis Method: 8015B | Date Collected: 04/20/2012 09:55

Extraction Method: 3520C | Date Extracted: 04/24/2012 09:45

Sample wt/vol: 1050(mL) | Date Analyzed: 04/26/2012 18:25

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 41709 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	780		480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	51		10-110

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A2HP6R\20120426-9419.b\P6B04276.D		
Lims ID:	240-10494-L-2-A	Client ID:	MSA-MW35S-042012
Inject. Date:	26-Apr-2012 18:25:28	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009419-016		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP6R
Vol. Injected:	1.0000	ALS Bottle#:	66
Lims Batch ID:	41709	Lims Sample ID:	16
Detector:	GC FID2B		
Method:	\\Ncchrom\ChromData\A2HP6R\20120426-9419.b\TPH6R.m		
Last Update:	27-Apr-2012 13:08:10	Calib Date:	26-Apr-2012 17:23:09
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP6R\20120426-9419.b\P6B04274.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
4.185	4.184	0.001	9473836	50.6	
A 15 Diesel					
9.362	5.180 - 13.543		22449933	142.1	
A 17 C10-C32					
9.939	5.180 - 14.697		25991222	164.6	

Sample Calculation

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10494-1 Analy Batch No.: 41709

SDG No.:

Instrument ID: A2HP6R GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8411

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41709/4	P6B04264.D
Level 2	STD2 240-41709/5	P6B04265.D
Level 3	STD3 240-41709/6	P6B04266.D
Level 4	STD4 240-41709/7	P6B04267.D
Level 5	STD5 240-41709/8	P6B04268.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	165214 152606	162088	159915	149941	Ave		157952.561				4.1		20.0			
n-Nonane	187792 185823	189585	191915	181619	Ave		187346.556				2.1		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

TestAmerica Canton

Client Sample ID: MSA-MW17I-042012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D240431-005	Work Order #...:	MR6H11AA	Matrix.....:	WATER
Date Sampled...:	04/20/12	Date Received..:	04/24/12		
Prep Date.....:	04/27/12	Analysis Date..:	05/02/12		
Prep Batch #...:	2118065				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.19 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL

Sample Calculation

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\01MAY2012A\QuantResults\01MAY2012A-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/2/2012 04.12
Analyst	lores
Data File	01MAY12-perc-092 d
Acquisition Method	PercMRM_2 m
Sample Name	G2D240431-5, 2118065, 2 00mL/2 00mL,
Sample Identification	MR6H11AA
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P1-E3
Exp. Concentration	
Injection Volume	50

Quantitation Results

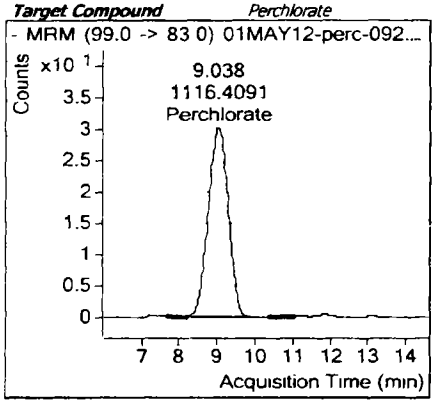
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 038	1116	99	83	**0.18663**	**0.18663**	1
Perchlorate-(35Cl18O4)	ISTD	9 020	83733	107	89			1

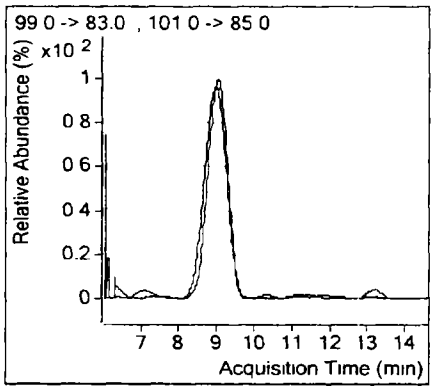
Result is J-Flag

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	417	101	85	2 68	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	26681	109	91	3 14	2 30	3 80	In Control

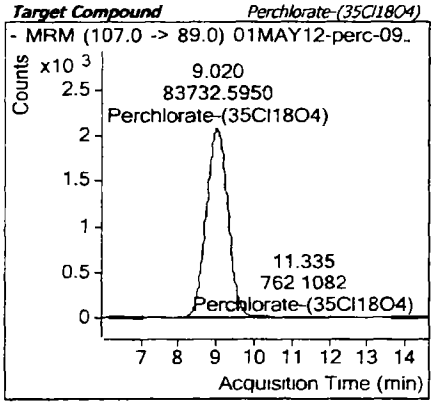
Compound Graphics

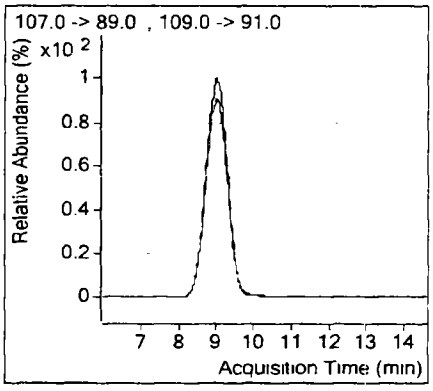
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/4/12
4
m 5/4/12

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **June 15, 2012**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- SELECT TOTAL AND DISSOLVED METALS**
LOCKHEED-MSA
SDG 240-10494-1

SAMPLES: 6/Waters/

MSA-MW17I-042012	MSA-MW17S-042012
MSA-MW20D-042012	MSA-MW20I-042012
MSA-MW20S-042012	MSA-MW35S-042012

Overview

The sample set for Lockheed MSA, SDG 240-10494-1, consists of six (6) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

All samples were analyzed for total and dissolved metals. The samples were collected by Tetra Tech on April 20th, 2012 and analyzed by TestAmerica. Metals analyses were conducted using methods 6020A. Mercury analyses were conducted using method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, laboratory control sample recoveries, matrix spike recoveries, laboratory duplicate results, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Barium [1]	0.72 ug/L	3.6 ug/L
Copper [1]	0.57 ug/L	2.85 ug/L
Lead [1]	0.29 ug/L	1.45 ug/L
Molybdenum [1]	0.29 ug/L	1.45 ug/L
Thallium [1]	0.38 ug/L	1.9 ug/L
Zinc [1]	2.83 ug/L	14.1 ug/L
Barium [2]	1.16 ug/L	5.8 ug/L
Copper [2]	0.71 ug/L	3.55 ug/L

Molybdenum [2]	0.14 ug/L	0.7 ug/L
Thallium [2]	0.27 ug/L	1.35 ug/L
Zinc [2]	8.88 ug/L	44.4 ug/L
Antimony [3]	0.16 ug/L	0.8 ug/L
Cobalt [3]	0.077 ug/L	0.35 ug/L
Molybdenum [3]	0.47 ug/L	2.35 ug/L
Thallium [3]	0.82 ug/L	4.1 ug/L
Tungsten [3]	0.68 ug/L	3.4 ug/L

[1] Maximum concentration found in a preparation blank affecting sample in 41326.
[2] Maximum concentration found in a preparation blank affecting sample in 41366.
[3] Maximum concentration found in a calibration blank affecting samples analyzed on 4/25/12.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The CRDL standard analyzed on 4/25/12 had a percent recovery > 110% for copper, nickel, silver, and thallium. All samples were affected. Positive nickel results < 2X CRDL were qualified as estimated (J) due to conflicting directional bias.

- Total and dissolved samples MSA-MW17S-042012, MSA-MW20I-042012, and MSA-MW20S-042012 had a percent recovery < 65% for internal standard lithium. Positive beryllium results were qualified as estimated (J) and non-detected results were qualified as estimated (UJ).

Notes

Positive results greater than MDL but less than the RL were qualified as estimated (J).

Executive Summary

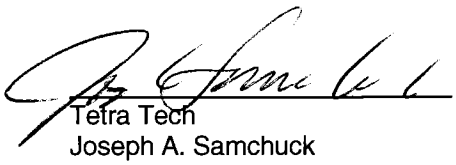
Laboratory Performance: CRDL standard non-compliances resulted in the qualification of sample results. Preparation and calibration blank contamination resulted on the qualification of sample results.

Other Factors Affecting Data Quality: Internal standard non-compliances for lithium resulted in the qualification of several beryllium results.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993).

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator



Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042012			MSA-MW17S-042012			MSA-MW20D-042012			MSA-MW20I-042012		
SDG: 240-10494-1	LAB_ID	240-10494-6			240-10494-5			240-10494-7			240-10494-4		
FRACTION: M	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.13	U		0.13	U	
ARSENIC		6.1			8.3			1.1	J	P	5.4		
BARIUM		11			66			130			14		
BERYLLIUM		0.2	U		0.2	UJ	N	1			0.2	UJ	N
CADMIUM		0.13	U		0.13	U		2.2			0.13	U	
CHROMIUM		0.71	U		1.1	J	P	1.9	J	P	0.71	U	
COBALT		16			0.5	J	P	89			16		
COPPER		1.1	B	A	0.86	B	A	6			0.33	B	A
LEAD		0.28	J	P	0.25	J	P	0.18	U		0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.13	B	A	0.5	B	A	0.093	U		0.31	B	A
NICKEL		22			1.8	J	CP	51			2.7		
SELENIUM		0.57	U		0.57	U		0.67	J	P	0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.15	B	A	0.2	B	A	0.17	B	A	0.25	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U		0.37	U	
VANADIUM		1.1	J	P	1.2	J	P	0.44	U		0.72	J	P
ZINC		35	B	A	2.5	B	A	140			3.7	B	A

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042012			MSA-MW35S-042012		
SDG: 240-10494-1	LAB_ID	240-10494-3			240-10494-2		
FRACTION: M	SAMP_DATE	4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.15	B	A	0.13	U	
ARSENIC		17			1.4	J	P
BARIUM		15			64		
BERYLLIUM		1.5	J	N	4		
CADMIUM		0.13	U		0.23	J	P
CHROMIUM		3			1.5	J	P
COBALT		5			350		
COPPER		0.38	B	A	6.1		
LEAD		0.18	U		0.51	B	A
MERCURY		0.12	U		0.12	U	
MOLYBDENUM		0.23	B	A	0.099	B	A
NICKEL		2.4			170		
SELENIUM		7.1			0.8	J	P
SILVER		0.08	U		0.08	U	
THALLIUM		0.31	B	A	0.29	B	A
TUNGSTEN		0.37	U		0.37	U	
VANADIUM		14	J	P	1.4	J	P
ZINC		5.9	B	A	140		

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042012			MSA-MW17S-042012			MSA-MW20D-042012			MSA-MW20I-042012		
SDG: 240-10494-1	LAB_ID	240-10494-6			240-10494-5			240-10494-7			240-10494-4		
FRACTION: MF	SAMP_DATE	4/20/2012			4/20/2012			4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.13	U		0.13	U	
ARSENIC		5.8			7.6			1	J	P	5.3		
BARIUM		10			66			140			15		
BERYLLIUM		0.2	U		0.2	UJ	N	0.95	J	P	0.2	UJ	N
CADMIUM		0.13	U		0.13	U		2.2			0.13	U	
CHROMIUM		0.71	U		0.71	U		1.5	J	P	0.71	U	
COBALT		17			0.42	J	P	90			16		
COPPER		0.42	B	A	0.29	B	A	2	B	A	0.36	B	A
LEAD		0.18	U		0.18	U		0.18	U		0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.094	B	A	0.48	B	A	0.093	U		0.33	B	A
NICKEL		21			1.1	J	CP	51			2.8		
SELENIUM		0.57	U		0.57	U		0.77	J	P	0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.17	B	A	0.16	B	A	0.21	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U		0.37	U	
VANADIUM		0.46	J	P	0.74	J	P	0.44	U		0.57	J	P
ZINC		31	B	A	2.5	B	A	140			3.8	B	A

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042012			MSA-MW35S-042012		
SDG: 240-10494-1	LAB_ID	240-10494-3			240-10494-2		
FRACTION: MF	SAMP_DATE	4/20/2012			4/20/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U	
ARSENIC		16			1.6	J	P
BARIUM		14			67		
BERYLLIUM		1.4	J	N	4.3		
CADMIUM		0.13	U		0.13	U	
CHROMIUM		2.8			1.2	J	P
COBALT		4.8			370		
COPPER		0.29	U		0.51	B	A
LEAD		0.18	U		0.18	U	
MERCURY		0.12	U		0.12	U	
MOLYBDENUM		0.19	B	A	0.12	B	A
NICKEL		2.3			180		
SELENIUM		7.1			0.88	J	P
SILVER		0.08	U		0.08	U	
THALLIUM		0.23	B	A	0.56	B	A
TUNGSTEN		0.37	U		0.37	U	
VANADIUM		11	J	P	0.54	J	P
ZINC		7.5	B	A	140		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW17I-042012**

Lab Sample ID: 240-10494-6
Client Matrix: Water

Date Sampled: 04/20/2012 1325
Date Received: 04/21/2012 0930

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1513			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	6.1		0.40	5.0
Barium	11	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	2.0	U	0.71	2.0
Cobalt	16		0.058	1.0
Copper	1.1	J B	0.29	2.0
Lead	0.28	J	0.18	1.0
Molybdenum	0.13	J B	0.093	10
Nickel	22		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.15	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	1.1	J	0.44	20
Zinc	35	B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1519			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	5.8		0.40	5.0
Barium	10	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	2.0	U	0.71	2.0
Cobalt	17		0.058	1.0
Copper	0.42	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.094	J B	0.093	10
Nickel	21		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	2.0	U	0.14	2.0
Vanadium	0.46	J	0.44	20
Zinc	31	B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW17I-042012**

Lab Sample ID: 240-10494-6
Client Matrix: Water

Date Sampled: 04/20/2012 1325
Date Received: 04/21/2012 0930

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-42025	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042712B-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/27/2012 1804			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-42025	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042712B-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/27/2012 1806			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW17S-042012**

Lab Sample ID: 240-10494-5
Client Matrix: Water

Date Sampled: 04/20/2012 1200
Date Received: 04/21/2012 0930

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1502			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	8.3		0.40	5.0
Barium	66	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	1.1	J	0.71	2.0
Cobalt	0.50	J	0.058	1.0
Copper	0.86	J B	0.29	2.0
Lead	0.25	J	0.18	1.0
Molybdenum	0.50	J B	0.093	10
Nickel	1.8	J	0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.20	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	1.2	J	0.44	20
Zinc	2.5	J B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1508			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	7.6		0.40	5.0
Barium	66	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	2.0	U	0.71	2.0
Cobalt	0.42	J	0.058	1.0
Copper	0.29	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.48	J B	0.093	10
Nickel	1.1	J	0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.17	J B	0.14	2.0
Vanadium	0.74	J	0.44	20
Zinc	2.5	J B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW17S-042012**

Lab Sample ID: 240-10494-5
Client Matrix: Water

Date Sampled: 04/20/2012 1200
Date Received: 04/21/2012 0930

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1420			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1422			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW20D-042012**

Lab Sample ID: 240-10494-7
Client Matrix: Water

Date Sampled: 04/20/2012 1342
Date Received: 04/21/2012 0930

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1524			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	1.1	J	0.40	5.0
Barium	130	B	0.19	5.0
Beryllium	1.0		0.20	1.0
Cadmium	2.2		0.13	1.0
Chromium	1.9	J	0.71	2.0
Cobalt	89		0.058	1.0
Copper	6.0	B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	10	U	0.093	10
Nickel	51		0.20	2.0
Selenium	0.67	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.17	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	20	U	0.44	20
Zinc	140	B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1530			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	1.0	J	0.40	5.0
Barium	140	B	0.19	5.0
Beryllium	0.95	J	0.20	1.0
Cadmium	2.2		0.13	1.0
Chromium	1.5	J	0.71	2.0
Cobalt	90		0.058	1.0
Copper	2.0	B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	10	U	0.093	10
Nickel	51		0.20	2.0
Selenium	0.77	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.16	J B	0.14	2.0
Vanadium	20	U	0.44	20
Zinc	140	B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW20D-042012**

Lab Sample ID: 240-10494-7
Client Matrix: Water

Date Sampled: 04/20/2012 1342
Date Received: 04/21/2012 0930

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-42025	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042712B-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/27/2012 1808			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-42025	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042712B-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/27/2012 1810			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW20I-042012**

Lab Sample ID: 240-10494-4
Client Matrix: Water

Date Sampled: 04/20/2012 1155
Date Received: 04/21/2012 0930

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1451			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	5.4		0.40	5.0
Barium	14	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	2.0	U	0.71	2.0
Cobalt	16		0.058	1.0
Copper	0.33	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.31	J B	0.093	10
Nickel	2.7		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.25	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	0.72	J	0.44	20
Zinc	3.7	J B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1457			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	5.3		0.40	5.0
Barium	15	B	0.19	5.0
Beryllium	1.0	U	0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	2.0	U	0.71	2.0
Cobalt	16		0.058	1.0
Copper	0.36	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.33	J B	0.093	10
Nickel	2.8		0.20	2.0
Selenium	5.0	U	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.21	J B	0.14	2.0
Vanadium	0.57	J	0.44	20
Zinc	3.8	J B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW20I-042012**

Lab Sample ID: 240-10494-4
Client Matrix: Water

Date Sampled: 04/20/2012 1155
Date Received: 04/21/2012 0930

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1416			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1418			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW20S-042012**

Lab Sample ID: 240-10494-3
Client Matrix: Water

Date Sampled: 04/20/2012 1020
Date Received: 04/21/2012 0930

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1441			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	0.15	J	0.13	2.0
Arsenic	17		0.40	5.0
Barium	15	B	0.19	5.0
Beryllium	1.5		0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	3.0		0.71	2.0
Cobalt	5.0		0.058	1.0
Copper	0.38	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.23	J B	0.093	10
Nickel	2.4		0.20	2.0
Selenium	7.1		0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.31	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	14	J	0.44	20
Zinc	5.9	J B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1446			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	16		0.40	5.0
Barium	14	B	0.19	5.0
Beryllium	1.4		0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	2.8		0.71	2.0
Cobalt	4.8		0.058	1.0
Copper	2.0	U	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.19	J B	0.093	10
Nickel	2.3		0.20	2.0
Selenium	7.1		0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.23	J B	0.14	2.0
Vanadium	11	J	0.44	20
Zinc	7.5	J B	2.3	20
Tungsten	10	U	0.37	10

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW20S-042012**

Lab Sample ID: 240-10494-3
Client Matrix: Water

Date Sampled: 04/20/2012 1020
Date Received: 04/21/2012 0930

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1412			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1414			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Client Sample ID: **MSA-MW35S-042012**

Lab Sample ID: 240-10494-2
Client Matrix: Water

Date Sampled: 04/20/2012 0955
Date Received: 04/21/2012 0930

6020 Metals (ICP/MS)-Total Recoverable

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41326	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1024			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 0946				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	1.4	J	0.40	5.0
Barium	64	B	0.19	5.0
Beryllium	4.0		0.20	1.0
Cadmium	0.23	J	0.13	1.0
Chromium	1.5	J	0.71	2.0
Cobalt	350		0.058	1.0
Copper	6.1	B	0.29	2.0
Lead	0.51	J B	0.18	1.0
Molybdenum	0.099	J B	0.093	10
Nickel	170		0.20	2.0
Selenium	0.80	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.29	J B	0.14	2.0
Tungsten	10	U	0.37	10
Vanadium	1.4	J	0.44	20
Zinc	140	B	2.3	20

6020 Metals (ICP/MS)-Dissolved

Analysis Method:	6020	Analysis Batch:	240-41639	Instrument ID:	I8
Prep Method:	3005A	Prep Batch:	240-41366	Lab File ID:	I8042512A.csv
Dilution:	1.0			Initial Weight/Volume:	50 mL
Analysis Date:	04/25/2012 1423			Final Weight/Volume:	50 mL
Prep Date:	04/24/2012 1116				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Antimony	2.0	U	0.13	2.0
Arsenic	1.6	J	0.40	5.0
Barium	67	B	0.19	5.0
Beryllium	4.3		0.20	1.0
Cadmium	1.0	U	0.13	1.0
Chromium	1.2	J	0.71	2.0
Cobalt	370		0.058	1.0
Copper	0.51	J B	0.29	2.0
Lead	1.0	U	0.18	1.0
Molybdenum	0.12	J B	0.093	10
Nickel	180		0.20	2.0
Selenium	0.88	J	0.57	5.0
Silver	1.0	U	0.080	1.0
Thallium	0.56	J B	0.14	2.0
Vanadium	0.54	J	0.44	20
Zinc	140	B	2.3	20
Tungsten	10	U	0.37	10

Client Sample ID: **MSA-MW35S-042012**

Lab Sample ID: 240-10494-2
Client Matrix: Water

Date Sampled: 04/20/2012 0955
Date Received: 04/21/2012 0930

7470A Mercury (CVAA)

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1408			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

7470A Mercury (CVAA)-Dissolved

Analysis Method:	7470A	Analysis Batch:	240-41861	Instrument ID:	H4
Prep Method:	7470A	Prep Batch:	240-41362	Lab File ID:	042612A-HG4.PRN
Dilution:	1.0			Initial Weight/Volume:	100 mL
Analysis Date:	04/26/2012 1410			Final Weight/Volume:	100 mL
Prep Date:	04/24/2012 1400				

Analyte	Result (ug/L)	Qualifier	MDL	RL
Mercury	0.20	U	0.12	0.20

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'meana	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: MSA Ground water Sampling	Method of Shipment/Carrier: Fed EX			
Project Number: 112IC04021-02	Shipping/Tracking No:			Job/SDG No:
PO #				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C / Grab G	VOCs	Total PPM	Diss PPM	1,4 Dioxane	GRO & DRO	RDX	Perchlorate				Sample Specific Notes / Special Instructions:
TB-042012	4-20-12	—		X						2					N	G	X										
MSA-MW35s-042012	↓	0955		X					2	5			5		↓	↓	X	X	X	X	X		X				
MSA-MW20s-042012	↓	1020		X					2	5			7		↓	↓	X	X	X	X	X	X	X				
MSA-MW20I-042012	↓	1155		X					2	3			3		↓	↓	X	X	X	X			X				
MSA-MW17s-042012	↓	1200		X					2	5			7		↓	↓	X	X	X	X	X	X	X				
MSA-MW17I-042012	↓	1325		X					2	3			3		↓	↓	X	X	X	X			X				
MSA-MW20D-042012	↓	1342		X					2	3			3		↓	↓	X	X	X	X			X				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	4-20-12 / 1426	[signature]	TestAmerica	4/20/12/1427
[signature]	TestAmerica	4/20/12/1530			
			Received in Laboratory by: [signature]	TA	4/21/12 0930

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TAL-0018 (1008)

05/10/2012

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10494-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate and RDX Explosive analysis were performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/21/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.4, 1.6 and 1.8 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042012 (240-10494-1), MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/27/2012 and 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

The laboratory control sample (LCS) for batch 41857 exceeded control limits for tert-Butyl alcohol . This has been identified as a poor performing analyte when analyzed using this method; therefore, re-extraction/re-analysis was not performed.

Several analytes failed the recovery criteria low for the MS/MSD of sample MSA-MW20S-042012 (240-10494-3) in batch 240-41857.

Refer to the QC report for details.

Samples MSA-MW20S-042012 (240-10494-3)[66.67X], MSA-MW20I-042012 (240-10494-4)[20X] and MSA-MW17I-042012 (240-10494-6)[33.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for analytical batch 41857 exceeded control criteria for several compounds. The samples associated with this CCV were not detected for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is reportable per the facility Standard Operating Procedure (SOP).

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/24/2012 and 04/25/2012 and analyzed on 04/26/2012, 04/27/2012 and 04/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 41464.

Sample MSA-MW20S-042012 (240-10494-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3) and MSA-MW17S-042012 (240-10494-5) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/26/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-41736/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sample MSA-MW20S-042012 (240-10494-3)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3) and MSA-MW17S-042012 (240-10494-5) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/24/2012 and analyzed on 04/26/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 41325.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/24/2012 and analyzed on 04/25/2012.

Several analytes were detected in method blank MB 240-41326/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-41366/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/26/2012 and 04/27/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW35S-042012 (240-10494-2), MSA-MW20S-042012 (240-10494-3), MSA-MW20I-042012 (240-10494-4), MSA-MW17S-042012 (240-10494-5), MSA-MW17I-042012 (240-10494-6) and MSA-MW20D-042012 (240-10494-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/24/2012 and analyzed on 04/26/2012 and 04/27/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

MSA- MW35S-042012

Reportedas 370ug/L

240-10494-g-2-b, 4/25/2012 14:23:05 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		68.389%	4.291	35.640
%RSD		1.846	2.400	3.052
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		12500.000	5831.000	M 1130.000
%RSD		1.521	1.835	M 1.294
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		T 0.000	T 804.300	3562.000
%RSD		T 0.000	T 1.398	1.200
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		T 79.862%	81.214%	0.291
%RSD		T 1.837	0.464	22.420
Run	Time	51V	52Cr	52Cr O
		ppb	ppb	ppb
x		0.539	1.199	0.596
%RSD		61.280	1.367	175.000
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		T 536.000	T 9146.000	M 367.500
%RSD		T 0.274	T 1.000	M 1.328
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		178.300	0.508	141.400
%RSD		1.071	4.976	0.826
Run	Time	72Ge	75As	77Ar Cl
		ppb	ppb	ppb
x		81.121%	1.626	0.191
%RSD		0.421	7.921	11.730
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		0.877	41.600	0.118
%RSD		6.509	1.294	21.660
Run	Time	105Pd	107Ag	108Mo O
		ppb	ppb	ppb
x		0.000	0.002	-2.338
%RSD		0.000	70.870	37.540
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.106	82.017%	0.133
%RSD		15.260	1.285	20.030
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		0.065	66.700	0.000
%RSD		23.520	1.182	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		86.052%	0.186	0.561
%RSD		0.647	5.620	1.933
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		0.135	0.000	
%RSD		1.477	0.000	

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10494

Client Tetra Tech Site Name MSA By: [signature] (Signature)

Cooler Received on 4/21/12 Opened on 4/23/12

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other Multiple

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	☒ Multiple on Back
IR GUN# 5G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 3 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

SOP: NC-SC[illegible] Sample Receiving 05/10/2012

N:\QAQC\NARRATIVE\TestAmerica\Cooler Receipt TestAmerica\COOLER_TestAmerica_Rev 83_032612 jcs.doc

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
35	<2 <2	4/23/12	MB
20S	<2 <2		
20I	<2 <2		
17S	<2 <2		
17I	<2 <2		
20D	<2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client cooler	3.4	1.4	1	ICE
	3.6	1.6		
	3.8	1.8		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10494-1

Login Number: 10494
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-10350-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/25/2012	4/27/2012	5	2	7
EXP	UG/L	MSA-MW15S-041812	240-10391-1	NM	4/18/2012	4/25/2012	4/27/2012	7	2	9
HG	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HG	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HG	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HG	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HG	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HG	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HG	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
M	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
M	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
M	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
M	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
M	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
HGF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/26/2012	5	2	7
HGF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/26/2012	4	2	6
HGF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
HGF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/24/2012	4/26/2012	6	2	8
HGF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/24/2012	4/25/2012	6	1	7
HGF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/27/2012	4	3	7
MF	UG/L	MSA-MW19I-041912	240-10391-4	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW15D-041812	240-10350-5	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15S-041812	240-10350-2	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW34S-041912	240-10391-5	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW15I-041812	240-10350-4	NM	4/18/2012	4/23/2012	4/24/2012	5	1	6
MF	UG/L	MSA-MW20D-042012	240-10494-7	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW19D-041912	240-10391-3	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW17S-042012	240-10494-5	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW17I-042012	240-10494-6	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
MF	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/24/2012	4/25/2012	5	1	6
MF	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/24/2012	4/25/2012	4	1	5
PCL	UG/L	MSA-MW20S-042012	240-10494-3	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW39S-041912	240-10391-7	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW38S-041812	240-10350-3	NM	4/18/2012	4/27/2012	5/1/2012	9	4	13
PCL	UG/L	MSA-MW35S-042012	240-10494-2	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12
PCL	UG/L	MSA-MW34I-041912	240-10391-6	NM	4/19/2012	4/27/2012	5/2/2012	8	5	13
PCL	UG/L	MSA-MW20I-042012	240-10494-4	NM	4/20/2012	4/27/2012	5/2/2012	7	5	12

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10494-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10494-1

SDG No.:

Instrument ID: I8 Date: 07/05/2011 09:44

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Antimony		1000	6020
Arsenic		10000	6020
Barium		10000	6020
Beryllium		10000	6020
Cadmium		10000	6020
Chromium		10000	6020
Cobalt		10000	6020
Copper		10000	6020
Lead		10000	6020
Molybdenum		2000	6020
Nickel		10000	6020
Selenium		10000	6020
Silver		1000	6020
Thallium		10000	6020
Vanadium		10000	6020
Tungsten		2000	6020
Zinc		10000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10494-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41362/1-A	04/24/2012 14:00	41362		100	100
LCS 240-41362/2-A	04/24/2012 14:00	41362		100	100
240-10391-E-4-C MS	04/24/2012 14:00	41362		100	100
240-10391-E-4-D MSD	04/24/2012 14:00	41362		100	100
240-10494-2	04/24/2012 14:00	41362		100	100
240-10494-2	04/24/2012 14:00	41362		100	100
240-10494-3	04/24/2012 14:00	41362		100	100
240-10494-3	04/24/2012 14:00	41362		100	100
240-10494-4	04/24/2012 14:00	41362		100	100
240-10494-4	04/24/2012 14:00	41362		100	100
240-10494-5	04/24/2012 14:00	41362		100	100
240-10494-5	04/24/2012 14:00	41362		100	100
240-10494-6	04/24/2012 14:00	41362		100	100
240-10494-6	04/24/2012 14:00	41362		100	100
240-10494-7	04/24/2012 14:00	41362		100	100
240-10494-7	04/24/2012 14:00	41362		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41362/1-A

Instrument Code: H4 Batch No.: 41861

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10391-E-4-C MS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.01		0.20	U	1.00	101	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10391-E-4-D MSD

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.988		1.00	99	69-134	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41362/2-A

Lab Name: TestAmerica Canton Job No.: 240-10494-1

Sample Matrix: Water LCS Source: MTHGICVW_00281

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.13		103	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41326/1-A	04/24/2012 09:46	41326		50	50
LCS 240-41326/2-A	04/24/2012 09:46	41326		50	50
240-10387-K-5-B MS	04/24/2012 09:46	41326		50	50
240-10387-K-5-C MSD	04/24/2012 09:46	41326		50	50
240-10494-2	04/24/2012 09:46	41326		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41326/1-A

Instrument Code: I8 Batch No.: 41639

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.717	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.575	J		6020
7439-92-1	Lead	0.292	J		6020
7439-98-7	Molybdenum	0.295	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.385	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	2.83	J		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10387-K-5-B MS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	98.2		0.20	J	100	98	44-153		6020
Arsenic	990		1.9	J	1000	99	82-123		6020
Barium	1100		96		1000	101	45-144		6020
Beryllium	941		0.34	J	1000	94	77-124		6020
Cadmium	988		0.20	J	1000	99	78-117		6020
Chromium	1000		2.0	U	1000	100	72-110		6020
Cobalt	1000		0.85	J	1000	100	67-114		6020
Copper	994		0.34	J	1000	99	60-123		6020
Lead	1030		1.0	U	1000	103	73-115		6020
Molybdenum	103		3.4	J	100	100	80-110		6020
Nickel	1030		28		1000	100	72-111		6020
Selenium	993		0.65	J	1000	99	72-148		6020
Silver	99.9		1.0	U	100	100	10-139		6020
Thallium	254		0.92	J	250	101	69-117		6020
Vanadium	991		20	U	1000	99	70-112		6020
Tungsten	99.0		0.93	J	100	98	43-133		6020
Zinc	991		2.8	J	1000	99	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10387-K-5-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	97.0		100	97	44-153	1	20		6020
Arsenic	987		1000	98	82-123	0	20		6020
Barium	1100		1000	101	45-144	0	20		6020
Beryllium	918		1000	92	77-124	2	20		6020
Cadmium	991		1000	99	78-117	0	20		6020
Chromium	992		1000	99	72-110	1	20		6020
Cobalt	988		1000	99	67-114	2	20		6020
Copper	985		1000	98	60-123	1	20		6020
Lead	1040		1000	104	73-115	0	20		6020
Molybdenum	102		100	99	80-110	1	20		6020
Nickel	1030		1000	100	72-111	1	20		6020
Selenium	993		1000	99	72-148	0	20		6020
Silver	99.5		100	99	10-139	0	20		6020
Thallium	256		250	102	69-117	1	20		6020
Vanadium	990		1000	99	70-112	0	20		6020
Tungsten	98.9		100	98	43-133	0	20		6020
Zinc	985		1000	98	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41326/2-A

Lab Name: TestAmerica Canton Job No.: 240-10494-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	95.1		95	80	120		6020
Arsenic	1000	943		94	80	120		6020
Barium	1000	962		96	80	120		6020
Beryllium	1000	886		89	80	120		6020
Cadmium	1000	968		97	80	120		6020
Chromium	1000	949		95	80	120		6020
Cobalt	1000	960		96	80	120		6020
Copper	1000	986		99	80	120		6020
Lead	1000	1000		100	80	120		6020
Molybdenum	100	94.7		95	80	120		6020
Nickel	1000	979		98	80	120		6020
Selenium	1000	964		96	80	120		6020
Silver	100	101		101	80	120		6020
Thallium	250	245		98	80	120		6020
Vanadium	1000	936		94	80	120		6020
Tungsten	100	93.0		93	80	120		6020
Zinc	1000	976		98	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 240-10387-K-5-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10494-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.20	J	10	U	NC		6020
Arsenic	1.9	J	2.28	J	NC		6020
Barium	96		93.8		NC		6020
Beryllium	0.34	J	5.0	U	NC		6020
Cadmium	0.20	J	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	0.85	J	0.845	J	NC		6020
Copper	0.34	J	10	U	NC		6020
Lead	1.0	U	5.0	U	NC		6020
Molybdenum	3.4	J	3.48	J	NC		6020
Nickel	28		28.7		NC		6020
Selenium	0.65	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.92	J	2.33	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	0.93	J	50	U	NC		6020
Zinc	2.8	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41366/1-A	04/24/2012 11:16	41366		50	50
LCS 240-41366/3-A	04/24/2012 11:16	41366		50	50
240-10417-R-1-G MS	04/24/2012 11:16	41366		50	50
240-10417-R-1-H MSD	04/24/2012 11:16	41366		50	50
240-10494-2	04/24/2012 11:16	41366		50	50
240-10494-3	04/24/2012 11:16	41366		50	50
240-10494-3	04/24/2012 11:16	41366		50	50
240-10494-4	04/24/2012 11:16	41366		50	50
240-10494-4	04/24/2012 11:16	41366		50	50
240-10494-5	04/24/2012 11:16	41366		50	50
240-10494-5	04/24/2012 11:16	41366		50	50
240-10494-6	04/24/2012 11:16	41366		50	50
240-10494-6	04/24/2012 11:16	41366		50	50
240-10494-7	04/24/2012 11:16	41366		50	50
240-10494-7	04/24/2012 11:16	41366		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41366/1-A

Instrument Code: I8 Batch No.: 41639

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	1.16	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.708	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.144	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.278	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	8.88	J		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Sample Not in SDG

Client ID: _____ Lab ID: 240-10417-R-1-G MS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C		Sample Result (SR)	C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	107			0.19	J		100	107	44-153		6020
Arsenic	1110			2.8	J		1000	111	82-123		6020
Barium	1110			14			1000	110	45-144		6020
Beryllium	1090			0.63	J		1000	109	77-124		6020
Cadmium	1040			1.0	U		1000	104	78-117		6020
Chromium	1070			2.0	U		1000	107	72-110		6020
Cobalt	1050			0.18	J		1000	105	67-114		6020
Copper	1010			0.45	J		1000	101	60-123		6020
Lead	1090			1.0	U		1000	109	73-115		6020
Molybdenum	115			2.0	J		100	113	80-110	F	6020
Nickel	1040			1.0	J		1000	104	72-111		6020
Selenium	1110			0.63	J		1000	110	72-148		6020
Silver	104			1.0	U		100	104	10-139		6020
Thallium	264			0.89	J		250	105	69-117		6020
Vanadium	1080			20	U		1000	108	70-112		6020
Tungsten	109			0.72	J		100	109	43-133		6020
Zinc	1000			20	U		1000	100	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Sample Not in SDG

Client ID: _____ Lab ID: 240-10417-R-1-H MSD

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	105		100	105	44-153	2	20		6020
Arsenic	1090		1000	109	82-123	2	20		6020
Barium	1090		1000	107	45-144	2	20		6020
Beryllium	1050		1000	105	77-124	4	20		6020
Cadmium	1020		1000	102	78-117	3	20		6020
Chromium	1050		1000	105	72-110	2	20		6020
Cobalt	1040		1000	104	67-114	1	20		6020
Copper	1000		1000	100	60-123	1	20		6020
Lead	1080		1000	108	73-115	2	20		6020
Molybdenum	114		100	112	80-110	1	20	F	6020
Nickel	1020		1000	102	72-111	2	20		6020
Selenium	1090		1000	109	72-148	1	20		6020
Silver	101		100	101	10-139	3	20		6020
Thallium	261		250	104	69-117	1	20		6020
Vanadium	1060		1000	106	70-112	1	20		6020
Tungsten	108		100	108	43-133	1	20		6020
Zinc	994		1000	99	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41366/3-A

Lab Name: TestAmerica Canton Job No.: 240-10494-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	99.3		99	80	120		6020
Arsenic	1000	977		98	80	120		6020
Barium	1000	1000		100	80	120		6020
Beryllium	1000	930		93	80	120		6020
Cadmium	1000	1000		100	80	120		6020
Chromium	1000	991		99	80	120		6020
Cobalt	1000	994		99	80	120		6020
Copper	1000	1020		102	80	120		6020
Lead	1000	1070		107	80	120		6020
Molybdenum	100	98.4		98	80	120		6020
Nickel	1000	1020		102	80	120		6020
Selenium	1000	993		99	80	120		6020
Silver	100	105		105	80	120		6020
Thallium	250	259		104	80	120		6020
Vanadium	1000	979		98	80	120		6020
Tungsten	100	97.5		98	80	120		6020
Zinc	1000	1010		101	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 240-10417-R-1-D SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10494-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.19	J	10	U	NC		6020
Arsenic	2.8	J	2.83	J	NC		6020
Barium	14		14.0	J	NC		6020
Beryllium	0.63	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	0.18	J	5.0	U	NC		6020
Copper	0.45	J	10	U	NC		6020
Lead	1.0	U	5.0	U	NC		6020
Molybdenum	2.0	J	2.38	J	NC		6020
Nickel	1.0	J	1.12	J	NC		6020
Selenium	0.63	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.89	J	2.36	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	0.72	J	50	U	NC		6020
Zinc	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-41478/1-A			10:23	X																				
IC 240-41478/2-A			10:25	X																				
IC 240-41478/3-A			10:27	X																				
IC 240-41478/4-A			10:29	X																				
IC 240-41478/5-A			10:32	X																				
IC 240-41478/6-A			10:35	X																				
ICV 240-41478/7-A	1		10:37	X																				
ICB 240-41478/8-A	1		10:39	X																				
CRA 240-41478/9-A	1		10:41	X																				
CCV 240-41478/10-A			10:43																					
CCB 240-41478/11-A			10:45																					
ZZZZZZ			10:47																					
ZZZZZZ			10:49																					
ZZZZZZ			10:51																					
ZZZZZZ			10:53																					
ZZZZZZ			10:55																					
ZZZZZZ			10:57																					
ZZZZZZ			10:59																					
ZZZZZZ			11:00																					
ZZZZZZ			11:02																					
ZZZZZZ			11:04																					
CCV 240-41478/10-A			11:09																					
CCB 240-41478/11-A			11:12																					
ZZZZZZ			11:14																					
ZZZZZZ			11:16																					
ZZZZZZ			11:18																					
ZZZZZZ			11:20																					
ZZZZZZ			11:22																					
ZZZZZZ			11:24																					
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
ZZZZZZ			11:31																					
ZZZZZZ			11:33																					
CCV 240-41478/10-A			11:35																					
CCB 240-41478/11-A			11:37																					
ZZZZZZ			11:39																					
ZZZZZZ			11:42																					
ZZZZZZ			11:43																					
ZZZZZZ			11:45																					
ZZZZZZ			11:47																					
ZZZZZZ			11:49																					
ZZZZZZ			11:51																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			11:53																					
ZZZZZZ			11:55																					
ZZZZZZ			11:58																					
CCV 240-41478/10-A			11:59																					
CCB 240-41478/11-A			12:01																					
ZZZZZZ			12:03																					
ZZZZZZ			12:05																					
ZZZZZZ			12:07																					
ZZZZZZ			12:09																					
ZZZZZZ			12:11																					
ZZZZZZ			12:13																					
ZZZZZZ			12:15																					
ZZZZZZ			12:18																					
ZZZZZZ			12:20																					
ZZZZZZ			12:22																					
CCV 240-41478/10-A			12:23																					
CCB 240-41478/11-A			12:25																					
ZZZZZZ			12:28																					
ZZZZZZ			12:29																					
ZZZZZZ			12:31																					
ZZZZZZ			12:33																					
ZZZZZZ			12:35																					
ZZZZZZ			12:37																					
ZZZZZZ			12:39																					
ZZZZZZ			12:42																					
ZZZZZZ			12:43																					
ZZZZZZ			12:45																					
CCV 240-41478/10-A			12:47																					
CCB 240-41478/11-A			12:49																					
ZZZZZZ			12:51																					
ZZZZZZ			12:53																					
ZZZZZZ			12:55																					
ZZZZZZ			12:57																					
ZZZZZZ			13:00																					
ZZZZZZ			13:02																					
ZZZZZZ			13:04																					
ZZZZZZ			13:06																					
ZZZZZZ			13:08																					
ZZZZZZ			13:09																					
CCV 240-41478/10-A	1		13:12	X																				
CCB 240-41478/11-A	1		13:14	X																				
ZZZZZZ			13:16																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/26/2012 10:23 End Date: 04/26/2012 14:27

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			13:19																					
ZZZZZZ			13:21																					
ZZZZZZ			13:24																					
ZZZZZZ			13:26																					
ZZZZZZ			13:28																					
ZZZZZZ			13:31																					
ZZZZZZ			13:33																					
MB 240-41362/1-A	1	T	13:34	X																				
LCS 240-41362/2-A	1	T	13:36	X																				
CCV 240-41478/10-A	1		13:38	X																				
CCB 240-41478/11-A	1		13:40	X																				
ZZZZZZ			13:42																					
240-10391-E-4-C MS	1	D	13:44	X																				
240-10391-E-4-D MSD	1	D	13:46	X																				
ZZZZZZ			13:48																					
ZZZZZZ			13:50																					
ZZZZZZ			13:53																					
ZZZZZZ			13:55																					
ZZZZZZ			13:57																					
ZZZZZZ			13:59																					
ZZZZZZ			14:01																					
CCV 240-41478/10-A	1		14:03	X																				
CCB 240-41478/11-A	1		14:05	X																				
240-10494-2	1	T	14:08	X																				
240-10494-2	1	D	14:10	X																				
240-10494-3	1	T	14:12	X																				
240-10494-3	1	D	14:14	X																				
240-10494-4	1	T	14:16	X																				
240-10494-4	1	D	14:18	X																				
240-10494-5	1	T	14:20	X																				
240-10494-5	1	D	14:22	X																				
CCV 240-41478/10-A	1		14:25	X																				
CCB 240-41478/11-A	1		14:27	X																				

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	ICV 240-41478/7-A 04/26/2012 10:37				CCV 240-41478/10-A 04/26/2012 13:12				CCV 240-41478/10-A 04/26/2012 13:38			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.43		2.50	97	5.00		5.00	100	5.02		5.00	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICV Source: MTHGICVW_00282 Concentration Units: ug/L

CCV Source: MTHGCALW_00183

Analyte	CCV 240-41478/10-A 04/26/2012 14:03				CCV 240-41478/10-A 04/26/2012 14:25							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.12		5.00	102	4.96		5.00	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-41478/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00183

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.218		109	50-150

Lab Sample ID: CRA 240-41879/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00185

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.193	J	96	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41478/8-A 04/26/2012 10:39		CCB 240-41478/11-A 04/26/2012 13:14		CCB 240-41478/11-A 04/26/2012 13:40		CCB 240-41478/11-A 04/26/2012 14:05	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-41478/11-A 04/26/2012 14:27							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes																					
				Hg																					
IC 240-41879/1-A			17:42	X																					
IC 240-41879/2-A			17:44	X																					
IC 240-41879/3-A			17:46	X																					
IC 240-41879/4-A			17:48	X																					
IC 240-41879/5-A			17:50	X																					
IC 240-41879/6-A			17:52	X																					
ICV 240-41879/7-A	1		17:54	X																					
ICB 240-41879/8-A	1		17:55	X																					
CRA 240-41879/9-A	1		17:58	X																					
CCVL 240-41879/10-A	1		18:00	X																					
CCB 240-41879/11-A	1		18:02	X																					
240-10494-6	1	T	18:04	X																					
240-10494-6	1	D	18:06	X																					
240-10494-7	1	T	18:08	X																					
240-10494-7	1	D	18:10	X																					
ZZZZZZ			18:12																						
ZZZZZZ			18:14																						
ZZZZZZ			18:16																						
ZZZZZZ			18:18																						
ZZZZZZ			18:20																						
ZZZZZZ			18:23																						
CCV 240-41879/12-A	1		18:25	X																					
CCB 240-41879/11-A	1		18:27	X																					
ZZZZZZ			18:29																						
ZZZZZZ			18:31																						
ZZZZZZ			18:33																						
ZZZZZZ			18:36																						
ZZZZZZ			18:38																						
ZZZZZZ			18:41																						
ZZZZZZ			18:43																						
ZZZZZZ			18:45																						
ZZZZZZ			18:47																						
ZZZZZZ			18:49																						
CCV 240-41879/12-A			18:51																						
CCB 240-41879/11-A			18:53																						
ZZZZZZ			18:55																						
ZZZZZZ			18:57																						
ZZZZZZ			19:00																						
ZZZZZZ			19:01																						
ZZZZZZ			19:03																						
ZZZZZZ			19:05																						
ZZZZZZ			19:07																						

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes																					
				Hg																					
ZZZZZZ			19:10																						
ZZZZZZ			19:12																						
ZZZZZZ			19:14																						
CCV 240-41879/12-A			19:17																						
CCB 240-41879/11-A			19:18																						
ZZZZZZ			19:20																						
ZZZZZZ			19:22																						
ZZZZZZ			19:24																						
ZZZZZZ			19:26																						
ZZZZZZ			19:28																						
ZZZZZZ			19:30																						
ZZZZZZ			19:32																						
ZZZZZZ			19:34																						
ZZZZZZ			19:36																						
ZZZZZZ			19:37																						
CCV 240-41879/12-A			19:39																						
CCB 240-41879/11-A			19:41																						
ZZZZZZ			19:43																						
ZZZZZZ			19:45																						
ZZZZZZ			19:47																						
ZZZZZZ			19:49																						
ZZZZZZ			19:51																						
ZZZZZZ			19:53																						
ZZZZZZ			19:55																						
ZZZZZZ			19:56																						
ZZZZZZ			19:58																						
ZZZZZZ			20:00																						
CCV 240-41879/12-A			20:02																						
CCB 240-41879/11-A			20:04																						
ZZZZZZ			20:06																						
ZZZZZZ			20:08																						
ZZZZZZ			20:10																						
ZZZZZZ			20:12																						
ZZZZZZ			20:14																						
ZZZZZZ			20:16																						
ZZZZZZ			20:18																						
ZZZZZZ			20:21																						
ZZZZZZ			20:23																						
ZZZZZZ			20:25																						
CCV 240-41879/12-A			20:27																						
CCB 240-41879/11-A			20:29																						
ZZZZZZ			20:31																						

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			20:33																					
ZZZZZZ			20:36																					
ZZZZZZ			20:38																					
ZZZZZZ			20:40																					
ZZZZZZ			20:42																					
ZZZZZZ			20:44																					
ZZZZZZ			20:46																					
ZZZZZZ			20:48																					
ZZZZZZ			20:50																					
CCV 240-41879/12-A			20:52																					
CCB 240-41879/11-A			20:54																					
ZZZZZZ			20:56																					
ZZZZZZ			20:58																					
ZZZZZZ			21:00																					
ZZZZZZ			21:02																					
ZZZZZZ			21:04																					
ZZZZZZ			21:07																					
ZZZZZZ			21:09																					
ZZZZZZ			21:11																					
ZZZZZZ			21:13																					
ZZZZZZ			21:15																					
CCV 240-41879/12-A			21:17																					
CCB 240-41879/11-A			21:19																					
ZZZZZZ			21:21																					
ZZZZZZ			21:23																					
ZZZZZZ			21:26																					
ZZZZZZ			21:28																					
ZZZZZZ			21:30																					
ZZZZZZ			21:32																					
ZZZZZZ			21:34																					
ZZZZZZ			21:36																					
ZZZZZZ			21:38																					
ZZZZZZ			21:40																					
CCV 240-41879/12-A			21:42																					
CCB 240-41879/11-A			21:43																					
ZZZZZZ			21:45																					
ZZZZZZ			21:47																					
ZZZZZZ			21:49																					
ZZZZZZ			21:51																					
ZZZZZZ			21:53																					
ZZZZZZ			21:55																					
ZZZZZZ			21:57																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			22:00	
ZZZZZZ			22:02	
ZZZZZZ			22:04	
CCV 240-41879/12-A			22:06	
CCB 240-41879/11-A			22:08	
ZZZZZZ			22:10	
ZZZZZZ			22:12	
ZZZZZZ			22:14	
ZZZZZZ			22:16	
ZZZZZZ			22:18	
ZZZZZZ			22:20	
ZZZZZZ			22:22	
ZZZZZZ			22:24	
ZZZZZZ			22:25	
ZZZZZZ			22:28	
CCV 240-41879/12-A			22:30	
CCB 240-41879/11-A			22:32	
ZZZZZZ			22:34	
ZZZZZZ			22:36	
ZZZZZZ			22:38	
ZZZZZZ			22:40	
ZZZZZZ			22:42	
ZZZZZZ			22:44	
ZZZZZZ			22:45	
ZZZZZZ			22:47	
CCV 240-41879/12-A			22:50	
CCB 240-41879/11-A			22:52	

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	ICV 240-41879/7-A 04/27/2012 17:54				CCVL 240-41879/10-A 04/27/2012 18:00				CCV 240-41879/12-A 04/27/2012 18:25			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.32		2.50	93	5.11		5.00	102	5.22		5.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41879/8-A 04/27/2012 17:55		CCB 240-41879/11-A 04/27/2012 18:02		CCB 240-41879/11-A 04/27/2012 18:27			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-41639/1			06:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-41639/2 IC	1		06:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-41639/3 IC	1		06:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-41639/4 IC	1		06:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-41639/5	1		06:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-41639/6	1		06:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-41639/7	1		06:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-41639/8	1		06:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-41639/9	1		06:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41639/10			07:01																				
CCB 240-41639/11			07:08																				
ZZZZZZ			07:13																				
ZZZZZZ			07:19																				
ZZZZZZ			07:26																				
CCV 240-41639/15	1		07:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/16	1		07:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-41326/1-A	1	R	07:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-41326/2-A	1	R	07:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			07:57																				
240-10387-K-5-A SD ^5	5	D	08:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10387-K-5-B MS	1	D	08:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10387-K-5-C MSD	1	D	08:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:22																				
ZZZZZZ			08:27																				
ZZZZZZ			08:33																				
ZZZZZZ			08:38																				
CCV 240-41639/27	1		08:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/28	1		08:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:56																				
ZZZZZZ			09:02																				
ZZZZZZ			09:07																				
ZZZZZZ			09:12																				
ZZZZZZ			09:18																				
ZZZZZZ			09:23																				
ZZZZZZ			09:29																				
ZZZZZZ			09:34																				
ZZZZZZ			09:39																				
ZZZZZZ			09:45																				
CCV 240-41639/39	1		09:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/40	1		09:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:03																				
ZZZZZZ			10:08																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D/F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			10:14																			
ZZZZZZ			10:19																			
240-10494-2	1	R	10:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			10:30																			
ZZZZZZ			10:35																			
ZZZZZZ			10:42																			
ZZZZZZ			10:48																			
ZZZZZZ			10:53																			
CCV 240-41639/51	1		11:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-41639/52	1		11:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			11:13																			
ZZZZZZ			11:20																			
ZZZZZZ			11:26																			
ZZZZZZ			11:31																			
ZZZZZZ			11:37																			
ZZZZZZ			11:42																			
ZZZZZZ			11:47																			
ZZZZZZ			11:53																			
ZZZZZZ			11:58																			
ZZZZZZ			12:04																			
CCV 240-41639/63			12:09																			
CCB 240-41639/64			12:16																			
ZZZZZZ			12:22																			
ZZZZZZ			12:27																			
ZZZZZZ			12:32																			
ZZZZZZ			12:38																			
ZZZZZZ			12:43																			
ZZZZZZ			12:49																			
ZZZZZZ			12:54																			
ZZZZZZ			13:00																			
ZZZZZZ			13:05																			
ZZZZZZ			13:11																			
CCV 240-41639/75	1		13:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-41639/76	1		13:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MB 240-41366/1-A	1	R	13:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
LCS 240-41366/3-A	1	R	13:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			13:41																			
240-10417-R-1-D SD ^5	5	D	13:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10417-R-1-G MS	1	D	13:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10417-R-1-H MSD	1	D	13:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			14:06																			
ZZZZZZ			14:12																			

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			14:17																				
240-10494-2	1	D	14:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41639/87	1		14:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/88	1		14:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-3	1	R	14:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-3	1	D	14:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-4	1	R	14:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-4	1	D	14:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-5	1	R	15:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-5	1	D	15:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-6	1	R	15:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-6	1	D	15:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-7	1	R	15:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10494-7	1	D	15:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-41639/99	1		15:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-41639/100	1		15:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			15:48																				
ZZZZZZ			15:53																				
ZZZZZZ			16:00																				
ZZZZZZ			16:05																				
ZZZZZZ			16:11																				
ZZZZZZ			16:18																				
ZZZZZZ			16:25																				
ZZZZZZ			16:31																				
ZZZZZZ			16:36																				
ZZZZZZ			16:42																				
CCV 240-41639/111			16:47																				
CCB 240-41639/112			16:54																				
ZZZZZZ			17:00																				
ZZZZZZ			17:05																				
ZZZZZZ			17:10																				
ZZZZZZ			17:16																				
ZZZZZZ			17:21																				
ZZZZZZ			17:27																				
ZZZZZZ			17:32																				
ZZZZZZ			17:38																				
ZZZZZZ			17:43																				
ZZZZZZ			17:49																				
CCV 240-41639/123			17:54																				
CCB 240-41639/124			18:01																				
ICSA 240-41639/125			18:07																				
ICSAB 240-41639/126			18:12																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/25/2012 06:06 End Date: 04/25/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
CCV 240-41639/127			18:19																				
CCB 240-41639/128			18:26																				
ZZZZZZ			18:32																				
ZZZZZZ			18:37																				
ZZZZZZ			18:43																				
ZZZZZZ			18:48																				
ZZZZZZ			18:54																				
ZZZZZZ			18:59																				
ZZZZZZ			19:05																				
ZZZZZZ			19:12																				
ZZZZZZ			19:17																				
ZZZZZZ			19:23																				
CCV 240-41639/139			19:30																				
CCB 240-41639/140			19:37																				
ZZZZZZ			19:42																				
ZZZZZZ			19:50																				
ZZZZZZ			19:55																				
ZZZZZZ			20:01																				
ZZZZZZ			20:06																				
ZZZZZZ			20:11																				
ZZZZZZ			20:17																				
ZZZZZZ			20:22																				
ZZZZZZ			20:28																				
ZZZZZZ			20:33																				
CCV 240-41639/151			20:39																				
CCB 240-41639/152			20:46																				
ZZZZZZ			20:52																				
ZZZZZZ			20:57																				
ZZZZZZ			21:03																				
ZZZZZZ			21:08																				
CCV 240-41639/157			21:14																				
CCB 240-41639/158			21:21																				
ZZZZZZ			21:26																				

Prep Types
D = Dissolved
R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-41639/5 04/25/2012 06:30				CCV 240-41639/15 04/25/2012 07:32				CCV 240-41639/27 04/25/2012 08:44			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.8		80.0	103	99.7		100	100	99.8		100	100
Arsenic	81.2		80.0	102	100		100	100	101		100	101
Barium	80.5		80.0	101	100		100	100	99.9		100	100
Beryllium	78.8		80.0	99	95.0		100	95	95.0		100	95
Cadmium	81.0		80.0	101	101		100	101	102		100	102
Chromium	80.3		80.0	100	100		100	100	100		100	100
Cobalt	81.0		80.0	101	101		100	101	101		100	101
Copper	82.8		80.0	103	102		100	102	103		100	103
Lead	82.1		80.0	103	102		100	102	102		100	102
Molybdenum	83.7		80.0	105	103		100	103	103		100	103
Nickel	82.5		80.0	103	102		100	102	102		100	102
Selenium	82.6		80.0	103	102		100	102	101		100	101
Silver	83.1		80.0	104	102		100	102	102		100	102
Thallium	80.4		80.0	101	100		100	100	99.9		100	100
Tungsten	81.2		80.0	101	102		100	102	102		100	102
Vanadium	79.8		80.0	100	99.9		100	100	99.3		100	99
Zinc	81.7		80.0	102	103		100	103	103		100	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-41639/39 04/25/2012 09:50				CCV 240-41639/51 04/25/2012 11:01				CCV 240-41639/75 04/25/2012 13:16			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	99.3		100	99	100		100	100	100		100	100
Arsenic	101		100	101	101		100	101	99.5		100	99
Barium	98.9		100	99	99.5		100	100	99.5		100	99
Beryllium	95.6		100	96	91.5		100	92	96.4		100	96
Cadmium	101		100	101	102		100	102	101		100	101
Chromium	101		100	101	101		100	101	98.9		100	99
Cobalt	101		100	101	100		100	100	101		100	101
Copper	103		100	103	102		100	102	102		100	102
Lead	102		100	102	102		100	102	102		100	102
Molybdenum	102		100	102	104		100	104	103		100	103
Nickel	102		100	102	102		100	102	101		100	101
Selenium	103		100	103	102		100	102	101		100	101
Silver	102		100	102	102		100	102	102		100	102
Thallium	99.4		100	99	101		100	101	100		100	100
Tungsten	102		100	102	103		100	103	102		100	102
Vanadium	100		100	100	101		100	101	101		100	101
Zinc	103		100	103	103		100	103	101		100	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-41639/87 04/25/2012 14:28				CCV 240-41639/99 04/25/2012 15:35							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	100		100	100	101		100	101				
Arsenic	100		100	100	101		100	101				
Barium	101		100	101	101		100	101				
Beryllium	96.0		100	96	96.4		100	96				
Cadmium	102		100	102	103		100	103				
Chromium	100		100	100	101		100	101				
Cobalt	100		100	100	102		100	102				
Copper	102		100	102	104		100	104				
Lead	103		100	103	103		100	103				
Molybdenum	104		100	104	104		100	104				
Nickel	102		100	102	102		100	102				
Selenium	101		100	101	103		100	103				
Silver	102		100	102	104		100	104				
Thallium	101		100	101	101		100	101				
Tungsten	104		100	104	104		100	104				
Vanadium	99.8		100	100	101		100	101				
Zinc	103		100	103	104		100	104				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-41639/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.04		102	50-150
Arsenic	2.00	2.07	J	104	50-150
Barium	1.00	1.04	J	104	50-150
Beryllium	1.00	0.941	J	94	50-150
Cadmium	0.500	0.498	J	100	50-150
Chromium	2.00	2.11		106	50-150
Cobalt	1.00	1.02		102	50-150
Copper	2.00	2.49		124	50-150
Lead	1.00	1.02		102	50-150
Molybdenum	10.0	10.2		102	50-150
Nickel	2.00	2.82		141	50-150
Selenium	2.00	2.19	J	110	50-150
Silver	0.500	0.565	J	113	50-150
Thallium	1.00	1.24	J	124	50-150
Vanadium	5.00	4.77	J	95	50-150
Tungsten	10.0	9.83	J	98	50-150
Zinc	10.0	10.7	J	107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41639/6 04/25/2012 06:38		CCB 240-41639/16 04/25/2012 07:39		CCB 240-41639/28 04/25/2012 08:51		CCB 240-41639/40 04/25/2012 09:57	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	0.0780	J	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.439	J	0.712	J	0.506	J	0.428	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.438	J	0.693	J	0.625	J	0.509	J
Tungsten	10	0.634	J	0.744	J	0.589	J	0.553	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-41639/52 04/25/2012 11:08		CCB 240-41639/76 04/25/2012 13:23		CCB 240-41639/88 04/25/2012 14:35		CCB 240-41639/100 04/25/2012 15:42	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.160	J	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	0.0590	J	1.0	U	1.0	U	0.0770	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	0.232	J	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.474	J	0.447	J	0.429	J	0.449	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.825	J	0.525	J	0.659	J	0.577	J
Tungsten	10	0.687	J	0.522	J	0.620	J	0.547	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICSA 240-41639/8 Instrument ID: I8

Lab File ID: I8042512A.csv ICS Source: MTMSICSAW_00013

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.188**	
Arsenic		**0.313**	
Barium		**0.107**	
Beryllium		**0.0210**	
Cadmium		**-0.452**	
Chromium		**0.684**	
Cobalt		**0.102**	
Copper		**0.369**	
Lead		**0.0360**	
Molybdenum	**1000**	**1051**	**105**
Nickel		**0.800**	
Selenium		**0.134**	
Silver		**0.0450**	
Thallium		**0.237**	
Tungsten		**0.384**	
Vanadium		**-0.0270**	
Zinc		**1.89**	
Aluminum	*50000*	*50070*	*100*
Boron		*0.389*	
Calcium	*50000*	*52450*	*105*
Iron	*50000*	*52270*	*105*
Magnesium	*50000*	*52030*	*104*
Manganese		*0.589*	
Potassium	*50000*	*52290*	*105*
Sodium	*50000*	*52170*	*104*
Strontium		*0.193*	
Tin		*0.124*	
Titanium	*1000*	*1079*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

Lab Sample ID: ICSAB 240-41639/9 Instrument ID: I8

Lab File ID: I8042512A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**100**	**100**
Barium	**100**	**103**	**103**
Beryllium	**100**	**99.7**	**100**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**109**	**109**
Cobalt	**100**	**103**	**103**
Copper	**100**	**101**	**101**
Lead	**100**	**109**	**109**
Molybdenum	**1100**	**1157**	**105**
Nickel	**100**	**106**	**106**
Selenium	**100**	**102**	**102**
Silver	**100**	**103**	**103**
Thallium	**100**	**107**	**107**
Tungsten	**100**	**104**	**104**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**104**	**104**
Aluminum	*50000*	*50810*	*102*
Boron	*100*	*101*	*101*
Calcium	*50000*	*52820*	*106*
Iron	*50000*	*52370*	*105*
Magnesium	*50000*	*52070*	*104*
Manganese	*100*	*112*	*112*
Potassium	*50000*	*51910*	*104*
Sodium	*50000*	*52180*	*104*
Strontium	*100*	*98.1*	*98*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1183*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-41639/2 IC	06:11	91		94		96		95		96	
STD3 240-41639/3 IC	06:18	91		96		94		91		93	
STD4 240-41639/4 IC	06:25	110		116		106		106		105	
ICV 240-41639/5	06:30	99		105		102		98		100	
ICB 240-41639/6	06:38	112		117		107		106		104	
CRI 240-41639/7	06:43	111		116		106		104		104	
ICSA 240-41639/8	06:48	86		96		88		90		92	
ICSAB 240-41639/9	06:54	74		85		83		84		89	
CCV 240-41639/15	07:32	87		93		91		87		90	
CCB 240-41639/16	07:39	107		106		97		95		96	
MB 240-41326/1-A	07:45	103		103		96		94		95	
LCS 240-41326/2-A	07:50	97		100		97		95		97	
240-10387-K-5-A SD	08:02	101		98		92		90		91	
240-10387-K-5-B MS	08:08	88		96		90		89		92	
240-10387-K-5-C MSD	08:15	92		97		91		89		92	
CCV 240-41639/27	08:44	84		92		89		86		88	
CCB 240-41639/28	08:51	107		106		96		95		94	
CCV 240-41639/39	09:50	80		90		88		85		88	
CCB 240-41639/40	09:57	103		104		96		94		94	
240-10494-2	10:24	90		98		94		93		93	
CCV 240-41639/51	11:01	86		92		88		85		88	
CCB 240-41639/52	11:08	103		102		94		91		92	
CCV 240-41639/75	13:16	74		85		83		80		82	
CCB 240-41639/76	13:23	93		97		90		88		88	
MB 240-41366/1-A	13:29	92		96		89		88		88	
LCS 240-41366/3-A	13:34	86		94		89		87		88	
240-10417-R-1-D SD	13:46	80		90		84		82		83	
240-10417-R-1-G MS	13:52	58		75		73		69		74	
240-10417-R-1-H MSD	13:59	57		75		71		67		73	
240-10494-2	14:23	68		80		81		81		82	
CCV 240-41639/87	14:28	66		79		81		78		80	
CCB 240-41639/88	14:35	83		89		85		85		85	
240-10494-3	14:41	56		73		73		71		75	
240-10494-3	14:46	50		71		73		73		76	
240-10494-4	14:51	51		73		76		75		79	
240-10494-4	14:57	52		71		75		74		78	
240-10494-5	15:02	56		72		76		76		78	
240-10494-5	15:08	59		76		78		77		79	
240-10494-6	15:13	70		82		83		83		84	
240-10494-6	15:19	70		81		82		82		83	
240-10494-7	15:24	69		80		79		79		79	
240-10494-7	15:30	71		79		78		78		79	

FORM XV - IN

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
CCV 240-41639/99	15:35	66		79		79		77		78	
CCB 240-41639/100	15:42	82		89		85		85		84	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-41639/2 IC	06:11			98							
STD3 240-41639/3 IC	06:18			94							
STD4 240-41639/4 IC	06:25			103							
ICV 240-41639/5	06:30			100							
ICB 240-41639/6	06:38			102							
CRI 240-41639/7	06:43			102							
ICSA 240-41639/8	06:48			93							
ICSAB 240-41639/9	06:54			91							
CCV 240-41639/15	07:32			92							
CCB 240-41639/16	07:39			94							
MB 240-41326/1-A	07:45			95							
LCS 240-41326/2-A	07:50			97							
240-10387-K-5-A SD	08:02			91							
240-10387-K-5-B MS	08:08			92							
240-10387-K-5-C MSD	08:15			91							
CCV 240-41639/27	08:44			90							
CCB 240-41639/28	08:51			93							
CCV 240-41639/39	09:50			90							
CCB 240-41639/40	09:57			93							
240-10494-2	10:24			97							
CCV 240-41639/51	11:01			89							
CCB 240-41639/52	11:08			93							
CCV 240-41639/75	13:16			83							
CCB 240-41639/76	13:23			86							
MB 240-41366/1-A	13:29			87							
LCS 240-41366/3-A	13:34			88							
240-10417-R-1-D SD	13:46			85							
240-10417-R-1-G MS	13:52			78							
240-10417-R-1-H MSD	13:59			77							
240-10494-2	14:23			86							
CCV 240-41639/87	14:28			82							
CCB 240-41639/88	14:35			84							
240-10494-3	14:41			106							
240-10494-3	14:46			106							
240-10494-4	14:51			84							
240-10494-4	14:57			82							
240-10494-5	15:02			81							
240-10494-5	15:08			82							
240-10494-6	15:13			85							
240-10494-6	15:19			84							
240-10494-7	15:24			84							
240-10494-7	15:30			83							

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10494-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/25/2012 End Date: 04/25/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
CCV 240-41639/99	15:35			81							
CCB 240-41639/100	15:42			84							

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **JUNE 26, 2012**

FROM: **EDWARD SEDLMYER** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC / 1,4-DIOXANE / TOTAL PETROLEUM HYDROCARBONS / PERCHLORATE / SELECT METALS MIDDLE RIVER COMPLEX – GROUNDWATER - FULL REVIEW SAMPLE DELIVERY GROUP (SDG) 240-10598-1**

SAMPLES: 3/Aqueous/VOC/1,4-DIOXANE/SELECT METALS

MT-MW04S MT-MW06S TB-042412

Overview

The sample set for Middle River Complex - groundwater, SDG 240-10598-1 consists of two (2) environmental water samples and one (1) trip blank. The trip blank (TB-042412) was analyzed for volatile organic compounds (VOC) only. All other samples were analyzed for 1,4-dioxane, VOCs, total petroleum hydrocarbons, perchlorate, and select metals (antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, tungsten, vanadium and zinc).

The samples were collected on April 24, 2012 and analyzed by Test America, North Canton. Volatile organic compound analyses were conducted in accordance with SW-846 Method 8260B. The semivolatile compound 1,4-dioxane analyses were conducted in accordance with SW-846 Method 8270D. The metals analyses were conducted in accordance with SW-846 Method 6020A and 7470A. The perchlorate analyses were conducted in accordance with SW-846 Method 6850.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, ICP interference results, ICP serial dilution results, laboratory duplicate results, matrix spike/matrix spike duplicate results, analyte identification, analyte quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- The volatile initial calibration of instrument A3UX16 on 04/29/12 had a relative response factor (RRF) less than the 0.05 quality control limit for tert butyl alcohol. The nondetected results for tert butyl alcohol in all samples were rejected (UR).

- The volatile continuing calibration analyzed on instrument A3UX16 on 04/30/12 @11:50 had RRFs less than the 0.05 quality control limit for tert butyl alcohol and vinyl acetate. The nondetected results for tert butyl alcohol and vinyl acetate in all samples were rejected (UR).

- The silanol tentatively identified compound (triimethyl silanol) was rejected (R) for sample TB-042412. This compound is indicative of column bleed.

Minor Problems

- The following compounds were detected in the VOC method blank at the concentrations indicated below:

Compound	Concentration	Action Level
1,2,3-Trichlorobenzene[1]	0.288 ug/L	1.44 ug/L
Methylcyclohexane[2]	0.197 ug/L	0.985 ug/L

1 – Compound detected in method blank (MB 240-42171/5) affecting all samples.
2 – Methycyclohexane was reported as a tentatively identified compound (TIC) in the method blank.

An action level of 5X the maximum contaminant concentration was established to evaluate laboratory contamination for 1,2,3-trichloroethene and methylcyclohexane. Dilution factors and sample aliquots were taken into consideration during the application of all action levels. The methylcyclohexane detection for sample MT-MW04S was qualified (B) as a result of blank contamination. No action was taken on the trip blank because field quality control samples are not qualified for blank contamination.

- The gasoline range organic TPH (C6-C10) was detected in the method blank at the concentration indicated below:

Compound	Concentration	Action Level
TPH (C6-C10)[1]	32.9 ug/L	164.5 ug/L

1 – Compound detected in method blank (MB 240-42055/7) affecting all samples.

An action level of 5X the maximum contaminant concentration was established to evaluate laboratory contamination for TPH (C6-C10). Dilution factors and sample aliquots were taken into consideration during the application of the action level. The TPH (C6-C10) detections for all samples were qualified (B) as a result of blank contamination.

- The diesel range organic TPH (C10-C32) was detected in the method blank at the concentration indicated below:

Compound	Concentration	Action Level
TPH (C10-C32)[1]	422 ug/L	2,110 ug/L

1 – Compound detected in method blank (MB 240-41890/15) affecting all samples.

An action level of 5X the maximum contaminant concentration was established to evaluate laboratory contamination for TPH (C10-C32). Dilution factors and sample aliquots were taken into consideration during the application of the action level. The TPH (C10-C32) detections for all samples were qualified (B) as a result of blank contamination.

- The reporting limit (RL) percent recoveries for arsenic, copper, nickel, silver, and thallium were > 110% quality control limit affecting all samples. The positive results < 2X RL for arsenic in all samples were qualified as estimated, (J), as a result of conflicting noncompliances.

- The following contaminants were detected in the metals laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Antimony	0.159 ug/L	0.795 ug/L
Barium[(1)]	2.10 ug/L	10.5 ug/L
Cobalt	0.093 ug/L	0.465 ug/L
Copper[(1)]	1.32 ug/L	6.6 ug/L
Lead[(1)]	0.268 ug/L	1.34 ug/L
Molybdenum	0.558 ug/L	2.79 ug/L
Thallium	0.899 ug/L	4.495 ug/L
Zinc[(1)]	13.7 ug/L	68.5 ug/L

  [(1)] Maximum concentration present in a preparation blank.

  An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results less than the blank action level reported for antimony, copper, molybdenum, thallium and zinc were qualified "B" as a result of laboratory blank contamination.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

The matrix spike / matrix spike duplicate (MS/MSD) performed on sample MSA-MW15D-041812 had a zero percent recovery for 2-chloroethyl vinyl ether in the MS and MSD. In addition, the relative percent difference for tert butyl alcohol exceeded the quality control limit. No action was taken on this basis because sample MSA-MW15D-041812 is contained in another SDG.

The nondetected results were reported to the method detection limit.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Blank contamination resulted in qualification of VOC, TPH, and METALS data. Two volatile compounds had RRFs less than the quality control limits in the initial and continuing calibrations resulting in the rejection of data. The RL percent recovery for arsenic resulted in qualification of the data. The TIC silanol compound was rejected.

Other Factors Affecting Data Quality: Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (September 1994) and Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993).

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Edward Sedlmyer
Chemist/Data Validator

TetraTech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S			TB-042412		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3			240-10598-1		
FRACTION: OV	SAMP_DATE	4/24/2012			4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE	0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE	0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE	0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE	0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE	0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE	0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE	0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE	0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE	0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE	0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE	0.13	U		0.13	U		0.13	U	
2-BUTANONE	0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE	0.11	U		0.11	U		0.11	U	
2-HEXANONE	0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE	0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE	0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE	0.32	U		0.32	U		0.32	U	
ACETONE	1.1	U		1.1	U		1.1	U	
BENZENE	0.13	U		0.13	U		0.13	U	
BROMOBENZENE	0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE	0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE	0.15	U		0.15	U		0.15	U	
BROMOFORM	0.64	U		0.64	U		0.64	U	
BROMOMETHANE	0.41	U		0.41	U		0.41	U	

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S			TB-042412		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3			240-10598-1		
FRACTION: OV	SAMP_DATE	4/24/2012			4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.62	J	P	0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.47	J	P	0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U	
METHYLCYCLOHEXANE		0.13	B	Z1				0.16	J	Z1
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U	
SILANOL, TRIMETHYL-								1.3	R	Z2
STYRENE		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U	

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S			TB-042412		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3			240-10598-1		
FRACTION: OV	SAMP_DATE	4/24/2012			4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		0.17	U		0.17	U		0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3		
FRACTION: OS	SAMP_DATE	4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.49	U		0.5	U	

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3		
FRACTION: PET	SAMP_DATE	4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		49	B	A	64	B	A
TPH (C10-C32)		440	B	A	480	B	A

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3		
FRACTION: MISC	SAMP_DATE	4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.16	J	P

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3		
FRACTION: M	SAMP_DATE	4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U	
ARSENIC		0.71	J	CP	1.5	J	CP
BARIUM		76			96		
BERYLLIUM		3.3			81		
CADMIUM		0.14	J	P	2		
CHROMIUM		0.71	U		0.71	U	
COBALT		210			540		
COPPER		43			46		
LEAD		0.71	B	A	2.3		
MERCURY		0.12	U		0.12	U	
MOLYBDENUM		0.093	U		0.15	B	A
NICKEL		330			1200		
SELENIUM		0.57	U		1.2	J	P
SILVER		0.08	U		0.08	U	
THALLIUM		0.16	B	A	0.77	B	A
TUNGSTEN		0.37	U		0.37	U	
VANADIUM		0.44	U		0.44	U	
ZINC		340			1900		

PROJ_NO: 04021	NSAMPLE	MT-MW04S			MT-MW06S		
SDG: 240-10598-1	LAB_ID	240-10598-2			240-10598-3		
FRACTION: MF	SAMP_DATE	4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.21	B	A	0.13	U	
ARSENIC		0.69	J	CP	1.3	J	CP
BARIUM		76			94		
BERYLLIUM		3.1			80		
CADMIUM		0.23	J	P	2.1		
CHROMIUM		0.71	U		0.71	U	
COBALT		200			530		
COPPER		44			48		
LEAD		0.64	B	A	2.3		
MERCURY		0.12	U		0.12	U	
MOLYBDENUM		0.55	B	A	0.093	U	
NICKEL		320			1200		
SELENIUM		0.57	U		0.63	J	P
SILVER		0.08	U		0.08	U	
THALLIUM		1.3	B	A	0.57	B	A
TUNGSTEN		0.78	J	P	0.37	U	
VANADIUM		0.44	U		0.44	U	
ZINC		330			1900		

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW04S | Lab Sample ID: 240-10598-2

Matrix: Water | Lab File ID: UXM5278.D

Analysis Method: 8260C | Date Collected: 04/24/2012 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW04S | Lab Sample ID: 240-10598-2

Matrix: Water | Lab File ID: UXM5278.D

Analysis Method: 8260C | Date Collected: 04/24/2012 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	0.62	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW04S | Lab Sample ID: 240-10598-2

Matrix: Water | Lab File ID: UXM5278.D

Analysis Method: 8260C | Date Collected: 04/24/2012 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	95		66-117
2037-26-5	Toluene-d8 (Surr)	89		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW04S | Lab Sample ID: 240-10598-2

Matrix: Water | Lab File ID: UXM5278.D

Analysis Method: 8260C | Date Collected: 04/24/2012 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:09

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 0.13

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	0.13	J B

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW06S | Lab Sample ID: 240-10598-3

Matrix: Water | Lab File ID: UXM5279.D

Analysis Method: 8260C | Date Collected: 04/24/2012 14:57

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW06S | Lab Sample ID: 240-10598-3

Matrix: Water | Lab File ID: UXM5279.D

Analysis Method: 8260C | Date Collected: 04/24/2012 14:57

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	0.47	J	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW06S | Lab Sample ID: 240-10598-3

Matrix: Water | Lab File ID: UXM5279.D

Analysis Method: 8260C | Date Collected: 04/24/2012 14:57

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:31

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		63-129
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
2037-26-5	Toluene-d8 (Surr)	93		74-115
1868-53-7	Dibromofluoromethane (Surr)	88		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW06S Lab Sample ID: 240-10598-3

Matrix: Water Lab File ID: UXM5279.D

Analysis Method: 8260C Date Collected: 04/24/2012 14:57

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 15:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Client Sample ID: TB-042412 Lab Sample ID: 240-10598-1

Matrix: Water Lab File ID: UXM5277.D

Analysis Method: 8260C Date Collected: 04/24/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 14:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Client Sample ID: TB-042412 Lab Sample ID: 240-10598-1

Matrix: Water Lab File ID: UXM5277.D

Analysis Method: 8260C Date Collected: 04/24/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 14:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Client Sample ID: TB-042412 Lab Sample ID: 240-10598-1

Matrix: Water Lab File ID: UXM5277.D

Analysis Method: 8260C Date Collected: 04/24/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 14:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	90		63-129
460-00-4	4-Bromofluorobenzene (Surr)	98		66-117
2037-26-5	Toluene-d8 (Surr)	91		74-115
1868-53-7	Dibromofluoromethane (Surr)	88		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Client Sample ID: TB-042412 Lab Sample ID: 240-10598-1

Matrix: Water Lab File ID: UXM5277.D

Analysis Method: 8260C Date Collected: 04/24/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 14:46

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 2 TIC Result Total: 1.46

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.3	T J N
108-87-2	Methylcyclohexane	6.21	0.16	J B

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW04S | Lab Sample ID: 240-10598-2

Matrix: Water | Lab File ID: 0501029.D

Analysis Method: 8270C | Date Collected: 04/24/2012 11:30

Extract. Method: 3520C | Date Extracted: 04/26/2012 08:59

Sample wt/vol: 1010(mL) | Date Analyzed: 05/01/2012 16:45

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42274 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		28-110
367-12-4	2-Fluorophenol (Surr)	48		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	60		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	49		27-111
4165-62-2	Phenol-d5 (Surr)	46		10-110
1718-51-0	Terphenyl-d14 (Surr)	69		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW06S | Lab Sample ID: 240-10598-3

Matrix: Water | Lab File ID: 0501030.D

Analysis Method: 8270C | Date Collected: 04/24/2012 14:57

Extract. Method: 3520C | Date Extracted: 04/26/2012 08:59

Sample wt/vol: 980(mL) | Date Analyzed: 05/01/2012 17:03

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42274 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.50

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	54		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	58		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	54		27-111
4165-62-2	Phenol-d5 (Surr)	49		10-110
1718-51-0	Terphenyl-d14 (Surr)	69		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW04S | Lab Sample ID: 240-10598-2

Matrix: Water | Lab File ID: YF042809.D

Analysis Method: 8015B | Date Collected: 04/24/2012 11:30

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2012 18:22

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	49	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	65		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW06S | Lab Sample ID: 240-10598-3

Matrix: Water | Lab File ID: YF042812.D

Analysis Method: 8015B | Date Collected: 04/24/2012 14:57

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2012 20:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	64	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	64		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW04S | Lab Sample ID: 240-10598-2

Matrix: Water | Lab File ID: P6F04308.D

Analysis Method: 8015B | Date Collected: 04/24/2012 11:30

Extraction Method: 3520C | Date Extracted: 04/27/2012 10:39

Sample wt/vol: 1020(mL) | Date Analyzed: 04/30/2012 13:30

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42140 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	440	J B	490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	51		10-110

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: MT-MW06S | Lab Sample ID: 240-10598-3

Matrix: Water | Lab File ID: P6F04309.D

Analysis Method: 8015B | Date Collected: 04/24/2012 14:57

Extraction Method: 3520C | Date Extracted: 04/27/2012 10:39

Sample wt/vol: 1010(mL) | Date Analyzed: 04/30/2012 14:01

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42140 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	480	J B	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	44		10-110

TestAmerica Canton

Client Sample ID: **MT-MW04S**

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2D270498-001 **Work Order #...:** MR86V1AA **Matrix.....:** WATER
Date Sampled...: 04/24/12 **Date Received..:** 04/27/12
Prep Date.....: 05/01/12 **Analysis Date..:** 05/07/12
Prep Batch #...: 2122104
Dilution Factor: 1 **Method.....:** SW846 6850

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MT-MW06S

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2D270498-002	**Work Order #...:**	MR8601AA	**Matrix.....:**	WATER
Date Sampled...:	04/24/12	**Date Received..:**	04/27/12		
Prep Date.....:	05/01/12	**Analysis Date..:**	05/04/12		
Prep Batch #...:	2122104				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.16 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result Result is less than RL

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MT-MW04S
Lab Sample ID: 240-10598-2
Lab Name: TestAmerica Canton
Job No.: 240-10598-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2012 11:30
Reporting Basis: WET
Date Received: 04/25/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.71	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	76	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	3.3	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.14	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	210	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	43	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.71	1.0	0.18	ug/L	J	B	1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	330	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.16	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	340	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MT-MW04S
Lab Sample ID: 240-10598-2
Lab Name: TestAmerica Canton
Job No.: 240-10598-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2012 11:30
Reporting Basis: WET
Date Received: 04/25/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MT-MW06S
Lab Sample ID: 240-10598-3
Lab Name: TestAmerica Canton
Job No.: 240-10598-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2012 14:57
Reporting Basis: WET
Date Received: 04/25/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.5	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	96	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	81	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	2.0	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	540	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	46	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.3	1.0	0.18	ug/L		B	1	6020
7439-98-7	Molybdenum	0.15	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	1200	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	1.2	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.77	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	1900	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MT-MW06S
Lab Sample ID: 240-10598-3
Lab Name: TestAmerica Canton
Job No.: 240-10598-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2012 14:57
Reporting Basis: WET
Date Received: 04/25/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MT-MW04S
Lab Sample ID: 240-10598-2
Lab Name: TestAmerica Canton
Job No.: 240-10598-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2012 11:30
Reporting Basis: WET
Date Received: 04/25/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.21	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	0.69	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	76	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	3.1	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.23	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	200	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	44	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.64	1.0	0.18	ug/L	J	B	1	6020
7439-98-7	Molybdenum	0.55	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	320	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	1.3	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	330	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	0.78	10	0.37	ug/L	J		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MT-MW06S
Lab Sample ID: 240-10598-3
Lab Name: TestAmerica Canton
Job No.: 240-10598-1
SDG ID.:
Matrix: Water
Date Sampled: 04/24/2012 14:57
Reporting Basis: WET
Date Received: 04/25/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.3	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	94	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	80	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	2.1	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	530	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	48	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.3	1.0	0.18	ug/L		B	1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	1200	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.63	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.57	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	1900	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

Appendix C

Support Documentation

HOLDTIME

SDG 240-10598-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/26/2012	4/27/2012	2	1	3
HG	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/27/2012	4/28/2012	3	1	4
M	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/26/2012	4/28/2012	2	2	4
M	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/26/2012	4/28/2012	2	2	4
HGF	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/27/2012	4/28/2012	3	1	4
HGF	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/26/2012	4/27/2012	2	1	3
MF	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/26/2012	4/28/2012	2	2	4
MF	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/26/2012	4/28/2012	2	2	4
PCL	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	5/1/2012	5/4/2012	7	3	10
PCL	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	5/1/2012	5/7/2012	7	6	13
OS	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/26/2012	5/1/2012	2	5	7
OS	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/26/2012	5/1/2012	2	5	7
OV	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/30/2012	4/30/2012	6	0	6
OV	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/30/2012	4/30/2012	6	0	6
OV	UG/L	TB-042412	240-10598-1	NM	4/24/2012	4/30/2012	4/30/2012	6	0	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
DRO	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/27/2012	4/30/2012	3	3	6
DRO	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/27/2012	4/30/2012	3	3	6
GRO	UG/L	MT-MW06S	240-10598-3	NM	4/24/2012	4/28/2012	4/28/2012	4	0	4
GRO	UG/L	MT-MW04S	240-10598-2	NM	4/24/2012	4/28/2012	4/28/2012	4	0	4

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

Job Number: 240-10598-1

Job Description: MSA Groundwater Sampling

For:
Tetra Tech, Inc formerly Tetra Tech NUS
20251 Century Blvd
Suite 200
Germantown, MD 20874

Attention: Tony Apanavage

Patrick O'Meara

Approved for release.
Patrick J O'Meara
Project Manager II
5/15/2012 3:55 PM

Patrick J O'Meara
Project Manager II
patrick.omeara@testamericainc.com
05/15/2012

cc: Samantha Brenner
Ms. Kelly Carper
Dev Murali
Ms. Tobrena Sedlmyer
Final Data Tracking

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to the NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory. This report is confidential and is intended for the sole use of TestAmerica and its client. All questions regarding this report should be directed to the TestAmerica Project Manager who has signed this report.

TestAmerica Laboratories, Inc.
TestAmerica Canton 4101 Shuffel Street NW, North Canton, OH 44720
Tel (330) 497-9396 Fax (330) 497-0772 www.testamericainc.com

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10598-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/25/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 0.2 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042412 (240-10598-1), MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 04/26/2012 and analyzed on 05/01/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/28/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42055/7 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/27/2012 and analyzed on 04/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Total Petroleum Hydrocarbons (C10-C32) was detected in method blank MB 240-41890/15-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/26/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/26/2012 and analyzed on 04/28/2012.

Several analytes were detected in method blank MB 240-41803/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-41805/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/26/2012 and 04/27/2012 and analyzed on 04/27/2012 and 04/28/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MT-MW04S (240-10598-2) and MT-MW06S (240-10598-3) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/26/2012 and 04/27/2012 and analyzed on 04/27/2012 and 04/28/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech INC	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 301 528-3021		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐ Job/SDG No.:
Project Name: MSA - Ground Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112FC04021-02	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C / Grab G	VOCs	Total Mn	Diss Mn	1,4 Dioxane	DRO	GRO	Perchlorate				Sample Specific Notes / Special Instructions:
TB-042412	4-24-12	—		X						2					N	G	X										
MT-MW04S	↓	1130		X					2	5			5		↓	↓	X	X	X	X	X	X	X				
MT-MW06S	↓	1457		X					2	5			5		↓	↓	X	X	X	X	X	X	X				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT INC.	4-24-12 / 1611	Paul Shepard	TestAmerica	4/24/12 / 1611
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	TestAmerica	4-24-2012 / 1650			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
				TAL	4/25/12 9:15

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TAL-0018 (1008)

05/15/2012

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10598

Client Tetra Tech Site Name _____ By: [signature] (Signature)

Cooler Received on 4/25/12 Opened on 4/25/12

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	☐ Multiple on Back
IR GUN# 5G	(CF -1°C)	Observed Sample Temp. 1.2 °C	Corrected Sample Temp. 0.2 °C	
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. Did custody papers accompany the sample(s)? Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

SOP: NC-SC-0016, Sample Receiving 05/15/2012

N:\QAQC\NARRATIVE\TestAmerica\Cooler Receipt TestAmerica\COOLER_TestAmerica_Rev 83_032612 jcs.doc

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
4	≤2 ≤2	4/25/12	MB
6	≤2 ≤2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042412	240-10598-1	88	90	91	98
MT-MW04S	240-10598-2	87	87	89	95
MT-MW06S	240-10598-3	88	90	93	97
	MB 240-42171/5	86	87	92	96
	LCS 240-42171/4	84	80	83	90
	240-10350-A-5 MS	86	84	90	93
	240-10350-C-5 MSD	86	83	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: A3UX16 Start Date: 04/29/2012 15:11

Analysis Batch Number: 42092 End Date: 04/29/2012 20:57

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-42092/1		04/29/2012 15:11	1	BFB2914.D	DB-624 0.18(mm)
STD8260 240-42092/2 IC		04/29/2012 15:41	1	UXM5239.D	DB-624 0.18(mm)
STD8260 240-42092/3 IC		04/29/2012 16:03	1	UXM5240.D	DB-624 0.18(mm)
STD8260 240-42092/4 ICIS		04/29/2012 16:26	1	UXM5241.D	DB-624 0.18(mm)
STD8260 240-42092/5 IC		04/29/2012 16:49	1	UXM5242.D	DB-624 0.18(mm)
STD8260 240-42092/6 IC		04/29/2012 17:12	1	UXM5243.D	DB-624 0.18(mm)
STD8260 240-42092/7 IC		04/29/2012 17:34	1	UXM5244.D	DB-624 0.18(mm)
STD1 240-42092/8 IC		04/29/2012 17:57	1	UXM5245.D	DB-624 0.18(mm)
STD2 240-42092/9 IC		04/29/2012 18:20	1	UXM5246.D	DB-624 0.18(mm)
STD3 240-42092/10 IC		04/29/2012 18:42	1	UXM5247.D	DB-624 0.18(mm)
STD4 240-42092/11 IC		04/29/2012 19:05	1	UXM5248.D	DB-624 0.18(mm)
STD5 240-42092/12 IC		04/29/2012 19:28	1	UXM5249.D	DB-624 0.18(mm)
STD6 240-42092/13 IC		04/29/2012 19:50	1	UXM5250.D	DB-624 0.18(mm)
ICV 240-42092/14		04/29/2012 20:13	1	UXM5251.D	DB-624 0.18(mm)
ZZZZZ		04/29/2012 20:35	1		DB-624 0.18(mm)
ZZZZZ		04/29/2012 20:57	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42092/2	UXM5239.D	04/29/2012	15:41
	STD8260 240-42092/3	UXM5240.D	04/29/2012	16:03
	STD8260 240-42092/4	UXM5241.D	04/29/2012	16:26
	STD8260 240-42092/5	UXM5242.D	04/29/2012	16:49
	STD8260 240-42092/6	UXM5243.D	04/29/2012	17:12
	STD8260 240-42092/7	UXM5244.D	04/29/2012	17:34
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50
	ICV 240-42092/14	UXM5251.D	04/29/2012	20:13

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.3038	0.2649	0.2905	0.2889	0.3016	Ave		0.2829			0.1000	7.8		15.0			
Chloromethane	0.4695 0.4320	0.4893	0.4830	0.4487	0.4452	Ave		0.4613			0.1000	4.9		15.0			
Vinyl chloride	0.4202 0.4041	0.4409	0.4365	0.4256	0.4202	Ave		0.4246			0.1000	3.1		15.0			
Bromomethane	0.1730 0.1493	0.1760	0.1733	0.1676	0.1710	Ave		0.1684			0.0500	5.8		15.0			
Chloroethane	0.2470 0.2229	0.2473	0.2344	0.2374	0.2336	Ave		0.2371				3.9		15.0			
Trichlorofluoromethane	0.2704 0.3132	0.3068	0.3031	0.3070	0.3204	Ave		0.3035			0.1000	5.7		15.0			
Acrolein	0.0469 0.0473	0.0483	0.0502	0.0508	0.0498	Ave		0.0489				3.3		15.0			
1,1-Dichloroethene	0.2340 0.2501	0.2402	0.2424	0.2499	0.2511	Ave		0.2446			0.1000	2.8		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1512 0.1622	0.1553	0.1500	0.1479	0.1608	Ave		0.1546			0.0500	3.8		15.0			
Acetone	0.2162 0.0864	0.1595	0.1181	0.1099	0.0970	Lin1	0.2842	0.0868			0.0500				0.9960		0.9950
Iodomethane	0.3345 0.3288	0.3415	0.3505	0.3469	0.3574	Ave		0.3433				3.1		15.0			
Carbon disulfide	0.6238 0.8183	0.6509	0.6976	0.7556	0.8104	Ave		0.7261			0.1000	11.0		15.0			
Acetonitrile	0.0391 0.0299	0.0368	0.0353	0.0335	0.0333	Ave		0.0346				9.2		15.0			
Methyl acetate	0.2451 0.2094	0.2377	0.2404	0.2374	0.2264	Ave		0.2327			0.1000	5.6		15.0			
Methylene Chloride	0.4532 0.2926	0.3791	0.3449	0.3188	0.3120	Lin1	0.1763	0.2950			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0187 0.0171	0.0206	0.0189	0.0189	0.0192	Ave		0.0189				6.0		15.0			
Acrylonitrile	0.1145 0.1022	0.1105	0.1139	0.1170	0.1105	Ave		0.1114				4.6		15.0			
trans-1,2-Dichloroethene	0.2839 0.2770	0.2945	0.2944	0.2851	0.2889	Ave		0.2873			0.1000	2.4		15.0			
Methyl tert-butyl ether	0.8507 0.8216	0.8205	0.8460	0.8461	0.8566	Ave		0.8402			0.1000	1.8		15.0			
Hexane	0.0529 0.0560	0.0521	0.0488	0.0501	0.0574	Ave		0.0529				6.3		15.0			
1,1-Dichloroethane	0.5478 0.5504	0.5906	0.5789	0.5698	0.5773	Ave		0.5691			0.1000	3.0		15.0			
Vinyl acetate	0.0438 0.0547	0.0420	0.0492	0.0562	0.0568	Ave		0.0505				13.0		15.0			
2-Butanone	0.1431 0.1214	0.1392	0.1413	0.1375	0.1314	Ave		0.1356			0.0500	5.9		15.0			
cis-1,2-Dichloroethene	0.3153 0.3006	0.3006	0.3107	0.3096	0.3157	Ave		0.3087			0.1000	2.2		15.0			
2,2-Dichloropropane	0.2459 0.3076	0.2799	0.2938	0.3057	0.3261	Ave		0.2932				9.5		15.0			
Bromochloromethane	0.1255 0.1262	0.1225	0.1298	0.1329	0.1330	Ave		0.1283				3.3		15.0			
Tetrahydrofuran	0.0875 0.0744	0.0826	0.0830	0.0854	0.0842	Ave		0.0828				5.4		15.0			
Chloroform	0.5169 0.5153	0.5299	0.5388	0.5290	0.5477	Ave		0.5296				2.4		15.0			
1,1,1-Trichloroethane	0.3234 0.3831	0.3500	0.3674	0.3840	0.3986	Ave		0.3678			0.1000	7.4		15.0			
Cyclohexane	0.4217 0.4832	0.4863	0.4431	0.4476	0.4809	Ave		0.4605			0.1000	5.8		15.0			
1,1-Dichloropropene	0.4359 0.4194	0.4199	0.4223	0.4252	0.4356	Ave		0.4264				1.8		15.0			
Carbon tetrachloride	0.2456 0.3072	0.2543	0.2617	0.2867	0.3066	Ave		0.2770			0.1000	9.7		15.0			
1,2-Dichloroethane	0.4838 0.4518	0.4761	0.4673	0.4667	0.4711	Ave		0.4694			0.1000	2.3		15.0			
Benzene	1.2256 1.2453	1.2535	1.2750	1.2420	1.2666	Ave		1.2513			0.5000	1.4		15.0			
Trichloroethene	0.2714 0.2655	0.2671	0.2733	0.2695	0.2719	Ave		0.2698			0.2000	1.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3056 0.3781	0.3553	0.3486	0.3331	0.3656	Ave		0.3477			0.1000	7.4		15.0			
1,2-Dichloropropane	0.2994 0.3048	0.3058	0.3148	0.3132	0.3116	Ave		0.3083			0.1000	1.9		15.0			
Dibromomethane	0.1675 0.1555	0.1521	0.1644	0.1597	0.1644	Ave		0.1606				3.7		15.0			
1,4-Dioxane	0.0023 0.0020	0.0024	0.0025	0.0025	0.0025	Ave		0.0024				8.2		15.0			
Bromodichloromethane	0.2586 0.3533	0.2732	0.3036	0.3210	0.3455	Ave		0.3092			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1532 0.1582	0.1459	0.1670	0.1699	0.1653	Ave		0.1599				5.8		15.0			
cis-1,3-Dichloropropene	0.3061 0.4576	0.3249	0.3845	0.4238	0.4469	Lin1	-0.212	0.4568			0.1500				0.9990		0.9950
4-Methyl-2-pentanone	0.2451 0.2575	0.2540	0.2759	0.2780	0.2752	Ave		0.2643			0.0500	5.3		15.0			
Toluene	1.7728 1.9294	1.8880	1.8619	1.8474	1.9604	Ave		1.8766			0.4000	3.5		15.0			
trans-1,3-Dichloropropene	0.3835 0.6056	0.4211	0.4964	0.5287	0.6010	Lin1	-0.314	0.6041			0.1000				0.9980		0.9950
Ethyl methacrylate	0.4455 0.5778	0.5229	0.5765	0.5788	0.6242	Ave		0.5543				11.0		15.0			
1,1,2-Trichloroethane	0.3279 0.3212	0.3141	0.3421	0.3341	0.3447	Ave		0.3307			0.1000	3.6		15.0			
1,3-Dichloropropane	0.6891 0.6635	0.6944	0.7152	0.6928	0.7223	Ave		0.6962				3.0		15.0			
Tetrachloroethene	0.2452 0.2600	0.2630	0.2668	0.2612	0.2738	Ave		0.2617			0.2000	3.6		15.0			
2-Hexanone	0.2323 0.2576	0.2818	0.2796	0.2822	0.2852	Ave		0.2698			0.0500	7.8		15.0			
Dibromochloromethane	0.1872 0.3114	0.2160	0.2464	0.2709	0.3057	Lin1	-0.171	0.3097							0.9980		0.9950
1,2-Dibromoethane	0.2962 0.3220	0.3089	0.3344	0.3261	0.3462	Ave		0.3223				5.5		15.0			
Chlorobenzene	1.0759 1.0855	1.1279	1.1114	1.0941	1.1299	Ave		1.1041			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	0.2665 0.3469	0.2706	0.3066	0.3249	0.3538	Ave		0.3116				12.0		15.0			
Ethylbenzene	0.5227 0.5869	0.5825	0.6026	0.5858	0.6163	Ave		0.5828				5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6757 0.7551	0.7220	0.7191	0.7176	0.7638	Ave		0.7256				4.3		15.0			
o-Xylene	0.6806 0.7276	0.7176	0.7304	0.7130	0.7551	Ave		0.7207				3.4		15.0			
Styrene	1.0565 1.2902	1.1310	1.1966	1.1904	1.2870	Ave		1.1920			0.3000	7.6		15.0			
Bromoform	0.0815 0.1487	0.0938	0.1133	0.1171	0.1413	Lin1	-0.094	0.1455			0.1000				0.9950		0.9950
Isopropylbenzene	1.5492 1.8304	1.6861	1.6648	1.6944	1.8507	Ave		1.7126			0.1000	6.6		15.0			
1,1,2,2-Tetrachloroethane	0.8553 0.8338	0.9184	0.9469	0.9293	0.9310	Ave		0.9025			0.3000	5.1		15.0			
Bromobenzene	0.8074 0.7779	0.8287	0.8325	0.8084	0.8409	Ave		0.8159				2.8		15.0			
1,2,3-Trichloropropane	0.2880 0.2558	0.2803	0.2925	0.2919	0.2938	Ave		0.2837				5.1		15.0			
trans-1,4-Dichloro-2-butene	0.2181 0.2689	0.2471	0.2346	0.2535	0.2845	Ave		0.2511				9.5		15.0			
n-Propylbenzene	0.7292 0.8665	0.8823	0.8741	0.8947	0.9118	Ave		0.8598				7.7		15.0			
2-Chlorotoluene	0.8583 0.7918	0.8579	0.8258	0.8361	0.8474	Ave		0.8362				3.0		15.0			
1,3,5-Trimethylbenzene	2.5787 2.8481	2.7830	2.7962	2.7951	2.9477	Ave		2.7914				4.3		15.0			
4-Chlorotoluene	0.8421 0.8602	0.8907	0.8940	0.8564	0.9136	Ave		0.8762				3.1		15.0			
tert-Butylbenzene	2.2870 2.5025	2.5077	2.4568	2.4969	2.5752	Ave		2.4710				4.0		15.0			
1,2,4-Trimethylbenzene	2.7586 2.9544	2.8331	2.8754	2.9504	3.0668	Ave		2.9065				3.7		15.0			
sec-Butylbenzene	2.8024 3.1977	3.0238	2.9596	3.0216	3.2137	Ave		3.0365				5.1		15.0			
1,3-Dichlorobenzene	1.5037 1.4698	1.4901	1.5135	1.5069	1.5495	Ave		1.5056			0.6000	1.8		15.0			
p-Isopropyltoluene	2.2069 2.6255	2.4647	2.4703	2.4761	2.6715	Ave		2.4858				6.6		15.0			
1,4-Dichlorobenzene	1.6073 1.5308	1.6512	1.5577	1.5557	1.6211	Ave		1.5873			0.5000	2.9		15.0			
n-Butylbenzene	2.0896 2.4436	2.2004	2.2368	2.2659	2.4792	Ave		2.2859				6.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4966 1.3945	1.5126	1.5119	1.4682	1.5239	Ave		1.4846			0.4000	3.2		15.0			
1,2-Dibromo-3-Chloropropane	0.0886 0.0950	0.0916	0.0904	0.0972	0.1086	Ave		0.0952			0.0500	7.6		15.0			
1,3,5-Trichlorobenzene	0.7904 0.7093	0.7633	0.7631	0.7837	0.8038	Ave		0.7690				4.3		15.0			
1,2,4-Trichlorobenzene	0.6476 0.5852	0.7228	0.7185	0.6951	0.7215	Ave		0.6818			0.2000	8.1		15.0			
Hexachlorobutadiene	0.2814 0.2092	0.2884	0.2495	0.2645	0.2531	Ave		0.2577				11.0		15.0			
Naphthalene	1.9527 1.6802	2.0647	2.2163	2.2497	2.2115	Ave		2.0625				11.0		15.0			
1,2,3-Trichlorobenzene	0.6221 0.4278	0.6296	0.6285	0.6505	0.5938	Ave		0.5920				14.0		15.0			
Dibromofluoromethane (Surr)	0.2331 0.2366	0.2278	0.2460	0.2403	0.2499	Ave		0.2389				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4238 0.3659	0.3675	0.3946	0.3884	0.3801	Ave		0.3867				5.5		15.0			
Toluene-d8 (Surr)	1.5539 1.5702	1.4814	1.5599	1.5466	1.5977	Ave		1.5516				2.5		15.0			
4-Bromofluorobenzene (Surr)	0.5499 0.5492	0.5504	0.5556	0.5412	0.5764	Ave		0.5538				2.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	35885 1980706	77645	213757	441965	926938	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	68054 2816599	143417	355421	686521	1368025	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	60917 2635065	129233	321221	651141	1291232	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	25083 973652	51574	127563	256449	525557	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	35804 1453341	72482	172479	363159	717903	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	39202 2042282	89918	223037	469710	984559	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	68008 3085342	141530	369770	777854	1531686	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	33918 1630889	70410	178421	382278	771598	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	21921 1057686	45508	110360	226331	494002	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	62683 1127237	93486	173839	336387	595897	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	48493 2144017	100103	257965	530730	1098294	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	90427 5335771	190797	513352	1156089	2490300	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	56749 1947368	107775	259776	513045	1022838	10.0 400	20.0	50.0	100	200
Methyl acetate	FB	Ave	71069 2730691	139317	353813	726384	1391336	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	65695 1907926	111106	253801	487762	958858	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	54296 2230486	121019	278401	577732	1181799	20.0 800	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	33199 1332502	64764	167664	357877	679313	2.00 80.0	4.00	10.0	20.0	40.0
trans-1,2-Dichloroethene	FB	Ave	41156 1805850	86315	216661	436186	887809	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	123316 5356990	240492	622584	1294546	2632357	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	7664 364870	15284	35939	76608	176542	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	79407 3589145	173107	426021	871835	1773954	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	6355 356768	12300	36192	86048	174699	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	41482 1583175	81587	207910	420664	807827	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	45701 1960017	88112	228624	473715	970100	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	35648 2005803	82038	216190	467681	1002264	1.00 40.0	2.00	5.00	10.0	20.0
Bromochloromethane	FB	Ave	18189 822935	35913	95509	203401	408648	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	12689 485231	24197	61085	130645	258628	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	74928 3359863	155328	396473	809345	1683052	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	46880 2498258	102599	270389	587525	1225053	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	61130 3150583	142538	326094	684755	1477804	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	63188 2734618	123064	310759	650531	1338590	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	35596 2003224	74531	192609	438606	942348	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	70126 2945634	139538	343914	713992	1447593	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	177668 8119748	367399	938261	1900238	3892190	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	39339 1731358	78290	201140	412335	835509	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	44297 2465241	104143	256548	509583	1123367	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43403 1987718	89635	231666	479240	957503	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	24282 1014093	44570	121000	244410	505175	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	16576 659305	35560	90656	190747	391761	50.0 2000	100	250	500	1000
Bromodichloromethane	FB	Ave	37481 2303873	80071	223410	491180	1061629	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	44406 2063070	85505	245756	519803	1016253	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Lin1	44366 2983706	95217	282978	648461	1373441	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	71052 3358613	148911	406020	850832	1691407	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	173321 8413844	364692	910325	1915731	3926815	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Lin1	37498 2640993	81347	242683	548215	1203917	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Ave	43557 2519754	100996	281867	600178	1250367	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	32062 1400847	60672	167279	346503	690523	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	67375 2893528	134135	349671	718457	1446895	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	23974 1134016	50793	130464	270912	548439	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	45416 2246833	108870	273438	585245	1142606	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Lin1	18304 1357782	41724	120488	280880	612329	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	28960 1404286	59664	163482	338113	693547	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	105191 4733672	217868	543385	1134607	2263366	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	26058 1512891	52279	149910	336962	708703	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	51103 2559405	112518	294632	607431	1234615	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	132121 6585856	278940	703188	1488195	3060062	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	66541 3173134	138606	357130	739399	1512511	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Ave	103288 5626230	218474	585061	1234437	2578106	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Lin1	7969 648344	18118	55408	121431	283016	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	151460 7982152	325696	813952	1757043	3707115	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	39154 1824334	86153	226349	464104	921979	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	36958 1702050	77737	198983	403705	832802	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	13182 559668	26291	69913	145766	291005	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Ave	9983 588408	23177	56072	126610	281722	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	33381 1896081	82760	208940	446839	902975	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	39291 1732447	80476	197398	417562	839275	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	118040 6231859	261059	668378	1395891	2919244	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	38548 1882105	83551	213705	427671	904798	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	104687 5475645	235235	587256	1246967	2550345	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	126276 6464529	265761	687322	1473461	3037207	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	128284 6996931	283652	707440	1509023	3182710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	68832 3216077	139781	361776	752571	1534518	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	101022 5744842	231206	590475	1236559	2645753	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	73576 3349475	154891	372339	776907	1605428	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	95655 5346731	206411	534670	1131581	2455279	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	68510 3051238	141891	361399	733205	1509157	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	4054 207890	8593	21620	48540	107543	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	36183 1552119	71605	182409	391395	796044	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	29643 1280551	67798	171750	347154	714527	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Ave	12883 457756	27055	59629	132088	250690	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCB	Ave	89388 3676449	193683	529762	1123493	2190121	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	28475 936111	59064	150229	324862	588048	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	33786 1543057	66758	181044	367622	767961	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	61436 2385669	107729	290422	594253	1168069	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	151916 6847384	286160	762662	1603788	3200285	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	53765 2394878	106312	271656	561195	1154675	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:
Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	74598 3240218	146412	376630	789014	1566079	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44644 1851341	89012	231543	484302	943782	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	17177 965704	36949	93484	214615	456905	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	175389 9021702	381358	989616	2099629	4197719	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	67037 3335483	138884	364302	785295	1565439	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	114038 5829697	234431	633692	1358093	2727406	1.00 40.0	2.00	5.00	10.0	20.0
Propionitrile	FB	Ave	10519 484864	19537	53643	122521	239365	2.00 80.0	4.00	10.0	20.0	40.0
Ethyl acetate	FB	Ave	76413 3443932	143929	384742	808060	1641769	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	24236 1201419	53633	136829	298324	582158	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	23378 1085228	43306	121353	274103	534944	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	88590 4733198	188598	508209	1098573	2224035	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	5104 272147	10152	29307	62019	127766	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Lin1	12500 823386	29417	83258	186498	409174	20.0 800	40.0	100	200	400
2-Nitropropane	FB	Qua	10528 633675	19709	59496	119215	263103	2.00 80.0	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Lin1	32243 1979275	60655	200382	427297	962192	10.0 400	20.0	50.0	100	200
1,2,3-Trimethylbenzene	DCB	Ave	110047 6167616	248432	651353	1415601	2917084	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
2-Methylnaphthalene	DCB	Qua	52371 3134049	125934	353992	839119	1833171	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2340	0.1000	8.27	10.0	-17.3	20.0
Chloromethane	Ave	0.4613	0.4720	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.4246	0.4443	0.1000	10.5	10.0	4.6	20.0
Bromomethane	Ave	0.1684	0.1539	0.0500	9.14	10.0	-8.6	20.0
Chloroethane	Ave	0.2371	0.2329	0.0500	9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.3035	0.3240	0.1000	10.7	10.0	6.8	20.0
Acrolein	Ave	0.0489	0.0264		16.2	30.0	-46.0*	20.0
1,1-Dichloroethene	Ave	0.2446	0.2652	0.1000	10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1709	0.0500	11.1	10.0	10.6	20.0
Acetone	Lin1		0.1057	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.3433	0.3416		9.95	10.0	-0.5	20.0
Carbon disulfide	Ave	0.7261	0.7042	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0346	0.0393		34.0	30.0	13.4	20.0
Methyl acetate	Ave	0.2327	0.2751	0.1000	11.8	10.0	18.2	20.0
Methylene Chloride	Lin1		0.3299	0.1000	10.6	10.0	6.0	20.0
tert-Butyl alcohol	Ave	0.0189	0.0195		207	200	3.2	20.0
Acrylonitrile	Ave	0.1114	0.1186		31.9	30.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.8405	0.1000	10.0	10.0	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2952	0.1000	10.3	10.0	2.7	20.0
Hexane	Ave	0.0529	0.0579		10.9	10.0	9.4	20.0
1,1-Dichloroethane	Ave	0.5691	0.6028	0.1000	10.6	10.0	5.9	20.0
Vinyl acetate	Ave	0.0505	0.0387		7.67	10.0	-23.3*	20.0
2-Butanone	Ave	0.1356	0.1389	0.0500	20.5	20.0	2.4	20.0
2,2-Dichloropropane	Ave	0.2932	0.2855		9.74	10.0	-2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.3186	0.1000	10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1283	0.1312		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0828	0.0852		10.3	10.0	2.9	20.0
Chloroform	Ave	0.5296	0.5462	0.2000	10.3	10.0	3.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3794	0.1000	10.3	10.0	3.2	20.0
Cyclohexane	Ave	0.4605	0.4767	0.1000	10.4	10.0	3.5	20.0
1,1-Dichloropropene	Ave	0.4264	0.4383		10.3	10.0	2.8	20.0
Carbon tetrachloride	Ave	0.2770	0.2912	0.1000	10.5	10.0	5.1	20.0
1,2-Dichloroethane	Ave	0.4694	0.4938	0.1000	10.5	10.0	5.2	20.0
Benzene	Ave	1.251	1.319	0.5000	10.5	10.0	5.4	20.0
Trichloroethene	Ave	0.2698	0.2968	0.2000	11.0	10.0	10.0	20.0
1,2-Dichloropropane	Ave	0.3083	0.3319	0.1000	10.8	10.0	7.7	20.0
Methylcyclohexane	Ave	0.3477	0.3665	0.1000	10.5	10.0	5.4	20.0
Dibromomethane	Ave	0.1606	0.1738		10.8	10.0	8.2	20.0
Bromodichloromethane	Ave	0.3092	0.3331	0.1000	10.8	10.0	7.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1599	0.1722		10.8	10.0	7.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.4089	0.1500	9.41	10.0	-5.9	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2914	0.0500	22.1	20.0	10.3	20.0
Toluene	Ave	1.877	1.918	0.4000	10.2	10.0	2.2	20.0
trans-1,3-Dichloropropene	Lin1		0.5291	0.1000	9.28	10.0	-7.2	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3442	0.1000	10.4	10.0	4.1	20.0
1,3-Dichloropropane	Ave	0.6962	0.7105		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	0.2617	0.2644	0.2000	10.1	10.0	1.0	20.0
2-Hexanone	Ave	0.2698	0.2927	0.0500	21.7	20.0	8.5	20.0
Dibromochloromethane	Lin1		0.2623		9.02	10.0	-9.8	20.0
1,2-Dibromoethane	Ave	0.3223	0.3341		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	1.104	1.136	0.3000	10.3	10.0	2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3283		10.5	10.0	5.4	20.0
Ethylbenzene	Ave	0.5828	0.6250		10.7	10.0	7.2	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7452		20.5	20.0	2.7	20.0
o-Xylene	Ave	0.7207	0.7518		10.4	10.0	4.3	20.0
Styrene	Ave	1.192	1.255	0.3000	10.5	10.0	5.3	20.0
Bromoform	Lin1		0.1220	0.1000	9.03	10.0	-9.7	20.0
Isopropylbenzene	Ave	1.713	1.779	0.1000	10.4	10.0	3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.9195	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8159	0.8010		9.82	10.0	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2982		10.5	10.0	5.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2617		20.8	20.0	4.2	20.0
n-Propylbenzene	Ave	0.8598	0.9010		10.5	10.0	4.8	20.0
2-Chlorotoluene	Ave	0.8362	0.8214		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.836		10.2	10.0	1.6	20.0
4-Chlorotoluene	Ave	0.8762	0.8813		10.1	10.0	0.6	20.0
tert-Butylbenzene	Ave	2.471	2.497		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.988		10.3	10.0	2.8	20.0
sec-Butylbenzene	Ave	3.036	3.064		10.1	10.0	0.9	20.0
1,3-Dichlorobenzene	Ave	1.506	1.484	0.6000	9.85	10.0	-1.5	20.0
p-Isopropyltoluene	Ave	2.486	2.579		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.584	0.5000	9.98	10.0	-0.2	20.0
n-Butylbenzene	Ave	2.286	2.295		10.0	10.0	0.4	20.0
1,2-Dichlorobenzene	Ave	1.485	1.504	0.4000	10.1	10.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.1049	0.0500	11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6660	0.2000	9.77	10.0	-2.3	20.0
Hexachlorobutadiene	Ave	0.2577	0.2217		8.60	10.0	-14.0	20.0
Naphthalene	Ave	2.063	2.211		10.7	10.0	7.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5920	0.6250		10.6	10.0	5.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2274		9.72	10.2	-4.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3583		9.46	10.2	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.552	1.491		9.81	10.2	-3.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5469		10.1	10.2	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3065		9.63	10.0	-3.7	20.0
Diisopropyl ether	Ave	0.2775	0.2745		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		527	500	5.4	20.0
Cyclohexanone	Lin1		0.0256		52.9	200	-73.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	3.178		10.7	10.0	6.6	20.0

GC/MS VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: A3UX16 Start Date: 04/30/2012 11:22

Analysis Batch Number: 42171 End Date: 04/30/2012 18:11

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
BFB 240-42171/1		04/30/2012 11:22	1	BFB2916.D	DB-624 0.18(mm)
CCVIS 240-42171/2		04/30/2012 11:50	1	UXM5270.D	DB-624 0.18(mm)
CCV 240-42171/3		04/30/2012 12:13	1	UXM5271.D	DB-624 0.18(mm)
LCS 240-42171/4		04/30/2012 12:36	1	UXM5272.D	DB-624 0.18(mm)
MB 240-42171/5		04/30/2012 12:59	1	UXM5273.D	DB-624 0.18(mm)
ZZZZZ		04/30/2012 13:34	1		DB-624 0.18(mm)
ZZZZZ		04/30/2012 14:00	1		DB-624 0.18(mm)
ZZZZZ		04/30/2012 14:23	1		DB-624 0.18(mm)
240-10598-1	TB-042412	04/30/2012 14:46	1	UXM5277.D	DB-624 0.18(mm)
240-10598-2	MT-MW04S	04/30/2012 15:09	1	UXM5278.D	DB-624 0.18(mm)
240-10598-3	MT-MW06S	04/30/2012 15:31	1	UXM5279.D	DB-624 0.18(mm)
ZZZZZ		04/30/2012 15:54	1		DB-624 0.18(mm)
ZZZZZ		04/30/2012 16:17	1		DB-624 0.18(mm)
ZZZZZ		04/30/2012 16:40	1		DB-624 0.18(mm)
ZZZZZ		04/30/2012 17:03	1		DB-624 0.18(mm)
240-10350-A-5 MS		04/30/2012 17:25	1	UXM5284.D	DB-624 0.18(mm)
240-10350-C-5 MSD		04/30/2012 17:48	1	UXM5285.D	DB-624 0.18(mm)
ZZZZZ		04/30/2012 18:11	1		DB-624 0.18(mm)

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab File ID: BFB2916.D BFB Injection Date: 04/30/2012

Instrument ID: A3UX16 BFB Injection Time: 11:22

Analysis Batch No.: 42171

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.1	(0.2)1
174	50.0 - 120.00 % of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	4.8	(7.3)1
176	95.0 - 101.0 % of mass 174	63.9	(96.5)1
177	5.0 - 9.0 % of mass 176	4.2	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-42171/2	UXM5270.D	04/30/2012	11:50
	CCV 240-42171/3	UXM5271.D	04/30/2012	12:13
	LCS 240-42171/4	UXM5272.D	04/30/2012	12:36
	MB 240-42171/5	UXM5273.D	04/30/2012	12:59
TB-042412	240-10598-1	UXM5277.D	04/30/2012	14:46
MT-MW04S	240-10598-2	UXM5278.D	04/30/2012	15:09
MT-MW06S	240-10598-3	UXM5279.D	04/30/2012	15:31
	240-10350-A-5 MS	UXM5284.D	04/30/2012	17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012	17:48

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2885	0.1000	10.2	10.0	2.0	20.0
Chloromethane	Ave	0.4613	0.4195	0.1000	9.10	10.0	-9.0	20.0
Vinyl chloride	Ave	0.4246	0.4029	0.1000	9.49	10.0	-5.1	20.0
Bromomethane	Ave	0.1684	0.1518	0.0500	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2371	0.2197	0.0500	9.27	10.0	-7.3	20.0
Trichlorofluoromethane	Ave	0.3035	0.3119	0.1000	10.3	10.0	2.8	20.0
Acrolein	Ave	0.0489	0.0440		89.9	100	-10.1	20.0
1,1-Dichloroethene	Ave	0.2446	0.2428	0.1000	9.93	10.0	-0.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1669	0.0500	10.8	10.0	8.0	20.0
Acetone	Lin1		0.0864	0.0500	16.6	20.0	-17.0	20.0
Iodomethane	Ave	0.3433	0.3500		10.2	10.0	1.9	20.0
Carbon disulfide	Ave	0.7261	0.7265	0.1000	10.0	10.0	0.0	20.0
Acetonitrile	Ave	0.0346	0.0292		84.2	100	-15.8	20.0
Methyl acetate	Ave	0.2327	0.1967	0.1000	16.9	20.0	-15.5	20.0
Methylene Chloride	Lin1		0.3004	0.1000	9.58	10.0	-4.2	20.0
tert-Butyl alcohol	Ave	0.0189	0.0158		167	200	-16.6	20.0
Acrylonitrile	Ave	0.1114	0.0998		17.9	20.0	-10.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7869	0.1000	9.36	10.0	-6.4	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2775	0.1000	9.66	10.0	-3.4	20.0
Hexane	Ave	0.0529	0.0551		10.4	10.0	4.1	20.0
1,1-Dichloroethane	Ave	0.5691	0.5381	0.1000	9.45	10.0	-5.5	20.0
Vinyl acetate	Ave	0.0505	0.0473		9.37	10.0	-6.3	20.0
2-Butanone	Ave	0.1356	0.1228	0.0500	18.1	20.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2944	0.1000	9.54	10.0	-4.6	20.0
2,2-Dichloropropane	Ave	0.2932	0.3012		10.3	10.0	2.7	20.0
Bromochloromethane	Ave	0.1283	0.1246		9.71	10.0	-2.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		8.61	10.0	-13.9	20.0
Chloroform	Ave	0.5296	0.5127	0.2000	9.68	10.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3764	0.1000	10.2	10.0	2.3	20.0
Cyclohexane	Ave	0.4605	0.4777	0.1000	10.4	10.0	3.7	20.0
1,1-Dichloropropene	Ave	0.4264	0.4061		9.53	10.0	-4.7	20.0
Carbon tetrachloride	Ave	0.2770	0.2871	0.1000	10.4	10.0	3.7	20.0
1,2-Dichloroethane	Ave	0.4694	0.4390	0.1000	9.35	10.0	-6.5	20.0
Benzene	Ave	1.251	1.173	0.5000	9.38	10.0	-6.2	20.0
Trichloroethene	Ave	0.2698	0.2578	0.2000	9.56	10.0	-4.4	20.0
1,2-Dichloropropane	Ave	0.3083	0.2961	0.1000	9.61	10.0	-3.9	20.0
Methylcyclohexane	Ave	0.3477	0.3809	0.1000	11.0	10.0	9.5	20.0
Dibromomethane	Ave	0.1606	0.1478		9.20	10.0	-8.0	20.0
1,4-Dioxane	Ave	0.0024	0.0019		403	500	-19.5	20.0
Bromodichloromethane	Ave	0.3092	0.3153	0.1000	10.2	10.0	2.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1599	0.1432		17.9	20.0	-10.4	20.0
cis-1,3-Dichloropropene	Lin1		0.3918	0.1500	9.04	10.0	-9.6	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2348	0.0500	17.8	20.0	-11.1	20.0
Toluene	Ave	1.877	1.787	0.4000	9.52	10.0	-4.8	20.0
trans-1,3-Dichloropropene	Lin1		0.5043	0.1000	8.87	10.0	-11.3	20.0
Ethyl methacrylate	Ave	0.5543	0.5335		9.62	10.0	-3.8	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3148	0.1000	9.52	10.0	-4.8	20.0
1,3-Dichloropropane	Ave	0.6962	0.6368		9.15	10.0	-8.5	20.0
Tetrachloroethene	Ave	0.2617	0.2605	0.2000	9.95	10.0	-0.5	20.0
2-Hexanone	Ave	0.2698	0.2379	0.0500	17.6	20.0	-11.8	20.0
Dibromochloromethane	Lin1		0.2633		9.05	10.0	-9.5	20.0
1,2-Dibromoethane	Ave	0.3223	0.3055		9.48	10.0	-5.2	20.0
Chlorobenzene	Ave	1.104	1.033	0.3000	9.36	10.0	-6.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3137		10.1	10.0	0.7	20.0
Ethylbenzene	Ave	0.5828	0.5604		9.61	10.0	-3.9	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7011		19.3	20.0	-3.4	20.0
o-Xylene	Ave	0.7207	0.6828		9.47	10.0	-5.3	20.0
Styrene	Ave	1.192	1.161	0.3000	9.74	10.0	-2.6	20.0
Bromoform	Lin1		0.1180	0.1000	8.76	10.0	-12.4	20.0
Isopropylbenzene	Ave	1.713	1.674	0.1000	9.78	10.0	-2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.8145	0.3000	9.03	10.0	-9.7	20.0
Bromobenzene	Ave	0.8159	0.7672		9.40	10.0	-6.0	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2411		8.50	10.0	-15.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2253		8.97	10.0	-10.3	20.0
n-Propylbenzene	Ave	0.8598	0.8408		9.78	10.0	-2.2	20.0
2-Chlorotoluene	Ave	0.8362	0.7704		9.21	10.0	-7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.685		9.62	10.0	-3.8	20.0
4-Chlorotoluene	Ave	0.8762	0.8030		9.16	10.0	-8.4	20.0
tert-Butylbenzene	Ave	2.471	2.377		9.62	10.0	-3.8	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.768		9.52	10.0	-4.8	20.0
sec-Butylbenzene	Ave	3.036	2.929		9.65	10.0	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.506	1.415	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.486	2.404		9.67	10.0	-3.3	20.0
1,4-Dichlorobenzene	Ave	1.587	1.474	0.5000	9.29	10.0	-7.1	20.0
n-Butylbenzene	Ave	2.286	2.220		9.71	10.0	-2.9	20.0
1,2-Dichlorobenzene	Ave	1.485	1.388	0.4000	9.35	10.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.0894	0.0500	9.39	10.0	-6.1	20.0
1,3,5-Trichlorobenzene	Ave	0.7690	0.7641		9.94	10.0	-0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6748	0.2000	9.90	10.0	-1.0	20.0
Hexachlorobutadiene	Ave	0.2577	0.2544		9.87	10.0	-1.3	20.0
Naphthalene	Ave	2.063	1.886		9.14	10.0	-8.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5920	0.5682		9.60	10.0	-4.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2170		9.27	10.2	-9.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3153		8.32	10.2	-18.5	20.0
Toluene-d8 (Surr)	Ave	1.552	1.338		8.81	10.2	-13.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5067		9.34	10.2	-8.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2389	0.2197		9.39	10.2	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3395		8.96	10.2	-12.2	20.0
Toluene-d8 (Surr)	Ave	1.552	1.410		9.28	10.2	-9.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5352		9.87	10.2	-3.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4967		9.39	10.0	-6.1	20.0
Ethyl ether	Ave	0.3182	0.2722		8.56	10.0	-14.4	20.0
3-Chloro-1-propene	Ave	0.1408	0.1458		10.4	10.0	3.5	20.0
Diisopropyl ether	Ave	0.2775	0.2702		48.7	50.0	-2.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.4999		9.70	10.0	-3.0	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.8664		9.74	10.0	-2.6	20.0
Propionitrile	Ave	0.0386	0.0384		19.9	20.0	-0.6	20.0
Ethyl acetate	Ave	0.2719	0.2478		18.2	20.0	-8.9	20.0
Methacrylonitrile	Ave	0.1921	0.1753		9.13	10.0	-8.7	20.0
Isobutyl alcohol	Ave	0.0086	0.0076		176	200	-12.2	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6972		9.74	10.0	-2.6	20.0
n-Heptane	Ave	0.0406	0.0438		10.8	10.0	7.7	20.0
n-Butanol	Lin1		0.0054		165	200	-17.6	20.0
2-Nitropropane	Qua		0.0379		18.5	20.0	-7.5	20.0
Cyclohexanone	Lin1		0.0798		79.4	100	-20.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.888		9.68	10.0	-3.2	20.0
2-Methylnaphthalene	Qua		0.8088		16.2	20.0	-19.0	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab File ID: UXM5273.D Lab Sample ID: MB 240-42171/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 04/30/2012 12:59

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42171/4	UXM5272.D	04/30/2012 12:36
TB-042412	240-10598-1	UXM5277.D	04/30/2012 14:46
MT-MW04S	240-10598-2	UXM5278.D	04/30/2012 15:09
MT-MW06S	240-10598-3	UXM5279.D	04/30/2012 15:31
	240-10350-A-5 MS	UXM5284.D	04/30/2012 17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012 17:48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroeth ane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.288	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	96		66-117
2037-26-5	Toluene-d8 (Surr)	92		74-115
1868-53-7	Dibromofluoromethane (Surr)	86		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 0.197

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	0.197	J

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.29	93	72-116	
1,1,1-Trichloroethane	10.0	9.17	92	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.61	86	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.47	95	74-151	
1,1-Dichloroethane	10.0	9.12	91	82-115	
1,1-Dichloroethene	10.0	9.37	94	78-131	
1,1-Dichloropropene	10.0	8.82	88	83-114	
1,2,3-Trichlorobenzene	10.0	9.27	93	54-126	
1,2,3-Trichloropropane	10.0	8.58	86	73-129	
1,2,3-Trimethylbenzene	10.0	9.34	93	70-130	
1,2,4-Trichlorobenzene	10.0	9.24	92	48-135	
1,2,4-Trimethylbenzene	10.0	9.09	91	76-120	
1,2-Dibromo-3-Chloropropane	10.0	8.48	85	42-136	
1,2-Dichlorobenzene	10.0	8.87	89	81-110	
1,2-Dichloroethane	10.0	9.10	91	71-127	
1,2-Dichloropropane	10.0	9.15	92	81-115	
1,3-Dichlorobenzene	10.0	9.09	91	80-110	
1,3-Dichloropropane	10.0	8.52	85	79-116	
1,4-Dichlorobenzene	10.0	8.91	89	82-110	
2,2-Dichloropropane	10.0	9.51	95	50-129	
2-Chloroethyl vinyl ether	10.0	8.76 J	88	52-131	
2-Chlorotoluene	10.0	8.59	86	76-116	
2-Hexanone	20.0	17.5	88	55-133	
Bromobenzene	10.0	9.12	91	76-115	
Bromochloromethane	10.0	9.21	92	77-120	
4-Chlorotoluene	10.0	8.82	88	77-115	
p-Isopropyltoluene	10.0	9.20	92	74-120	
Acetone	20.0	16.4	82	43-136	
Benzene	10.0	9.16	92	83-112	
Bromoform	10.0	8.16	82	40-131	
Bromomethane	10.0	7.64	76	11-185	
Carbon disulfide	10.0	8.61	86	62-142	
Carbon tetrachloride	10.0	9.19	92	66-128	
Chlorobenzene	10.0	8.95	90	85-110	
Chloroethane	10.0	8.17	82	25-153	
Chloroform	10.0	8.84	88	79-117	
Chloromethane	10.0	7.91	79	44-126	
cis-1,2-Dichloroethene	10.0	9.23	92	80-113	
cis-1,3-Dichloropropene	10.0	8.36	84	61-115	
Hexachlorobutadiene	10.0	8.77	88	36-134	
Dibromomethane	10.0	9.18	92	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	9.60	96	72-121	
Dichlorodifluoromethane	10.0	5.86	59	19-129	
Ethylbenzene	10.0	9.06	91	83-112	
1,2-Dibromoethane	10.0	8.75	88	79-113	
Diisopropyl ether	10.0	8.74 J	87	77-118	
Naphthalene	10.0	8.79	88	32-141	
m-Xylene & p-Xylene	20.0	18.0	90	83-113	
n-Butylbenzene	10.0	8.83	88	66-125	
Isopropylbenzene	10.0	9.08	91	75-114	
n-Propylbenzene	10.0	9.50	95	74-121	
2-Butanone	20.0	16.7	84	60-126	
4-Methyl-2-pentanone	20.0	17.3	87	63-128	
sec-Butylbenzene	10.0	8.78	88	70-117	
Methyl tert-butyl ether	10.0	8.66	87	52-144	
Methylene Chloride	10.0	8.84	88	66-131	
o-Xylene	10.0	9.15	92	83-113	
Styrene	10.0	9.27	93	79-114	
tert-Butylbenzene	10.0	8.95	90	71-115	
Tetrachloroethene	10.0	9.17	92	79-114	
Toluene	10.0	8.87	89	84-111	
trans-1,2-Dichloroethene	10.0	9.08	91	83-117	
trans-1,3-Dichloropropene	10.0	8.11	81	58-117	
Trichloroethene	10.0	9.17	92	76-117	
Trichlorofluoromethane	10.0	9.25	93	49-157	
Vinyl acetate	10.0	8.12	81	46-161	
Vinyl chloride	10.0	8.25	83	53-127	
tert-Butyl alcohol	200	167	84	70-130	
Xylenes, Total	30.0	27.2	91	83-112	
Dibromochloromethane	10.0	8.13	81	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	1.0 U	9.57	96	64-118	
1,1,1-Trichloroethane	10.0	1.0 U	9.42	94	68-121	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.56	96	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	11.6	116	70-152	
1,1-Dichloroethane	10.0	1.0 U	9.26	93	79-116	
1,1-Dichloroethene	10.0	1.0 U	10.0	100	74-135	
1,1-Dichloropropene	10.0	1.0 U	9.55	96	80-114	
1,2,3-Trichlorobenzene	10.0	1.0 U	9.86	99	45-129	
1,2,3-Trichloropropane	10.0	1.0 U	9.72	97	67-132	
1,2,3-Trimethylbenzene	10.0	5.0 U	9.43	94	70-130	
1,2,4-Trichlorobenzene	10.0	1.0 U	9.37	94	38-138	
1,2,4-Trimethylbenzene	10.0	1.0 U	9.37	94	67-124	
1,2-Dibromo-3-Chloropropane	10.0	2.0 U	9.54	95	32-139	
1,2-Dichlorobenzene	10.0	1.0 U	9.15	92	75-111	
1,2-Dichloroethane	10.0	1.0 U	9.37	94	68-129	
1,2-Dichloropropane	10.0	1.0 U	9.68	97	78-115	
1,3-Dichlorobenzene	10.0	1.0 U	9.16	92	73-110	
1,3-Dichloropropane	10.0	1.0 U	9.44	94	74-118	
1,4-Dichlorobenzene	10.0	1.0 U	9.01	90	75-110	
2,2-Dichloropropane	10.0	1.0 U	9.23	92	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	0	10-150	F
2-Chlorotoluene	10.0	1.0 U	8.96	90	69-117	
2-Hexanone	20.0	10 U	21.3	107	47-139	
Bromobenzene	10.0	1.0 U	9.39	94	71-116	
Bromochloromethane	10.0	1.0 U	9.28	93	73-121	
4-Chlorotoluene	10.0	1.0 U	8.98	90	71-116	
p-Isopropyltoluene	10.0	1.0 U	9.57	96	64-122	
Acetone	20.0	10 U	17.7	89	33-145	
Benzene	10.0	1.0 U	9.36	94	72-121	
Bromoform	10.0	1.0 U	8.55	86	32-128	
Bromomethane	10.0	1.0 U	4.44	44	10-186	
Carbon disulfide	10.0	1.0 U	8.83	88	57-147	
Carbon tetrachloride	10.0	1.0 U	9.67	97	59-129	
Chlorobenzene	10.0	1.0 U	9.37	94	80-110	
Chloroethane	10.0	1.0 U	6.84	68	21-165	
Chloroform	10.0	1.0 U	9.03	90	76-118	
Chloromethane	10.0	1.0 U	7.92	79	33-132	
cis-1,2-Dichloroethene	10.0	1.0 U	9.38	94	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	8.26	83	51-110	
Hexachlorobutadiene	10.0	1.0 U	8.51	85	27-132	
Dibromomethane	10.0	1.0 U	9.68	97	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	1.0 U	9.64	96	67-120	
Dichlorodifluoromethane	10.0	1.0 U	7.19	72	17-128	
Ethylbenzene	10.0	1.0 U	9.51	95	75-116	
1,2-Dibromoethane	10.0	1.0 U	9.96	100	74-113	
Diisopropyl ether	10.0	10 U	8.79 J	88	73-118	
Naphthalene	10.0	1.0 U	9.96	100	15-158	
m-Xylene & p-Xylene	20.0	2.0 U	19.0	95	75-117	
n-Butylbenzene	10.0	1.0 U	9.11	91	56-127	
Isopropylbenzene	10.0	1.0 U	9.45	95	68-116	
n-Propylbenzene	10.0	1.0 U	9.58	96	64-124	
2-Butanone	20.0	10 U	19.4	97	54-129	
4-Methyl-2-pentanone	20.0	10 U	20.9	105	56-131	
sec-Butylbenzene	10.0	1.0 U	9.33	93	60-119	
Methyl tert-butyl ether	10.0	5.0 U	9.03	90	46-144	
Methylene Chloride	10.0	1.0 U	8.65	87	63-128	
o-Xylene	10.0	1.0 U	9.39	94	76-116	
Styrene	10.0	1.0 U	9.60	96	71-117	
tert-Butylbenzene	10.0	1.0 U	9.33	93	61-119	
Tetrachloroethene	10.0	1.0 U	10.0	100	70-117	
Toluene	10.0	1.0 U	9.36	94	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	9.18	92	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	8.16	82	46-116	
Trichloroethene	10.0	1.0 U	9.41	94	66-120	
Trichlorofluoromethane	10.0	1.0 U	8.71	87	46-157	
Vinyl acetate	10.0	2.0 U	8.93	89	43-157	
Vinyl chloride	10.0	1.0 U	9.08	91	49-130	
tert-Butyl alcohol	200	50 U	217	109	70-130	
Xylenes, Total	30.0	2.0 U	28.4	95	76-116	
Dibromochloromethane	10.0	1.0 U	8.56	86	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.67	97	1	30	64-118	
1,1,1-Trichloroethane	10.0	9.09	91	4	30	68-121	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	5	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.92	99	16	30	70-152	
1,1-Dichloroethane	10.0	9.28	93	0	30	79-116	
1,1-Dichloroethene	10.0	9.69	97	3	30	74-135	
1,1-Dichloropropene	10.0	9.22	92	4	30	80-114	
1,2,3-Trichlorobenzene	10.0	8.21	82	18	30	45-129	
1,2,3-Trichloropropane	10.0	9.80	98	1	30	67-132	
1,2,3-Trimethylbenzene	10.0	9.03	90	4	30	70-130	
1,2,4-Trichlorobenzene	10.0	7.84	78	18	30	38-138	
1,2,4-Trimethylbenzene	10.0	9.00	90	4	30	67-124	
1,2-Dibromo-3-Chloropropane	10.0	9.69	97	2	30	32-139	
1,2-Dichlorobenzene	10.0	8.74	87	5	30	75-111	
1,2-Dichloroethane	10.0	9.04	90	4	30	68-129	
1,2-Dichloropropane	10.0	9.25	93	5	30	78-115	
1,3-Dichlorobenzene	10.0	8.99	90	2	30	73-110	
1,3-Dichloropropane	10.0	9.43	94	0	30	74-118	
1,4-Dichlorobenzene	10.0	8.88	89	1	30	75-110	
2,2-Dichloropropane	10.0	8.87	89	4	30	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
2-Chlorotoluene	10.0	9.37	94	4	30	69-117	
2-Hexanone	20.0	20.5	103	4	30	47-139	
Bromobenzene	10.0	9.57	96	2	30	71-116	
Bromochloromethane	10.0	8.92	89	4	30	73-121	
4-Chlorotoluene	10.0	9.06	91	1	30	71-116	
p-Isopropyltoluene	10.0	8.93	89	7	30	64-122	
Acetone	20.0	13.9	70	24	30	33-145	
Benzene	10.0	9.16	92	2	30	72-121	
Bromoform	10.0	8.51	85	0	30	32-128	
Bromomethane	10.0	5.19	52	16	30	10-186	
Carbon disulfide	10.0	8.03	80	9	30	57-147	
Carbon tetrachloride	10.0	9.13	91	6	30	59-129	
Chlorobenzene	10.0	9.23	92	2	30	80-110	
Chloroethane	10.0	6.73	67	2	30	21-165	
Chloroform	10.0	8.90	89	1	30	76-118	
Chloromethane	10.0	8.81	88	11	30	33-132	
cis-1,2-Dichloroethene	10.0	9.27	93	1	30	70-120	
cis-1,3-Dichloropropene	10.0	7.99	80	3	30	51-110	
Hexachlorobutadiene	10.0	6.53	65	26	30	27-132	
Dibromomethane	10.0	9.52	95	2	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	10.0	9.34	93	3	30	67-120	
Dichlorodifluoromethane	10.0	5.82	58	21	30	17-128	
Ethylbenzene	10.0	9.29	93	2	30	75-116	
1,2-Dibromoethane	10.0	9.55	96	4	30	74-113	
Diisopropyl ether	10.0	8.71 J	87	1	30	73-118	
Naphthalene	10.0	8.36	84	17	30	15-158	
m-Xylene & p-Xylene	20.0	18.3	92	4	30	75-117	
n-Butylbenzene	10.0	8.35	84	9	30	56-127	
Isopropylbenzene	10.0	9.07	91	4	30	68-116	
n-Propylbenzene	10.0	9.61	96	0	30	64-124	
2-Butanone	20.0	17.6	88	10	30	54-129	
4-Methyl-2-pentanone	20.0	20.2	101	3	30	56-131	
sec-Butylbenzene	10.0	8.71	87	7	30	60-119	
Methyl tert-butyl ether	10.0	8.88	89	2	30	46-144	
Methylene Chloride	10.0	8.38	84	3	30	63-128	
o-Xylene	10.0	9.08	91	3	30	76-116	
Styrene	10.0	9.26	93	4	30	71-117	
tert-Butylbenzene	10.0	9.04	90	3	30	61-119	
Tetrachloroethene	10.0	9.57	96	4	30	70-117	
Toluene	10.0	9.29	93	1	30	78-114	
trans-1,2-Dichloroethene	10.0	8.99	90	2	30	80-119	
trans-1,3-Dichloropropene	10.0	8.50	85	4	30	46-116	
Trichloroethene	10.0	9.19	92	2	30	66-120	
Trichlorofluoromethane	10.0	8.33	83	4	30	46-157	
Vinyl acetate	10.0	9.09	91	2	30	43-157	
Vinyl chloride	10.0	8.71	87	4	30	49-130	
tert-Butyl alcohol	200	159	79	31	30	70-130	F
Xylenes, Total	30.0	27.4	91	4	30	76-116	
Dibromochloromethane	10.0	8.69	87	2	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: STD8260 240-42092/4 Date Analyzed: 04/29/2012 16:26

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5241.D Heated Purge: (Y/N) N

Calibration ID: 8426

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1530000	5.70	1036987	8.39	499405	10.64
UPPER LIMIT		3060000	6.20	2073974	8.89	998810	11.14
LOWER LIMIT		765000	5.20	518494	7.89	249703	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42092/14		1382789	5.70	929711	8.39	462842	10.64
CCVIS 240-42171/2		1827438	5.70	1228317	8.39	614323	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: CCVIS 240-42171/2 Date Analyzed: 04/30/2012 11:50

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5270.D Heated Purge: (Y/N) N

Calibration ID: 8428

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1827438	5.70	1228317	8.39	614323	10.64
UPPER LIMIT		3654876	6.20	2456634	8.89	1228646	11.14
LOWER LIMIT		913719	5.20	614159	7.89	307162	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42171/3		1675303	5.70	1143405	8.39	543922	10.64
LCS 240-42171/4		1858112	5.70	1240826	8.39	615173	10.64
MB 240-42171/5		1636782	5.70	1107392	8.39	536650	10.64
240-10598-1	TB-042412	1623556	5.70	1081632	8.39	523267	10.64
240-10598-2	MT-MW04S	1638447	5.70	1095228	8.39	524543	10.64
240-10598-3	MT-MW06S	1598458	5.70	1050881	8.39	504682	10.64
240-10350-A-5 MS		1710874	5.70	1135916	8.39	559548	10.64
240-10350-C-5 MSD		1786806	5.70	1151558	8.39	541302	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

SDG 240-10598-1

SAMPLE ID MT-MW06S

SAMPLE CALC IS AREA	DILUTION	COMPOUND OF INTEREST / IS AMOUNT (NG)	Final Extract Volume (UL)	AVE RRF	CONCENTRATION PPB
1598458	1	34980 / 10	5	0.4613	0.47

Sample Volume (ML)

5

Chloromethane = 0.47 ug/L

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\Ncchrom\ChromData\A3UX16\20120430-9532.b\UXM5279.D
Lims ID: 240-10598-C-3 Client ID: MT-MW06S
Inject. Date: 30-Apr-2012 15:31:30 Dil. Factor: 1.0000
Sample Type: Client
Sample ID: 240-0009532-011
Misc. Info.: M20430A,8260LLUX16,,1904
Operator: 1904 Instrument ID: A3UX16
Vol. Injected: 1.0000 ALS Bottle#: 10
Lims Batch ID: 42171 Lims Sample ID: 11
Detector: MS SCAN

Method: \\Ncchrom\ChromData\A3UX16\20120430-9532.b\8260_16.m
Last Update: 01-May-2012 09:03:45 Calib Date: 29-Apr-2012 19:50:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A3UX16\20120429-9509.b\UXM5250.D
Limit Group: MSV 8260DOD ICAL
Integrator: RTE ID Type: Deconvolution ID
Process Host: CORP-CTX-15

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1598458	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.394	-0.001	90	1050881	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	98	504682	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.120	5.121	-0.001	63	343604	9.00	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	566885	9.17	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	85	1553101	9.53	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	82	575188	9.88	
134 Chlorodifluoromethane TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50	1.824	1.836	-0.012	99	34980	0.4744	
14 Vinyl chloride	62		1.954					
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.405					
18 Trichlorofluoromethane	101		2.666					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
26 Carbon disulfide	76		3.365					
30 Methylene Chloride	84		3.591					
31 2-Methyl-2-propanol	59		3.674					
34 Methyl tert-butyl ether	73		3.840					
33 trans-1,2-Dichloroethene	96		3.840					
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.279					
40 Tert-butyl ethyl ether	59		4.587					
42 cis-1,2-Dichloroethene	96		4.705					
41 2-Butanone (MEK)	43		4.705					
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.919					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97		5.156					

Method 8270C

Semivolatile Organic Compounds (GC/MS) by Method 8270C

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MT-MW04S	240-10598-2	48	46	49	52	60	69
MT-MW06S	240-10598-3	54	49	54	51	58	69
	MB 240-41671/21-A	47	46	45	47	45	66
	LCS 240-41671/22-A	70	67	69	68	72	81
	240-10552-Q-15-A MS	61	59	56	61	68	57
	240-10552-U-15-A MSD	58	61	55	62	73	59

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: A4AG2 Start Date: 04/30/2012 12:57

Analysis Batch Number: 42126 End Date: 04/30/2012 15:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-42126/1		04/30/2012 12:57	1	0430001.D	RXI-5SILMS 0.45(mm)
STD9 240-42126/2 IC		04/30/2012 13:15	1	0430002.D	RXI-5SILMS 0.45(mm)
STD8 240-42126/3 IC		04/30/2012 13:33	1	0430003.D	RXI-5SILMS 0.45(mm)
STD7 240-42126/4 IC		04/30/2012 13:50	1	0430004.D	RXI-5SILMS 0.45(mm)
STD6 240-42126/5 ICIS		04/30/2012 14:08	1	0430005.D	RXI-5SILMS 0.45(mm)
STD5 240-42126/6 IC		04/30/2012 14:26	1	0430006.D	RXI-5SILMS 0.45(mm)
STD4 240-42126/7 IC		04/30/2012 14:44	1	0430007.D	RXI-5SILMS 0.45(mm)
STD3 240-42126/8 IC		04/30/2012 15:02	1	0430008.D	RXI-5SILMS 0.45(mm)
STD2 240-42126/9 IC		04/30/2012 15:19	1	0430009.D	RXI-5SILMS 0.45(mm)
STD1 240-42126/10 IC		04/30/2012 15:37	1	0430010.D	RXI-5SILMS 0.45(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab File ID: 0430001.D DFTPP Injection Date: 04/30/2012

Instrument ID: A4AG2 DFTPP Injection Time: 12:57

Analysis Batch No.: 42126

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	39.9	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	41.8	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	54.1	
197	Less than 1.0% of mass 198	0.4	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	25.2	
365	Greater than 0.75% of mass 198	3.1	
441	Present, but less than mass 443	11.7	
442	40.0 - 110.0% of mass 198	78.1	
443	15.0 - 24.0% of mass 442	15.2	(19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-42126/2	0430002.D	04/30/2012	13:15
	STD8 240-42126/3	0430003.D	04/30/2012	13:33
	STD7 240-42126/4	0430004.D	04/30/2012	13:50
	STD6 240-42126/5	0430005.D	04/30/2012	14:08
	STD5 240-42126/6	0430006.D	04/30/2012	14:26
	STD4 240-42126/7	0430007.D	04/30/2012	14:44
	STD3 240-42126/8	0430008.D	04/30/2012	15:02
	STD2 240-42126/9	0430009.D	04/30/2012	15:19
	STD1 240-42126/10	0430010.D	04/30/2012	15:37

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42126

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2012 13:15 Calibration End Date: 04/30/2012 15:37 Calibration ID: 8434

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42126/10	0430010.D
Level 2	STD2 240-42126/9	0430009.D
Level 3	STD3 240-42126/8	0430008.D
Level 4	STD4 240-42126/7	0430007.D
Level 5	STD5 240-42126/6	0430006.D
Level 6	STD6 240-42126/5	0430005.D
Level 7	STD7 240-42126/4	0430004.D
Level 8	STD8 240-42126/3	0430003.D
Level 9	STD9 240-42126/2	0430002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5728	0.6355 0.5627	0.5798 0.5463	0.6017 0.5108	0.5466	Ave		0.5695				6.7		15.0			
N-Nitrosodimethylamine	0.9615	1.0109 0.9653	1.0216 0.9356	1.0312 0.9342	0.9214	Ave		0.9727				4.4		15.0			
Pyridine	1.5363	1.4068 1.5922	1.4798 1.6124	1.5198 1.5216	1.4854	Ave		1.5193				4.3		15.0			
Benzaldehyde	1.5900 0.8200	1.3435 +++++	1.3737 +++++	1.3465 +++++	1.2256	Ave		1.2832				20.0	*	15.0			
Ethyl methacrylate	1.1729	1.3426 1.2068	1.3271 1.1778	1.3285 1.0865	1.2100	Ave		1.2315				7.5		15.0			
3-Chloropropionitrile	0.7915	0.8829 0.8090	0.8963 0.8283	0.8661 0.7801	0.7944	Ave		0.8311				5.4		15.0			
Malononitrile	1.6253	1.8858 1.4486	1.9479 1.2781	1.9508 1.1074	1.7573	Qua	0.0069	1.9584	-0.034						1.0000		0.9900
Benzoic acid	0.2189	+++++ 0.2575	+++++ 0.2753	0.1467 0.2823	0.2527	Qua	-0.197	0.2226	0.0013						0.9970		0.9900
Phenol	1.9116	1.9760 1.8999	2.0509 1.9403	2.0005 1.8064	1.9443	Ave		1.9412				3.8		15.0			
Aniline	2.3974	2.3054 2.4734	2.5181 2.4654	2.5390 2.4046	2.4402	Ave		2.4430				3.0		15.0			
Bis(2-chloroethyl)ether	1.5855	1.8212 1.5616	1.6973 1.7905	1.7143 1.5521	1.6590	Ave		1.6727				6.1		15.0			
2-Chlorophenol	1.5738	1.5746 1.5760	1.6506 1.6053	1.6202 1.4704	1.5891	Ave		1.5825				3.3		15.0			
1,3-Dichlorobenzene	1.5595	1.5935 1.5555	1.6495 1.5861	1.6596 1.4544	1.5619	Ave		1.5775				4.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 42126

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2012 13:15 Calibration End Date: 04/30/2012 15:37 Calibration ID: 8434

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42126/10	0430010.D
Level 2	STD2 240-42126/9	0430009.D
Level 3	STD3 240-42126/8	0430008.D
Level 4	STD4 240-42126/7	0430007.D
Level 5	STD5 240-42126/6	0430006.D
Level 6	STD6 240-42126/5	0430005.D
Level 7	STD7 240-42126/4	0430004.D
Level 8	STD8 240-42126/3	0430003.D
Level 9	STD9 240-42126/2	0430002.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	424737	34525 698155	59329 1089823	96941 1392728	225836	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	712967	54920 1197641	104539 1866625	166150 2547134	380658	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	1139143	76430 1975525	151423 3216851	244874 4148954	613675	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	16789 608024	72994 +++++	140563 +++++	216950 +++++	506348	0.100 10.0	0.500 +++++	1.00 +++++	2.00 +++++	5.00
Ethyl methacrylate	DCB	Ave	869681	72941 1497340	135794 2349655	214038 2962559	499908	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
3-Chloropropionitrile	DCB	Ave	586866	47970 1003735	91718 1652394	139548 2127126	328194	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Malononitrile	DCB	Qua	1205153	102454 1797394	199325 2549764	314312 3019484	725985	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Qua	1396719	+++++ 2715923	+++++ 4683771	199326 6526044	895953	20.0	+++++ 30.0	+++++ 40.0	4.00 50.0	10.0
Phenol	DCB	Ave	1417389	107357 2357330	209868 3870975	322318 4925325	803237	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	1777623	125253 3068884	257675 4918602	409078 6556455	1008141	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	1175639	98947 1937554	173675 3572007	276199 4231991	685390	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	1166966	85547 1955365	168901 3202550	261047 4009323	656527	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	1156335	86576 1930027	168787 3164252	267392 3965541	645275	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,4-Dichlorobenzene	DCB	Ave	1183285	92421 1994148	174319 3215876	273135 4044012	665983	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

GC/MS SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: A4AG2 Start Date: 05/01/2012 08:29

Analysis Batch Number: 42274 End Date: 05/01/2012 20:01

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
DFTPP 240-42274/1		05/01/2012 08:29	1	0501001.D	RXI-5SILMS 0.45(mm)
CCV 240-42274/2 CCVIS		05/01/2012 08:47	1	0501002.D	RXI-5SILMS 0.45(mm)
ICV 240-42274/3		05/01/2012 09:05	1	0501003.D	RXI-5SILMS 0.45(mm)
MB 240-41671/21-A		05/01/2012 09:23	1	0501004.D	RXI-5SILMS 0.45(mm)
LCS 240-41671/22-A		05/01/2012 09:40	1	0501005.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 09:58	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 10:15	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 10:33	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 10:51	20		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 11:09	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 11:26	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 11:44	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 12:02	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 12:19	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 12:37	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 12:55	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 13:13	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 13:30	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 13:48	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 14:06	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 14:23	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 14:41	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 14:59	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 15:17	1		RXI-5SILMS 0.45(mm)
240-10552-Q-15-A MS		05/01/2012 15:34	1	0501025.D	RXI-5SILMS 0.45(mm)
240-10552-U-15-A MSD		05/01/2012 15:52	1	0501026.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 16:10	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 16:28	1		RXI-5SILMS 0.45(mm)
240-10598-2	MT-MW04S	05/01/2012 16:45	1	0501029.D	RXI-5SILMS 0.45(mm)
240-10598-3	MT-MW06S	05/01/2012 17:03	1	0501030.D	RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 17:21	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 17:39	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 17:56	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 18:14	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 18:32	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 18:50	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 19:07	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 19:25	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 19:43	1		RXI-5SILMS 0.45(mm)
ZZZZZ		05/01/2012 20:01	1		RXI-5SILMS 0.45(mm)

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab File ID: 0501001.D DFTPP Injection Date: 05/01/2012

Instrument ID: A4AG2 DFTPP Injection Time: 08:29

Analysis Batch No.: 42274

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	36.5	
68	Less than 2.0% of mass 69	0.1	(0.2)1
69	Mass 69 relative abundance	39.7	
70	Less than 2.0% of mass 69	0.0	(0.1)1
127	25.0 - 75.0% of mass 198	53.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	24.7	
365	Greater than 0.75% of mass 198	3.0	
441	Present, but less than mass 443	11.1	
442	40.0 - 110.0% of mass 198	77.5	
443	15.0 - 24.0% of mass 442	15.1	(19.5)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-42274/2	0501002.D	05/01/2012	08:47
	ICV 240-42274/3	0501003.D	05/01/2012	09:05
	MB 240-41671/21-A	0501004.D	05/01/2012	09:23
	LCS 240-41671/22-A	0501005.D	05/01/2012	09:40
	240-10552-Q-15-A MS	0501025.D	05/01/2012	15:34
	240-10552-U-15-A MSD	0501026.D	05/01/2012	15:52
MT-MW04S	240-10598-2	0501029.D	05/01/2012	16:45
MT-MW06S	240-10598-3	0501030.D	05/01/2012	17:03

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42274/2 Calibration Date: 05/01/2012 08:47

Instrument ID: A4AG2 Calib Start Date: 04/30/2012 13:15

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/30/2012 15:37

Lab File ID: 0501002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5695	0.5365		9.42	10.0	-5.8	50.0
N-Nitrosodimethylamine	Ave	0.9727	0.8871		9.12	10.0	-8.8	50.0
Pyridine	Ave	1.519	1.492		9.82	10.0	-1.8	50.0
Ethyl methacrylate	Ave	1.232	1.144		9.29	10.0	-7.1	50.0
3-Chloropropionitrile	Ave	0.8311	0.7435		8.95	10.0	-10.5	50.0
Malononitrile	Qua		1.550		9.47	10.0	-5.3	50.0
Benzaldehyde	Ave	1.283	0.5752		4.48	10.0	-55.2*	50.0
Phenol	Ave	1.941	1.826		9.40	10.0	-6.0	20.0
Aniline	Ave	2.443	2.281		9.34	10.0	-6.6	50.0
Bis(2-chloroethyl)ether	Ave	1.673	1.608		9.62	10.0	-3.8	50.0
2-Chlorophenol	Ave	1.583	1.530		9.67	10.0	-3.3	50.0
1,3-Dichlorobenzene	Ave	1.578	1.534		9.72	10.0	-2.8	50.0
1,4-Dichlorobenzene	Ave	1.626	1.573		9.67	10.0	-3.3	50.0
Benzyl alcohol	Ave	1.031	0.9947		9.64	10.0	-3.6	50.0
1,2-Dichlorobenzene	Ave	1.477	1.471		9.96	10.0	-0.4	50.0
2-Methylphenol	Ave	1.429	1.418		9.92	10.0	-0.8	50.0
bis (2-chloroisopropyl) ether	Ave	1.954	1.740		8.90	10.0	-11.0	50.0
3 & 4 Methylphenol	Ave	1.552	1.476		9.51	10.0	-4.9	50.0
N-Nitrosodi-n-propylamine	Ave	1.129	1.028	0.0500	9.11	10.0	-8.9	50.0
Acetophenone	Ave	2.073	1.969		9.50	10.0	-5.0	50.0
Hexachloroethane	Ave	0.5884	0.5711		9.71	10.0	-2.9	50.0
Nitrobenzene	Ave	0.3725	0.3501		9.40	10.0	-6.0	50.0
Isophorone	Ave	0.7185	0.6609		9.20	10.0	-8.0	50.0
2,4-Dimethylphenol	Ave	0.3623	0.3428		9.46	10.0	-5.4	50.0
2-Nitrophenol	Ave	0.1926	0.1895		9.84	10.0	-1.6	20.0
1,3,5-Trichlorobenzene	Ave	0.2834	0.2766		9.76	10.0	-2.4	50.0
Bis(2-chloroethoxy)methane	Ave	0.4206	0.3929		9.34	10.0	-6.6	50.0
Benzoic acid	Qua		0.2078		17.7	20.0	-11.5	50.0
2,4-Dichlorophenol	Ave	0.2673	0.2706		10.1	10.0	1.2	20.0
1,2,4-Trichlorobenzene	Ave	0.2822	0.2771		9.82	10.0	-1.8	50.0
Naphthalene	Ave	1.129	1.064		9.43	10.0	-5.7	50.0
4-Chloroaniline	Ave	0.4756	0.4532		9.53	10.0	-4.7	50.0
Hexachlorobutadiene	Ave	0.1264	0.1237		9.79	10.0	-2.1	20.0
1,2,3-Trichlorobenzene	Ave	0.2653	0.2636		9.94	10.0	-0.6	50.0
Caprolactam	Qua		0.1304		8.96	10.0	-10.4	50.0
4-Chloro-3-methylphenol	Ave	0.3144	0.3081		9.80	10.0	-2.0	20.0
2-Methylnaphthalene	Ave	0.7092	0.6887		9.71	10.0	-2.9	50.0
1-Methylnaphthalene	Ave	0.6791	0.6501		9.57	10.0	-4.3	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4537	0.4525		9.97	10.0	-0.3	50.0
Hexachlorocyclopentadiene	Ave	0.2414	0.2513	0.0500	10.4	10.0	4.1	50.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-42274/3 Calibration Date: 05/01/2012 09:05

Instrument ID: A4AG2 Calib Start Date: 04/30/2012 13:15

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 04/30/2012 15:37

Lab File ID: 0501003.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5695	0.5708		10.0	10.0	0.2	50.0
N-Nitrosodimethylamine	Ave	0.9727	0.9032		9.29	10.0	-7.1	50.0
Pyridine	Ave	1.519	1.532		10.1	10.0	0.8	50.0
Ethyl methacrylate	Ave	1.232	1.194		9.70	10.0	-3.0	50.0
3-Chloropropionitrile	Ave	0.8311	0.7699		9.26	10.0	-7.4	50.0
Malononitrile	Qua		1.585		9.73	10.0	-2.7	50.0
Benzaldehyde	Ave	1.283	0.6291		4.90	10.0	-51.0*	50.0
Phenol	Ave	1.941	1.827		9.41	10.0	-5.9	20.0
Aniline	Ave	2.443	2.303		9.43	10.0	-5.7	50.0
Bis(2-chloroethyl)ether	Ave	1.673	1.621		9.69	10.0	-3.1	50.0
2-Chlorophenol	Ave	1.583	1.558		9.84	10.0	-1.6	50.0
1,3-Dichlorobenzene	Ave	1.578	1.567		9.93	10.0	-0.7	50.0
1,4-Dichlorobenzene	Ave	1.626	1.611		9.91	10.0	-0.9	20.0
Benzyl alcohol	Ave	1.031	0.9846		9.55	10.0	-4.5	50.0
1,2-Dichlorobenzene	Ave	1.477	1.490		10.1	10.0	0.9	50.0
2-Methylphenol	Ave	1.429	1.431		10.0	10.0	0.2	50.0
bis (2-chloroisopropyl) ether	Ave	1.954	1.755		8.98	10.0	-10.2	50.0
3 & 4 Methylphenol	Ave	1.552	1.495		9.63	10.0	-3.7	50.0
N-Nitrosodi-n-propylamine	Ave	1.129	1.041	0.0500	9.22	10.0	-7.8	50.0
Acetophenone	Ave	2.073	2.000		9.65	10.0	-3.5	50.0
Hexachloroethane	Ave	0.5884	0.5789		9.84	10.0	-1.6	50.0
Nitrobenzene	Ave	0.3725	0.3562		9.56	10.0	-4.4	50.0
Isophorone	Ave	0.7185	0.6691		9.31	10.0	-6.9	50.0
2,4-Dimethylphenol	Ave	0.3623	0.3453		9.53	10.0	-4.7	50.0
2-Nitrophenol	Ave	0.1926	0.1966		10.2	10.0	2.1	20.0
1,3,5-Trichlorobenzene	Ave	0.2834	0.2834		10.0	10.0	-0.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4206	0.4016		9.55	10.0	-4.5	50.0
Benzoic acid	Qua		0.2014		17.2	20.0	-14.0	50.0
2,4-Dichlorophenol	Ave	0.2673	0.2734		10.2	10.0	2.3	20.0
1,2,4-Trichlorobenzene	Ave	0.2822	0.2834		10.0	10.0	0.4	50.0
Naphthalene	Ave	1.129	1.096		9.70	10.0	-3.0	50.0
4-Chloroaniline	Ave	0.4756	0.4518		9.50	10.0	-5.0	50.0
Hexachlorobutadiene	Ave	0.1264	0.1288		10.2	10.0	1.9	20.0
1,2,3-Trichlorobenzene	Ave	0.2653	0.2680		10.1	10.0	1.0	50.0
Caprolactam	Qua		0.1313		9.03	10.0	-9.7	50.0
4-Chloro-3-methylphenol	Ave	0.3144	0.3094		9.84	10.0	-1.6	20.0
2-Methylnaphthalene	Ave	0.7092	0.6990		9.86	10.0	-1.4	50.0
1-Methylnaphthalene	Ave	0.6791	0.6603		9.72	10.0	-2.8	50.0
Hexachlorocyclopentadiene	Ave	0.2414	0.2610	0.0500	10.8	10.0	8.1	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4537	0.4620		10.2	10.0	1.8	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab File ID: 0501004.D Lab Sample ID: MB 240-41671/21-A

Matrix: Water Date Extracted: 04/26/2012 08:59

Instrument ID: A4AG2 Date Analyzed: 05/01/2012 09:23

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-41671/22-A	0501005.D	05/01/2012 09:40
	240-10552-Q-15-A MS	0501025.D	05/01/2012 15:34
	240-10552-U-15-A MSD	0501026.D	05/01/2012 15:52
MT-MW04S	240-10598-2	0501029.D	05/01/2012 16:45
MT-MW06S	240-10598-3	0501030.D	05/01/2012 17:03

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41671/21-A

Matrix: Water | Lab File ID: 0501004.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 04/26/2012 08:59

Sample wt/vol: 1000(mL) | Date Analyzed: 05/01/2012 09:23

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42274 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	47		28-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	45		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	45		27-111
4165-62-2	Phenol-d5 (Surr)	46		10-110
1718-51-0	Terphenyl-d14 (Surr)	66		37-119

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0501005.D

Lab ID: LCS 240-41671/22-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	13.0	65	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: STD6 240-42126/5 Date Analyzed: 04/30/2012 14:08

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0430005.D Heated Purge: (Y/N) N

Calibration ID: 8434

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		296592	3.68	1276255	4.59	695164	5.86
UPPER LIMIT		593184	4.18	2552510	5.09	1390328	6.36
LOWER LIMIT		148296	3.18	638128	4.09	347582	5.36
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42274/2 CCVIS		360379	3.58	1508108	4.47	812845	5.75
ICV 240-42274/3		356861	3.58	1483234	4.47	792419	5.75

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: STD6 240-42126/5 Date Analyzed: 04/30/2012 14:08

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0430005.D Heated Purge: (Y/N) N

Calibration ID: 8434

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1087336	6.96	992470	8.96	923665	10.52
UPPER LIMIT		2174672	7.46	1984940	9.46	1847330	11.02
LOWER LIMIT		543668	6.46	496235	8.46	461833	10.02
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42274/2 CCVIS		1259704	6.84	1089704	8.82	1027957	10.28
ICV 240-42274/3		1218080	6.84	1073389	8.82	992749	10.28

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: CCV 240-42274/2 Date Analyzed: 05/01/2012 08:47

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0501002.D Heated Purge: (Y/N) N

Calibration ID: 8434

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		360379	3.58	1508108	4.47	812845	5.75
UPPER LIMIT		720758	4.08	3016216	4.97	1625690	6.25
LOWER LIMIT		180190	3.08	754054	3.97	406423	5.25
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-41671/21-A		370468	3.58	1523922	4.47	835901	5.74
LCS 240-41671/22-A		357218	3.58	1488091	4.47	830775	5.75
240-10552-Q-15-A MS		373991	3.58	1524197	4.48	843121	5.75
240-10552-U-15-A MSD		303516	3.58	1275017	4.48	724837	5.75
240-10598-2	MT-MW04S	339346	3.58	1363317	4.47	715088	5.75
240-10598-3	MT-MW06S	423247	3.58	1566985	4.48	736253	5.75

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: CCV 240-42274/2 Date Analyzed: 05/01/2012 08:47

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0501002.D Heated Purge: (Y/N) N

Calibration ID: 8434

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1259704	6.84	1089704	8.82	1027957	10.28
UPPER LIMIT		2519408	7.34	2179408	9.32	2055914	10.78
LOWER LIMIT		629852	6.34	544852	8.32	513979	9.78
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-41671/21-A		1287166	6.84	1117554	8.81	1053124	10.28
LCS 240-41671/22-A		1296597	6.84	1135359	8.82	1065151	10.28
240-10552-Q-15-A MS		1324424	6.84	1203069	8.83	1118651	10.30
240-10552-U-15-A MSD		1156933	6.84	1084502	8.83	1040979	10.31
240-10598-2	MT-MW04S	1257376	6.84	1134277	8.83	1084082	10.30
240-10598-3	MT-MW06S	1457348	6.84	1290432	8.83	1211618	10.30

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

GC/MS SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Batch Number: 41671 Batch Start Date: 04/26/12 11:10 Batch Analyst: Matthews, Brandon

Batch Method: 3520C Batch End Date: 04/27/12 05:10

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	InitialAmount	FinalAmount	FirstAdjustpH	EXBNALCS1 00020	EXBNASURRW 00012
240-10598-L-2	MT-MW04S	3520C, 8270C	T	5 SU	1010 mL	2 mL	2 SU		1 mL
240-10598-J-3	MT-MW06S	3520C, 8270C	T	5 SU	980 mL	2 mL	2 SU		1 mL
240-10552-Q-15 MS		3520C, 8270C	T	7 SU	1050 mL	2 mL	2 SU	1 mL	1 mL
240-10552-U-15 MSD		3520C, 8270C	T	7 SU	1020 mL	2 mL	2 SU	1 mL	1 mL
MB 240-41671/21		3520C, 8270C		7 SU	1000 mL	2 mL	2 SU		1 mL
LCS 240-41671/22		3520C, 8270C		7 SU	1000 mL	2 mL	2 SU	1 mL	1 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	EXRESTEKSPKW 00010					
240-10598-L-2	MT-MW04S	3520C, 8270C	T						
240-10598-J-3	MT-MW06S	3520C, 8270C	T						
240-10552-Q-15 MS		3520C, 8270C	T	1 mL					
240-10552-U-15 MSD		3520C, 8270C	T	1 mL					
MB 240-41671/21		3520C, 8270C							
LCS 240-41671/22		3520C, 8270C		1 mL					

Batch Notes	
Acid used for pH adjust Lot #	178762
Batch Comment	s/s bpm
Na2SO4 Lot Number	275335
Prep Solvent Lot #	454500

Basis	Basis Description
T	Total/NA

Method 8015B - GRO

Gasoline Range Organics (GC) by Method 8015B

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MT-MW04S	240-10598-2	65
MT-MW06S	240-10598-3	64
	MB 240-42055/7	63
	LCS 240-42055/8	73
MT-MW04S MS	240-10598-2 MS	75
MT-MW04S MSD	240-10598-2 MSD	71

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Total Petroleum Hydrocarbons (C6-C10)	11.810	11.810	11.810	11.810	11.810	11.810					4.817 - 18.802	11.810
C6-C12	13.469	13.469	13.469	13.469	13.469	13.469					4.917 - 22.022	13.469
Trifluorotoluene (Surr)	9.768	9.772	9.769	9.772	9.771	9.774					9.522 - 10.022	9.771

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Total Petroleum Hydrocarbons (C6-C10)	Ave	31810312 471343808	64091921	113029874	235565977	346880438	100 1600	200	400	800	1200
C6-C12	Ave	37547242 517161889	72788086	126621830	259357128	381833988	100 1600	200	400	800	1200
Trifluorotoluene (Surr)	Ave	3841333 4831084	3750122	3958818	4240925	4607363	10.0 10.0	10.0	10.0	10.0	10.0

Curve Type Legend:
Ave = Average

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.81	4.82	18.80
C6-C12	13.47	4.92	22.02
Trifluorotoluene (Surr)	9.77	9.52	10.02

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: CCV 240-42055/6 Date Analyzed: 04/28/2012 16:30

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF042806.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.75		
UPPER LIMIT				9.85		
LOWER LIMIT				9.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-42055/6 CCVRT		04/28/2012 16:30	YF042806.D	9.75		
MB 240-42055/7		04/28/2012 17:07	YF042807.D	9.75		
LCS 240-42055/8		04/28/2012 17:45	YF042808.D	9.76		
240-10598-2	MT-MW04S	04/28/2012 18:22	YF042809.D	9.75		
240-10598-2 MS	MT-MW04S MS	04/28/2012 18:59	YF042810.D	9.75		
240-10598-2 MSD	MT-MW04S MSD	04/28/2012 19:36	YF042811.D	9.76		
240-10598-3	MT-MW06S	04/28/2012 20:13	YF042812.D	9.75		
CCV 240-42055/16		04/28/2012 22:43	YF042816.D	9.75		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42055/6 Calibration Date: 04/28/2012 16:30

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042806.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	319489		852	800	6.5	15.0
C6-C12	Ave	336931	355619		844	800	5.5	15.0
Trifluorotoluene (Surr)	Ave	420494	318723		7.58	10.0	-24.2*	15.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42055/6 Calibration Date: 04/28/2012 16:30

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042806.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.80	4.81	18.78
C6-C12	13.41	4.91	21.91
Trifluorotoluene (Surr)	9.75	9.50	10.00

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42055/16 Calibration Date: 04/28/2012 22:43

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042816.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	304088		811	800	1.4	15.0
C6-C12	Ave	336931	340309		808	800	1.0	15.0
Trifluorotoluene (Surr)	Ave	420494	314986		7.49	10.0	-25.1*	15.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42055/16 Calibration Date: 04/28/2012 22:43

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042816.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.80	4.81	18.78
C6-C12	13.41	4.91	21.91
Trifluorotoluene (Surr)	9.75	9.50	10.00

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: MB 240-42055/7

Matrix: Water Date Extracted: 04/28/2012 17:07

Lab File ID:(1) YF042807.D Lab File ID:(2)

Date Analyzed:(1) 04/28/2012 17:07 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-42055/8	04/28/2012 17:45	
MT-MW04S	240-10598-2	04/28/2012 18:22	
MT-MW04S MS	240-10598-2 MS	04/28/2012 18:59	
MT-MW04S MSD	240-10598-2 MSD	04/28/2012 19:36	
MT-MW06S	240-10598-3	04/28/2012 20:13	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42055/7

Matrix: Water | Lab File ID: YF042807.D

Analysis Method: 8015B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2012 17:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	32.9	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042808.D

Lab ID: LCS 240-42055/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	896	112	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042810.D

Lab ID: 240-10598-2 MS Client ID: MT-MW04S MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	49 J	963	114	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III

GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042811.D

Lab ID: 240-10598-2 MSD Client ID: MT-MW04S MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	930	110	4	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

Method 8015B - DRO

Diesel Range Organics (DRO) (GC) by Method 8015B

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-5 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	C91 #
MT-MW04S	240-10598-2	51
MT-MW06S	240-10598-3	44
	MB 240-41890/15-A	62
	LCS 240-41890/16-A	47

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Diesel	9.493	9.493	9.493	9.493	9.493						5.280 - 13.709	9.493
n-Nonane	4.296	4.295	4.296	4.296	4.298						4.246 - 4.346	4.296

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198430 174115	188482	182432	173562	Ave		183404.386				5.7		20.0			
n-Nonane	213382 212758	214563	217346	210050	Ave		213619.735				1.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10598-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Diesel	Ave	19843021	37696404	91215944	173562318	348230992	100	200	500	1000	2000
n-Nonane	Ave	2133821	4291261	10867284	21005029	42551511	10.0	20.0	50.0	100	200

Curve Type Legend:
Ave = Average

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-41691/9 Calibration Date: 04/26/2012 14:47

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04269.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	171101		467	500	-6.7	20.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICV 240-41691/9 Calibration Date: 04/26/2012 14:47

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04269.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.49	5.28	13.71

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Sample No.: CCVRT 240-42140/4 Date Analyzed: 04/30/2012 11:25

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm)

Lab File ID (Standard): P6F04304.D Heated Purge: (Y/N) N

Calibration ID: 8406

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				4.29		
UPPER LIMIT				4.39		
LOWER LIMIT				4.19		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-42140/4		04/30/2012 11:25	P6F04304.D	4.29		
240-10598-2	MT-MW04S	04/30/2012 13:30	P6F04308.D	4.29		
240-10598-3	MT-MW06S	04/30/2012 14:01	P6F04309.D	4.29		
MB 240-41890/15-A		04/30/2012 19:13	P6F04319.D	4.29		
LCS 240-41890/16-A		04/30/2012 19:44	P6F04320.D	4.29		
CCV 240-42140/21		04/30/2012 20:15	P6F04321.D	4.30		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCVRT 240-42140/4 Calibration Date: 04/30/2012 11:25

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04304.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	184302		502	500	0.5	15.0
n-Nonane	Ave	213620	221736		51.9	50.0	3.8	15.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCVRT 240-42140/4 Calibration Date: 04/30/2012 11:25

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04304.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.49	5.27	13.70
n-Nonane	4.29	4.24	4.34

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42140/21 Calibration Date: 04/30/2012 20:15

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04321.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	202278		552	500	10.3	15.0
n-Nonane	Ave	213620	238934		55.9	50.0	11.8	15.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: CCV 240-42140/21 Calibration Date: 04/30/2012 20:15

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04321.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.49	5.27	13.70
n-Nonane	4.30	4.24	4.34

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: MB 240-41890/15-A

Matrix: Water Date Extracted: 04/27/2012 10:39

Lab File ID:(1) P6F04319.D Lab File ID:(2)

Date Analyzed:(1) 04/30/2012 19:13 Date Analyzed:(2)

Instrument ID:(1) A2HP6F Instrument ID:(2)

GC Column:(1) RTX-5 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MT-MW04S	240-10598-2	04/30/2012 13:30	
MT-MW06S	240-10598-3	04/30/2012 14:01	
	LCS 240-41890/16-A	04/30/2012 19:44	

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10598-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41890/15-A

Matrix: Water | Lab File ID: P6F04319.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3520C | Date Extracted: 04/27/2012 10:39

Sample wt/vol: 1000(mL) | Date Analyzed: 04/30/2012 19:13

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42140 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	422	J	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	62		10-110

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P6F04320.D

Lab ID: LCS 240-41890/16-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	1860	74	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

DIESEL RANGE ORGANICS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

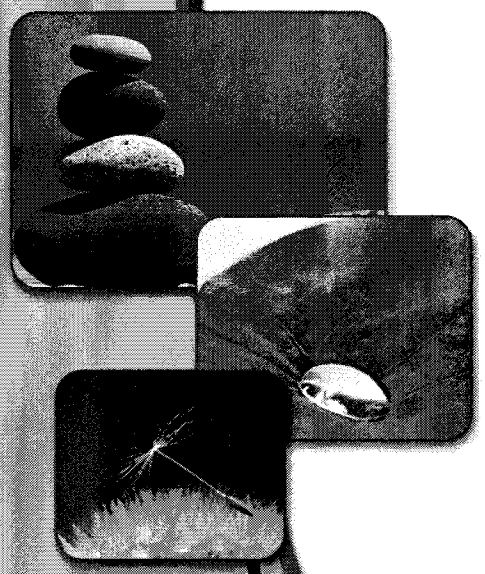
Batch Number: 41890 Batch Start Date: 04/27/12 12:00 Batch Analyst: Kendall, Aaron

Batch Method: 3520C Batch End Date: 04/28/12 06:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	ReceivedpH	FirstAdjustpH	EXDIESELSPKW 00015	EXTPHSURR 00011
240-10598-K-2	MT-MW04S	3520C, 8015B	T	1020 mL	5 mL	6	2		1 mL
240-10598-I-3	MT-MW06S	3520C, 8015B	T	1010 mL	5 mL	5	2		1 mL
MB 240-41890/15		3520C, 8015B		1000 mL	5 mL	7	2		1 mL
LCS 240-41890/16		3520C, 8015B		1000 mL	5 mL	7	2	1 mL	1 mL

Batch Notes	
Na2SO4 Lot Number	275338
Prep Solvent Lot #	454506

Basis	Basis Description
T	Total/NA



TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

ANALYTICAL REPORT

TestAmerica Laboratories, Inc.
TestAmerica West Sacramento
880 Riverside Parkway
West Sacramento, CA 95605
Tel: (916)373-5600

TestAmerica Job ID: G2D270498
Client Project/Site: 240-10598
Client Project Description: 240-10598/MSA GW

For:
TestAmerica North Canton
4101 Shuffel Street NW
North Canton, OH 44720

Attn: Patrick Omeara

Authorized for release by:
5/11/2012 4:54:37 PM

Karen Dahl
Project Manager
karen.dahl@testamericainc.com

LINKS

Review your project results through TotalAccess

Have a Question? Ask The Expert

Visit us at: www.testamericainc.com

This report has been electronically signed and authorized by the signatory. Electronic signature is intended to be the legally binding equivalent of a traditionally handwritten signature.

Results relate only to the items tested and the sample(s) as received by the laboratory.

Case Narrative

TestAmerica West Sacramento Project Number G2D270498

WATER, 6850, Perchlorate
Sample(s): 1, 1, 1, 2
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTAGP1AC
SMCS: MTAGP1AD

There were no other anomalies associated with this project.

ANALYTICAL METHODS SUMMARY

G2D270498

PARAMETER	ANALYTICAL METHOD
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

QC DATA ASSOCIATION SUMMARY

G2D270498

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6850		2122104	2122054
002	WATER	SW846 6850		2122104	2122054

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D270498 **Work Order #...:** MTAGP1AA **Matrix.....:** WATER
MB Lot-Sample #: G2E010000-104

Prep Date.....: 05/01/12
Analysis Date..: 05/04/12 **Prep Batch #...:** 2122104
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D270498 **Work Order #...:** MTAGP1AC **Matrix.....:** WATER
LCS Lot-Sample#: G2E010000-104
Prep Date.....: 05/01/12 **Analysis Date..:** 05/04/12
Prep Batch #...: 2122104
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	**95**	**(80 - 120)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D270498 **Work Order #...:** MTAGP1AD **Matrix.....:** WATER
LCS Lot-Sample#: G2E010000-104
Prep Date.....: 05/01/12 **Analysis Date..:** 05/04/12
Prep Batch #...: 2122104
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	**100**	**(80 - 120)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2D270498 **Work Order #...:** MR86V1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G2D270498-001 MR86V1AD-MSD
Date Sampled...: 04/24/12 **Date Received..:** 04/27/12
Prep Date.....: 05/01/12 **Analysis Date..:** 05/04/12
Prep Batch #...: 2122104
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	**100**	**(80 - 120)**			**SW846 6850**
	97	**(80 - 120)**	**2.5**	**(0-15)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
04MAY12-perc-005.d	Blank No IS	P2-A5		Sample	5/4/2012 13:46
04MAY12-perc-006.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/4/2012 14:02
04MAY12-perc-007.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-B2	1	Calibration	5/4/2012 14:19
04MAY12-perc-008.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/4/2012 14:35
04MAY12-perc-009.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/4/2012 14:51
04MAY12-perc-010.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/4/2012 15:07
04MAY12-perc-011.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/4/2012 15:23
04MAY12-perc-012.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/4/2012 15:40
04MAY12-perc-013.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/4/2012 15:56
04MAY12-perc-014.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/4/2012 16:12
04MAY12-perc-015.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/4/2012 16:28
04MAY12-perc-016.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/4/2012 16:45
04MAY12-perc-017.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/4/2012 17:01
04MAY12-perc-018.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/4/2012 17:17
04MAY12-perc-019.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/4/2012 17:33
04MAY12-perc-020.d	G2E010000-MB, 2122104, 2.00mL/2.00mL, 6850-L	P1-A1		Sample	5/4/2012 17:49
04MAY12-perc-021.d	G2E010000-LCS, 2122104, 2.00mL/2.00mL	P1-A2	LCS_5	QC	5/4/2012 18:06
04MAY12-perc-022.d	G2E010000-SMCS, 2122104, 2.00mL/2.00mL	P1-A3	LCS_5	QC	5/4/2012 18:22
04MAY12-perc-023.d	G2D270498-1, 2122104, - *IS missing-see RI*	P1-A4		Sample	5/4/2012 18:38
04MAY12-perc-024.d	G2D270498-1MS, 2122104, 2.00mL/2.00mL,	P1-A5	MS_5	QC	5/4/2012 18:54
04MAY12-perc-025.d	G2D270498-1SD, 2122104, 2.00mL/2.00mL,	P1-A6	MS_5	QC	5/4/2012 19:10
04MAY12-perc-026.d	G2D270498-2, 2122104, 2.00mL/2.00mL,	P1-A7		Sample	5/4/2012 19:27
04MAY12-perc-027.d	G2D270500-1, 2122104, 2.00mL/2.00mL,	P1-A8		Sample	5/4/2012 19:43
04MAY12-perc-028.d	G2D300415-1, 2122104, *- IS failed criteria - see 5x dilution*	P1-A9		Sample	5/4/2012 19:59
04MAY12-perc-029.d	G2D300415-2, 2122104, *- IS failed criteria - see 5x dilution*	P1-B1		Sample	5/4/2012 20:15
04MAY12-perc-030.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/4/2012 20:32
04MAY12-perc-031.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/4/2012 20:48

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373 - 5600 Page 880 of 991
05/15/2013 28 of 124

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

04MAY12-perc-032.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/4/2012 21:04
04MAY12-perc-033.d	G2D300000-MB, 2121147, 3.00g/10mL, 6850-DOD-S	P1-B2		Sample	5/4/2012 21:20
04MAY12-perc-034.d	G2D300000-LCS, 2121147, 3.00g/10mL,	P1-B3	LCS_5	QC	5/4/2012 21:36
04MAY12-perc-035.d	G2D300000-SMCS, 2121147, 3.00g/10mL,	P1-B4	LCS_5	QC	5/4/2012 21:53
04MAY12-perc-036.d	G2D240413-1, 2121147, 3.00g/10mL,	P1-B5		Sample	5/4/2012 22:09
04MAY12-perc-037.d	G2D240413-1MS, 2121147, 3.04g/10mL,	P1-B6	MS_5	QC	5/4/2012 22:25
04MAY12-perc-038.d	G2D240413-1SD, 2121147, 3.06g/10mL,	P1-B7	MS_5	QC	5/4/2012 22:41
04MAY12-perc-039.d	G2D240413-2, 2121147, 2.99g/10mL,	P1-B8		Sample	5/4/2012 22:58
04MAY12-perc-040.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/4/2012 23:14
04MAY12-perc-041.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/4/2012 23:30
04MAY12-perc-042.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/4/2012 23:46
04MAY12-perc-043.d	G2E020000-MB, 2123122, 3.00g/10mL, 6850-DOD-S	P1-B9		Sample	5/5/2012 00:02
04MAY12-perc-044.d	G2E020000-LCS, 2123122, 3.00g/10mL,	P1-C1	LCS_5	QC	5/5/2012 00:19
04MAY12-perc-045.d	G2E020000-SMCS, 2123122, 3.00g/10mL,	P1-C2	LCS_5	QC	5/5/2012 00:35
04MAY12-perc-046.d	G2D270504-1, 2123122, 3.00g/10mL,	P1-C3		Sample	5/5/2012 00:51
04MAY12-perc-047.d	G2D270504-2, 2123122, 3.01g/10mL,	P1-C4		Sample	5/5/2012 01:07
04MAY12-perc-048.d	G2D270504-3, 2123122, 3.00g/10mL,	P1-C5		Sample	5/5/2012 01:24
04MAY12-perc-049.d	G2D270504-4, 2123122, 3.09g/10mL,	P1-C6		Sample	5/5/2012 01:40
04MAY12-perc-050.d	G2D270504-5, 2123122, 3.01g/10mL,	P1-C7		Sample	5/5/2012 01:56
04MAY12-perc-051.d	G2D270504-6, 2123122, 3.10g/10mL,	P1-C8		Sample	5/5/2012 02:12
04MAY12-perc-052.d	G2D270504-7, 2123122, 3.06g/10mL,	P1-C9		Sample	5/5/2012 02:28
04MAY12-perc-053.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/5/2012 02:45
04MAY12-perc-054.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/5/2012 03:01
04MAY12-perc-055.d	G2D270504-8, 2123122, 3.07g/10mL,	P1-D1		Sample	5/5/2012 03:17
04MAY12-perc-056.d	G2D270504-9, 2123122, 3.01g/10mL,	P1-D2		Sample	5/5/2012 03:33
04MAY12-perc-057.d	G2D270504-10, 2123122, 3.03g/10mL,	P1-D3		Sample	5/5/2012 03:50
04MAY12-perc-058.d	G2D270504-10MS, 2123122, 3.05g/10mL,	P1-D4	MS_5	QC	5/5/2012 04:06
04MAY12-perc-059.d	G2D270504-10SD, 2123122, 3.07g/10mL,	P1-D5	MS_5	QC	5/5/2012 04:22
04MAY12-perc-060.d	G2D270504-11, 2123122, 3.00g/10mL,	P1-D6		Sample	5/5/2012 04:38
04MAY12-perc-061.d	G2D270504-12, 2123122, 3.01g/10mL,	P1-D7		Sample	5/5/2012 04:54

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

04MAY12-perc-062.d	G2D270504-13, 2123122, 3.04g/10mL,	P1-D8		Sample	5/5/2012 05:11
04MAY12-perc-063.d	G2D270504-14, 2123122, 3.04g/10mL,	P1-D9		Sample	5/5/2012 05:27
04MAY12-perc-064.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/5/2012 05:43
04MAY12-perc-065.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/5/2012 05:59
04MAY12-perc-066.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/5/2012 06:15
04MAY12-perc-067.d	G2E020000-MB, 2123123, 3.00g/10mL, 6850-DOD-S	P1-E1		Sample	5/5/2012 06:32
04MAY12-perc-068.d	G2E020000-LCS, 2123123, 3.00g/10mL,	P1-E2	LCS_5	QC	5/5/2012 06:48
04MAY12-perc-069.d	G2E020000-SMCS, 2123123, 3.00g/10mL,	P1-E3	LCS_5	QC	5/5/2012 07:04
04MAY12-perc-070.d	G2D270504-15, 2123123, 3.08g/10mL,	P1-E4		Sample	5/5/2012 07:20
04MAY12-perc-071.d	G2D270504-15MS, 2123123, 3.00g/10mL,	P1-E5	MS_5	QC	5/5/2012 07:36
04MAY12-perc-072.d	G2D270504-15SD, 2123123, 3.01g/10mL,	P1-E6	MS_5	QC	5/5/2012 07:53
04MAY12-perc-073.d	G2D270504-16, 2123123, 3.09g/10mL,	P1-E7		Sample	5/5/2012 08:09
04MAY12-perc-074.d	G2D270504-17, 2123123, 3.03g/10mL,	P1-E8		Sample	5/5/2012 08:25
04MAY12-perc-075.d	G2D270504-18, 2123123, 3.00g/10mL,	P1-E9		Sample	5/5/2012 08:41
04MAY12-perc-076.d	G2D270504-19, 2123123, 3.08g/10mL,	P1-F1		Sample	5/5/2012 08:58
04MAY12-perc-077.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/5/2012 09:14
04MAY12-perc-078.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/5/2012 09:30
04MAY12-perc-079.d	G2D270504-20, 2123123, 3.04g/10mL,	P1-F2		Sample	5/5/2012 09:46
04MAY12-perc-080.d	G2D270504-21, 2123123, 3.05g/10mL,	P1-F3		Sample	5/5/2012 10:02
04MAY12-perc-081.d	G2D270504-22, 2123123, 3.08g/10mL,	P1-F4		Sample	5/5/2012 10:19
04MAY12-perc-082.d	G2D270504-23, 2123123, 3.00g/10mL,	P1-F5		Sample	5/5/2012 10:35
04MAY12-perc-083.d	G2D270504-24, 2123123, 3.03g/10mL,	P1-F6		Sample	5/5/2012 10:51
04MAY12-perc-084.d	G2D270504-25, 2123123, 3.02g/10mL,	P1-F7		Sample	5/5/2012 11:07
04MAY12-perc-085.d	G2D270504-26, 2123123, 3.01g/10mL,	P1-F8		Sample	5/5/2012 11:23
04MAY12-perc-086.d	G2D270504-27, 2123123, 3.02g/10mL,	P1-F9		Sample	5/5/2012 11:40
04MAY12-perc-087.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/5/2012 11:56
04MAY12-perc-088.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/5/2012 12:12
04MAY12-perc-089.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/5/2012 12:28

TestAmerica West Sacramento (916) 373 - 5600 Page 892 of 991
05/15/2012 30 of 124

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\07MAY2012\QuantResults\07May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
07MAY12-perc-005.d	Blank No IS	P2-A5		Sample	5/7/2012 13:21
07MAY12-perc-006.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/7/2012 13:37
07MAY12-perc-007.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-B2	1	Calibration	5/7/2012 13:53
07MAY12-perc-008.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/7/2012 14:09
07MAY12-perc-009.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/7/2012 14:26
07MAY12-perc-010.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/7/2012 14:42
07MAY12-perc-011.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/7/2012 14:58
07MAY12-perc-012.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/7/2012 15:14
07MAY12-perc-013.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/7/2012 15:31
07MAY12-perc-014.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/7/2012 15:47
07MAY12-perc-015.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/7/2012 16:03
07MAY12-perc-016.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/7/2012 16:19
07MAY12-perc-017.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/7/2012 16:35
07MAY12-perc-018.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/7/2012 16:52
07MAY12-perc-019.d ✓	G2D270498-1, 2122104, 2.00mL/2.00mL, RI	P1-A1		Sample	5/7/2012 17:08
07MAY12-perc-020.d	G2D300415-1, 2122104, 2.00mL/2.00mL, 5x	P1-A2		Sample	5/7/2012 17:24
07MAY12-perc-021.d	G2D300415-2, 2122104, 2.00mL/2.00mL, 5x	P1-A3		Sample	5/7/2012 17:40
07MAY12-perc-022.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/7/2012 17:57
07MAY12-perc-023.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/7/2012 18:13
07MAY12-perc-024.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/7/2012 18:29

TestAmerica West Sacramento (916) 373 - 5600

ICAL Data

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-04 12:21		
Data Path	D:\MassHunter\Tune\QQQ\atunes.TUNE.XML		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.10	0.00	Pass	0.69	0.70	0.10	-0.01	Pass	47276	0	Pass
301.98	302.00	0.10	-0.02	Pass	0.71	0.70	0.10	0.01	Pass	272911	0	Pass
601.96	601.98	0.10	-0.02	Pass	0.69	0.70	0.10	-0.01	Pass	700864	0	Pass
1033.94	1033.99	0.10	-0.05	Pass	0.70	0.70	0.10	0.00	Pass	309536	0	Pass
1333.93	1333.97	0.10	-0.04	Pass	0.68	0.70	0.10	-0.02	Pass	488183	0	Pass
1633.91	1633.95	0.10	-0.04	Pass	0.72	0.70	0.10	0.02	Pass	427994	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.00	112.99	0.10	0.01	Pass	0.71	0.70	0.10	0.01	Pass	175059	0	Pass
301.99	302.00	0.10	-0.01	Pass	0.71	0.70	0.10	0.01	Pass	260034	0	Pass
601.99	601.98	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	392769	0	Pass
1034.00	1033.99	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	166060	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	412304	0	Pass
1633.94	1633.95	0.10	-0.01	Pass	0.67	0.70	0.10	-0.03	Pass	301887	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.01	112.99	0.30	0.02	Pass	1.17	1.20	0.60	-0.03	Pass	54893	0	Pass
301.93	302.00	0.30	-0.07	Pass	1.29	1.20	0.60	0.09	Pass	397274	0	Pass
601.92	601.98	0.30	-0.06	Pass	1.31	1.20	0.60	0.11	Pass	1215911	0	Pass
1033.91	1033.99	0.30	-0.08	Pass	1.30	1.20	0.60	0.10	Pass	637311	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.28	1.20	0.60	0.08	Pass	1184873	0	Pass
1633.89	1633.95	0.30	-0.06	Pass	1.20	1.20	0.60	0.00	Pass	1165571	0	Pass

TestAmerica West Sacramento (916) 373 - 5600

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.03	112.99	0.30	0.04	Pass	1.18	1.20	0.60	-0.02	Pass	230119	0	Pass
301.97	302.00	0.30	-0.03	Pass	1.23	1.20	0.60	0.03	Pass	386564	0	Pass
601.93	601.98	0.30	-0.05	Pass	1.25	1.20	0.60	0.05	Pass	624630	0	Pass
1033.94	1033.99	0.30	-0.05	Pass	1.25	1.20	0.60	0.05	Pass	318821	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.26	1.20	0.60	0.06	Pass	751870	0	Pass
1633.92	1633.95	0.30	-0.03	Pass	1.25	1.20	0.60	0.05	Pass	591402	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.78	2.50	1.25	0.28	Pass	63235	0	Pass
301.86	302.00	0.50	-0.14	Pass	2.86	2.50	1.25	0.36	Pass	473017	0	Pass
601.88	601.98	0.50	-0.10	Pass	2.86	2.50	1.25	0.36	Pass	1348564	0	Pass
1033.92	1033.99	0.50	-0.07	Pass	2.77	2.50	1.25	0.27	Pass	850342	0	Pass
1333.97	1333.97	0.50	0.00	Pass	2.69	2.50	1.25	0.19	Pass	1720350	0	Pass
1633.98	1633.95	0.50	0.03	Pass	2.58	2.50	1.25	0.08	Pass	1899649	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.58	2.50	1.25	0.08	Pass	280008	0	Pass
301.92	302.00	0.50	-0.08	Pass	2.57	2.50	1.25	0.07	Pass	527407	0	Pass
601.91	601.98	0.50	-0.07	Pass	2.54	2.50	1.25	0.04	Pass	998661	0	Pass
1034.00	1033.99	0.50	0.01	Pass	2.46	2.50	1.25	-0.04	Pass	627135	0	Pass
1333.96	1333.97	0.50	-0.01	Pass	2.47	2.50	1.25	-0.03	Pass	1540124	0	Pass
1634.02	1633.95	0.50	0.07	Pass	2.41	2.50	1.25	-0.09	Pass	1445837	0	Pass

[1] *NOTE* *1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Info

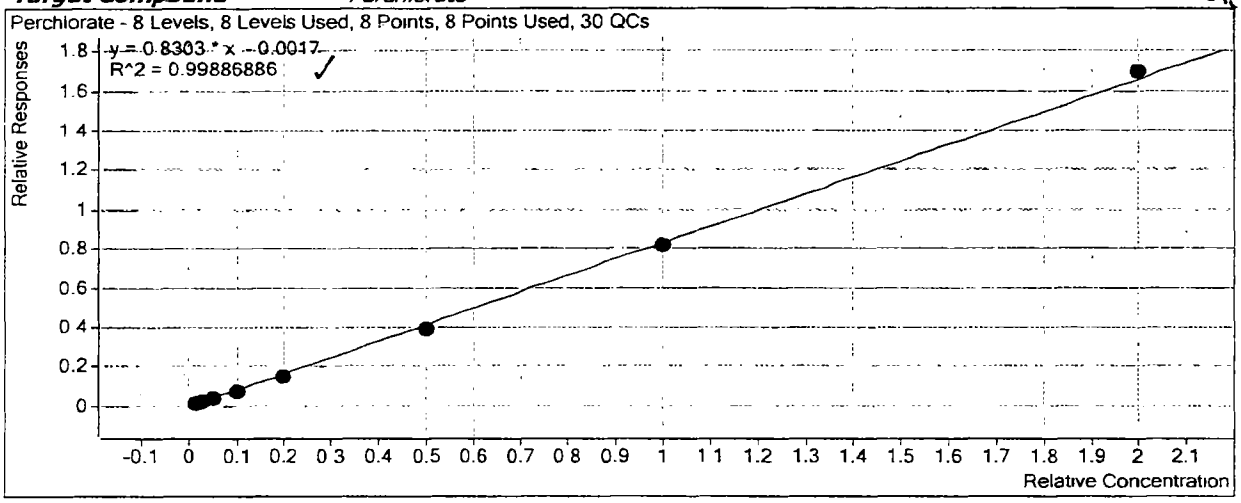
Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml		
Analysis Time	5/7/2012 7:54 AM	**Analyst Name**	lores
Report Time	5/7/2012 8:02 AM	**Reporter Name**	lores
Last Calib Update	5/7/2012 7:54 AM	**Batch State**	Processed

Calibration Info Linear fit, 1/x weighting, and origin ignored.

m 5/9/12

DCL 5-7-12

Target Compound *Perchlorate*



Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
04MAY12-perc-007.d	1	☑	2556	0.7938	0.1500
04MAY12-perc-008.d	2	☑	3716	0.8134	0.3000
04MAY12-perc-009.d	3	☑	6142	0.7990	0.5000
04MAY12-perc-010.d	4	☑	12141	0.7713	1.0000
04MAY12-perc-011.d	5	☑	24634	0.7678	2.0000
04MAY12-perc-012.d	6	☑	59680	0.7879	5.0000
04MAY12-perc-013.d	7	☑	128590	0.8176	10.0000
04MAY12-perc-014.d	8	☑	216604	0.8507	20.0000
04MAY12-perc-018.d	CCV3	☑	6508	0.7991	0.5000
04MAY12-perc-031.d	CCV3	☑	4954	0.7617	0.5000
04MAY12-perc-030.d	CCV5	☑	18265	0.8103	2.0000
04MAY12-perc-053.d	CCV5	☑	22923	0.7848	2.0000
04MAY12-perc-077.d	CCV5	☑	23800	0.7832	2.0000
04MAY12-perc-017.d	CCV6	☑	65545	0.8005	5.0000
04MAY12-perc-040.d	CCV6	☑	57437	0.7933	5.0000
04MAY12-perc-064.d	CCV6	☑	56986	0.8166	5.0000
04MAY12-perc-087.d	CCV6	☑	57822	0.8078	5.0000
04MAY12-perc-016.d	ICV	☑	74936	0.8309	5.0000
04MAY12-perc-021.d	LCS_5	☑	52596	0.7880	5.0000
04MAY12-perc-022.d	LCS_5	☑	52815	0.8303	5.0000
04MAY12-perc-034.d	LCS_5	☑	19193	0.2341	5.0000
04MAY12-perc-035.d	LCS_5	☑	17969	0.2372	5.0000
04MAY12-perc-044.d	LCS_5	☑	18559	0.2333	5.0000
04MAY12-perc-045.d	LCS_5	☑	17619	0.2266	5.0000
04MAY12-perc-068.d	LCS_5	☑	17642	0.2325	5.0000
04MAY12-perc-069.d	LCS_5	☑	17538	0.2352	5.0000
04MAY12-perc-019.d	LODV	☑	1905	0.8366	0.1500
04MAY12-perc-041.d	LODV	☑	1678	0.7868	0.1500
04MAY12-perc-065.d	LODV	☑	1729	0.7748	0.1500
04MAY12-perc-088.d	LODV	☑	1952	0.8471	0.1500
04MAY12-perc-024.d	MS_5	☑	53221	0.8226	5.0000
04MAY12-perc-025.d	MS_5	☑	39719	0.8019	5.0000
04MAY12-perc-037.d	MS_5	☑	15926	0.2439	5.0000
04MAY12-perc-038.d	MS_5	☑	16294	0.2398	5.0000
04MAY12-perc-058.d	MS_5	☑	22072	0.3207	5.0000
04MAY12-perc-059.d	MS_5	☑	22495	0.3453	5.0000
04MAY12-perc-071.d	MS_5	☑	15760	0.2464	5.0000
04MAY12-perc-072.d	MS_5	☑	18578	0.2493	5.0000

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate-(35Cl18O4)*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
04MAY12-perc-007.d	1	☑	214678	21467.8200	10.0000
04MAY12-perc-008.d	2	☑	152282	15228.1955	10.0000
04MAY12-perc-009.d	3	☑	153759	15375.9420	10.0000
04MAY12-perc-010.d	4	☑	157412	15741.2495	10.0000
04MAY12-perc-011.d	5	☑	160423	16042.3023	10.0000
04MAY12-perc-012.d	6	☑	151483	15148.3132	10.0000
04MAY12-perc-013.d	7	☑	157276	15727.6221	10.0000
04MAY12-perc-014.d	8	☑	127308	12730.7669	10.0000
04MAY12-perc-018.d	CCV3	☑	162869	16286.9092	10.0000
04MAY12-perc-031.d	CCV3	☑	130082	13008.1719	10.0000
04MAY12-perc-030.d	CCV5	☑	112705	11270.4702	10.0000
04MAY12-perc-053.d	CCV5	☑	146039	14603.9196	10.0000
04MAY12-perc-077.d	CCV5	☑	151937	15193.7214	10.0000
04MAY12-perc-017.d	CCV6	☑	163763	16376.2776	10.0000
04MAY12-perc-040.d	CCV6	☑	144799	14479.8704	10.0000
04MAY12-perc-064.d	CCV6	☑	139577	13957.7259	10.0000
04MAY12-perc-087.d	CCV6	☑	143153	14315.2820	10.0000
04MAY12-perc-016.d	ICV	☑	180367	18036.7158	10.0000
04MAY12-perc-021.d	LCS_5	☑	133495	13349.5034	10.0000
04MAY12-perc-022.d	LCS_5	☑	127219	12721.8618	10.0000
04MAY12-perc-034.d	LCS_5	☑	163995	16399.5129	10.0000
04MAY12-perc-035.d	LCS_5	☑	151525	15152.4519	10.0000
04MAY12-perc-044.d	LCS_5	☑	159073	15907.3269	10.0000
04MAY12-perc-045.d	LCS_5	☑	155481	15548.0511	10.0000
04MAY12-perc-068.d	LCS_5	☑	151757	15175.7361	10.0000
04MAY12-perc-069.d	LCS_5	☑	149103	14910.3263	10.0000
04MAY12-perc-019.d	LODV	☑	151824	15182.3853	10.0000
04MAY12-perc-041.d	LODV	☑	142211	14221.1355	10.0000
04MAY12-perc-065.d	LODV	☑	148755	14875.5092	10.0000
04MAY12-perc-088.d	LODV	☑	153604	15360.3929	10.0000
04MAY12-perc-024.d	MS_5	☑	129389	12938.8979	10.0000
04MAY12-perc-025.d	MS_5	☑	99068	9906.7834	10.0000
04MAY12-perc-037.d	MS_5	☑	130602	13060.1589	10.0000
04MAY12-perc-038.d	MS_5	☑	135881	13588.0962	10.0000
04MAY12-perc-058.d	MS_5	☑	137638	13763.7587	10.0000
04MAY12-perc-059.d	MS_5	☑	130306	13030.5854	10.0000
04MAY12-perc-071.d	MS_5	☑	127944	12794.3806	10.0000
04MAY12-perc-072.d	MS_5	☑	149059	14905.9329	10.0000

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/4/2012 16:45
Analyst	lores
Data File	04MAY12-perc-016 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850IC_00001 12LCMS0073, 5 0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5.00
Injection Volume	50

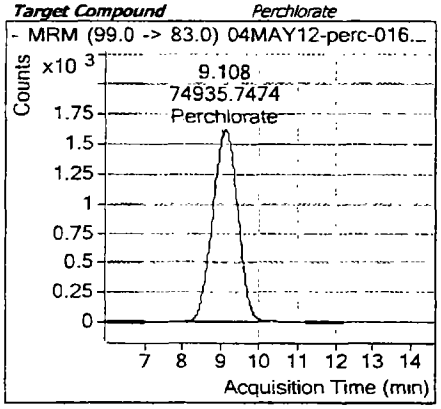
Quantitation Results

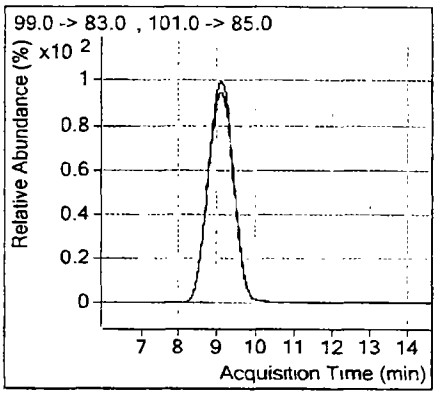
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 108	74936	99	83	**5.02496**	**5.02496**	1
Perchlorate-(35Cl18O4)	ISTD	9 101	180367	107	89			1
							0.5 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	24551	101	85	3.05	2.30	3 80	In Control
Perchlorate-(35Cl18O4)	57011	109	91	3 16	2 30	3.80	In Control

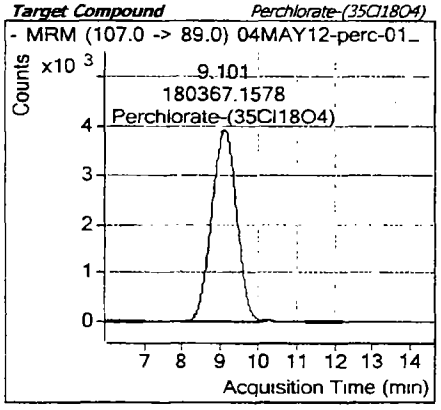
Compound Graphics

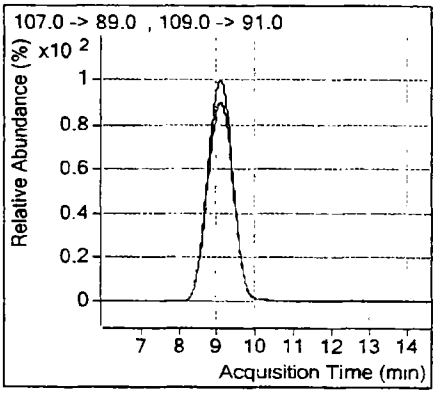
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





DF 5-7-12
MB 5/9/12

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-07 12:03		
Data Path	D:\MassHunter\Tune\QQQ\atunes.TUNE.XML		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.10	0.00	Pass	0.68	0.70	0.10	-0.02	Pass	85823	0	Pass
301.98	302.00	0.10	-0.02	Pass	0.71	0.70	0.10	0.01	Pass	369624	0	Pass
601.93	601.98	0.10	-0.05	Pass	0.68	0.70	0.10	-0.02	Pass	878232	0	Pass
1033.92	1033.99	0.10	-0.07	Pass	0.70	0.70	0.10	0.00	Pass	435063	0	Pass
1333.90	1333.97	0.10	-0.07	Pass	0.70	0.70	0.10	0.00	Pass	698780	0	Pass
1633.89	1633.95	0.10	-0.06	Pass	0.73	0.70	0.10	0.03	Pass	606348	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.01	112.99	0.10	0.02	Pass	0.68	0.70	0.10	-0.02	Pass	257229	0	Pass
302.01	302.00	0.10	0.01	Pass	0.68	0.70	0.10	-0.02	Pass	299611	0	Pass
602.00	601.98	0.10	0.02	Pass	0.67	0.70	0.10	-0.03	Pass	405527	0	Pass
1034.01	1033.99	0.10	0.02	Pass	0.71	0.70	0.10	0.01	Pass	205063	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	536959	0	Pass
1633.95	1633.95	0.10	0.00	Pass	0.68	0.70	0.10	-0.02	Pass	387382	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.30	0.00	Pass	1.19	1.20	0.60	-0.01	Pass	96529	0	Pass
301.93	302.00	0.30	-0.07	Pass	1.29	1.20	0.60	0.09	Pass	512492	0	Pass
601.92	601.98	0.30	-0.06	Pass	1.30	1.20	0.60	0.10	Pass	1325802	0	Pass
1033.86	1033.99	0.30	-0.13	Pass	1.33	1.20	0.60	0.13	Pass	783960	0	Pass
1333.85	1333.97	0.30	-0.12	Pass	1.32	1.20	0.60	0.12	Pass	1514499	0	Pass
1633.84	1633.95	0.30	-0.11	Pass	1.25	1.20	0.60	0.05	Pass	1521112	0	Pass

TestAmerica West Sacramento (916) 373 - 5600

QQQ Checktune Report

Analyzer: ***MS2*** ***Polarity:*** ***Negative*** ***Width:*** ***Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.04	112.99	0.30	0.05	Pass	1.15	1.20	0.60	-0.05	Pass	330523	0	Pass
302.01	302.00	0.30	0.01	Pass	1.23	1.20	0.60	0.03	Pass	411587	0	Pass
601.95	601.98	0.30	-0.03	Pass	1.24	1.20	0.60	0.04	Pass	622743	0	Pass
1033.96	1033.99	0.30	-0.03	Pass	1.26	1.20	0.60	0.06	Pass	377628	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.27	1.20	0.60	0.07	Pass	964886	0	Pass
1633.92	1633.95	0.30	-0.03	Pass	1.25	1.20	0.60	0.05	Pass	767525	0	Pass

Analyzer: ***MS1*** ***Polarity:*** ***Negative*** ***Width:*** ***Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.90	112.99	0.50	-0.09	Pass	2.76	2.50	1.25	0.26	Pass	115158	0	Pass
301.88	302.00	0.50	-0.12	Pass	2.84	2.50	1.25	0.34	Pass	743221	0	Pass
601.87	601.98	0.50	-0.11	Pass	2.90	2.50	1.25	0.40	Pass	1670203	0	Pass
1033.88	1033.99	0.50	-0.11	Pass	2.82	2.50	1.25	0.32	Pass	1134757	0	Pass
1333.91	1333.97	0.50	-0.06	Pass	2.71	2.50	1.25	0.21	Pass	2363493	0	Pass
1633.95	1633.95	0.50	0.00	Pass	2.58	2.50	1.25	0.08	Pass	2594574	0	Pass

Analyzer: ***MS2*** ***Polarity:*** ***Negative*** ***Width:*** ***Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.91	112.99	0.50	-0.08	Pass	2.53	2.50	1.25	0.03	Pass	429984	0	Pass
301.94	302.00	0.50	-0.06	Pass	2.56	2.50	1.25	0.06	Pass	615163	0	Pass
601.92	601.98	0.50	-0.06	Pass	2.53	2.50	1.25	0.03	Pass	1062354	0	Pass
1034.02	1033.99	0.50	0.03	Pass	2.40	2.50	1.25	-0.10	Pass	789048	0	Pass
1333.94	1333.97	0.50	-0.03	Pass	2.51	2.50	1.25	0.01	Pass	1982928	0	Pass
1634.02	1633.95	0.50	0.07	Pass	2.42	2.50	1.25	-0.08	Pass	1830234	0	Pass

' NOTE 1) *Actual abundances depend on many factors and are instrument specific*
To change the minimum abundance, edit the values on the "Options" sheet

TestAmerica West Sacramento (916) 373 - 5600
Page 947 of 991
05/15/2012
85 of 124

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

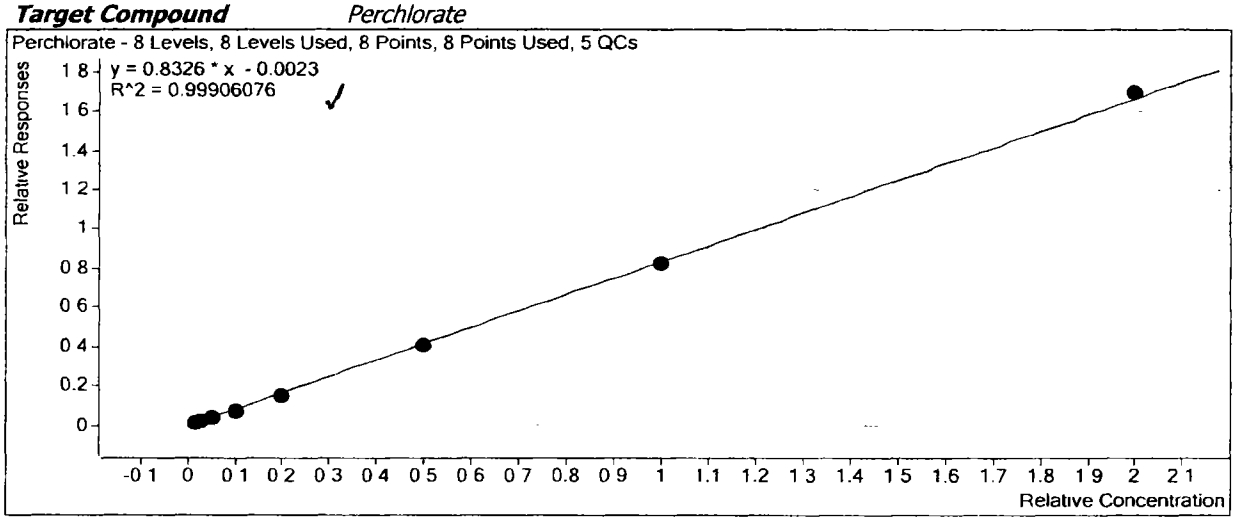
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\07MAY2012\QuantResults\07May2012-Perchlorate.batch.xml		
Analysis Time	5/7/2012 8:03 PM	**Analyst Name**	lores
Report Time	5/7/2012 8:05 PM	**Reporter Name**	lores
Last Calib Update	5/7/2012 8:03 PM	**Batch State**	Processed

Calibration Info Linear Fit, 1/x weighting, and origin ignored.

5/9/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
07MAY12-perc-007.d	1	☑	2870	0.7690	0.1500
07MAY12-perc-008.d	2	☑	4418	0.7972	0.3000
07MAY12-perc-009.d	3	☑	7172	0.7719	0.5000
07MAY12-perc-010.d	4	☑	13861	0.7692	1.0000
07MAY12-perc-011.d	5	☑	25984	0.7491	2.0000
07MAY12-perc-012.d	6	☑	65542	0.8086	5.0000
07MAY12-perc-013.d	7	☑	125418	0.8217	10.0000
07MAY12-perc-014.d	8	☑	225026	0.8487	20.0000
07MAY12-perc-018.d	CCV3	☑	6209	0.7628	0.5000
07MAY12-perc-023.d	CCV3	☑	6870	0.8028	0.5000
07MAY12-perc-022.d	CCV5	☑	24513	0.7857	2.0000
07MAY12-perc-017.d	CCV6	☑	64534	0.7918	5.0000
07MAY12-perc-016.d	ICV	☑	79332	0.8357	5.0000
Target Compound	*Perchlorate-(35Cl18O4)*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
07MAY12-perc-007.d	1	☑	248858	24885.7968	10.0000
07MAY12-perc-008.d	2	☑	184723	18472.3355	10.0000
07MAY12-perc-009.d	3	☑	185820	18582.0136	10.0000
07MAY12-perc-010.d	4	☑	180202	18020.2263	10.0000
07MAY12-perc-011.d	5	☑	173439	17343.9007	10.0000
07MAY12-perc-012.d	6	☑	162110	16210.9851	10.0000
07MAY12-perc-013.d	7	☑	152630	15263.0298	10.0000
07MAY12-perc-014.d	8	☑	132575	13257.5304	10.0000
07MAY12-perc-018.d	CCV3	☑	162787	16278.7485	10.0000
07MAY12-perc-023.d	CCV3	☑	171159	17115.9280	10.0000
07MAY12-perc-022.d	CCV5	☑	155997	15599.7127	10.0000
07MAY12-perc-017.d	CCV6	☑	163016	16301.5839	10.0000
07MAY12-perc-016.d	ICV	☑	189867	18986.6752	10.0000

CCAL Data

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/4/2012 17:01
Analyst	lores
Data File	04MAY12-perc-017 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5.00
Injection Volume	50

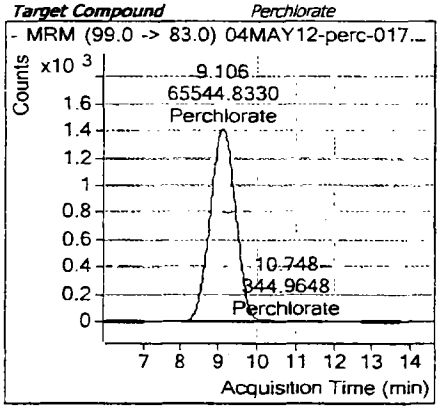
Quantitation Results

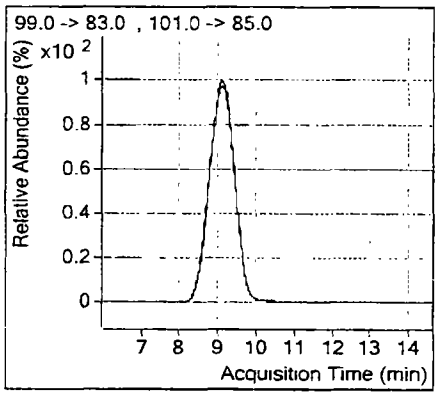
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 106	65545	99	83	**4.84164**	**4.84164**	1
Perchlorate-(35Cl18O4)	ISTD	9 098	163763	107	89			1
							-3.2 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	21979	101	85	2 98	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	50482	109	91	3.24	2.30	3.80	In Control

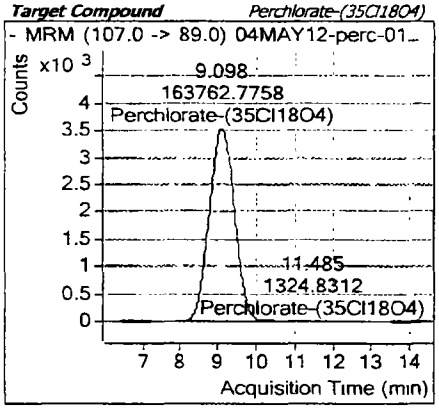
Compound Graphics

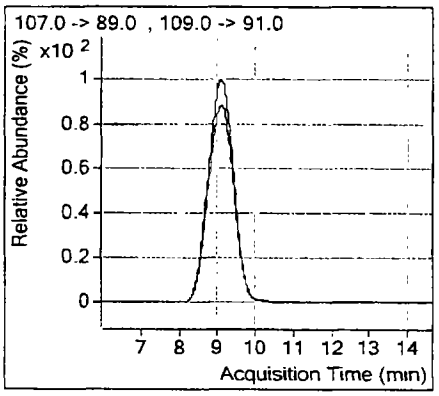
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





Dev 5-7-12
MR 5/9/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/4/2012 17:17
Analyst	lores
Data File	04MAY12-perc-018.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

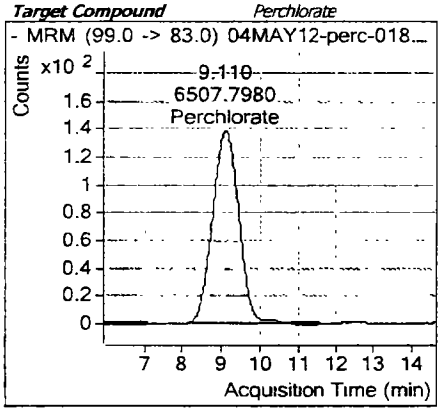
Quantitation Results

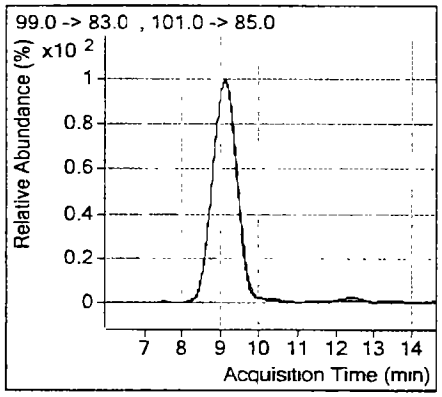
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.110	6508	99	83	**0.50219**	**0.50219**	1
Perchlorate-(35Cl18O4)	ISTD	9 103	162869	107	89			1
							0.4 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2131	101	85	3.05	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	51593	109	91	3 16	2 30	3 80	In Control

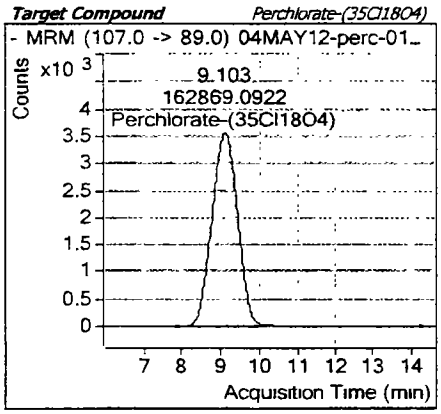
Compound Graphics

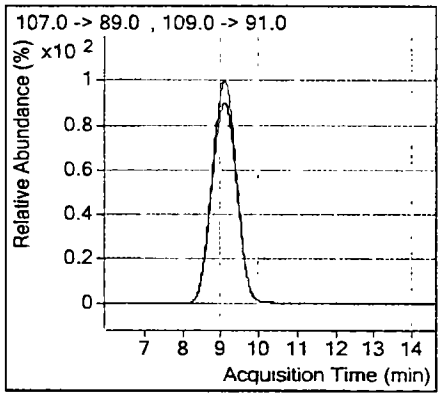
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





DG. 5-7-12
MR 5/9/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/4/2012 17:33
Analyst	lores
Data File	04MAY12-perc-019.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L1_00001 12LCMS0064, 0 15ng/mL
Sample Identification	LODV
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C3
Exp. Concentration	0 15
Injection Volume	50

Quantitation Results

Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 111	1905	99	83	**0.17206**	**0.17206**	1
Perchlorate-(35Cl18O4)	ISTD	9 099	151824	107	89			1
							14.7 % Deviation	

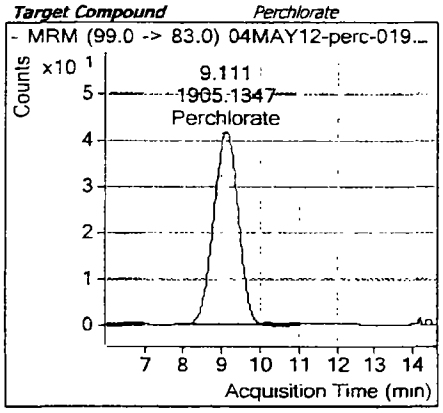
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	673	101	85	2.83	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	46645	109	91	3 25	2 30	3 80	In Control

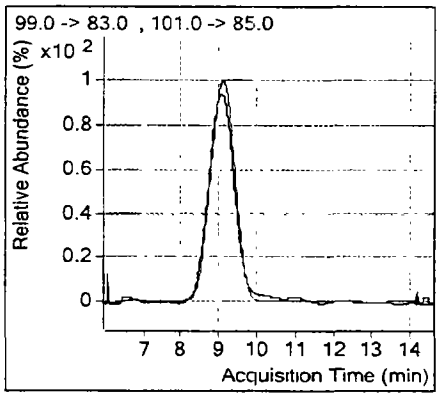
Compound Graphics

DEL 5-7-12

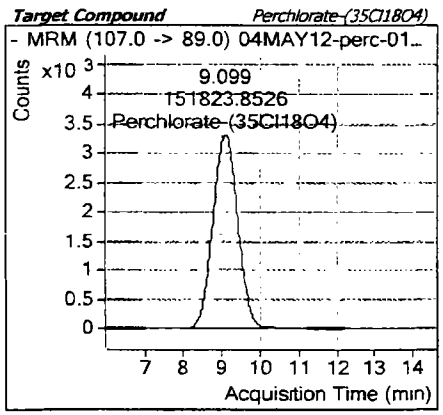
mr 5/9/12

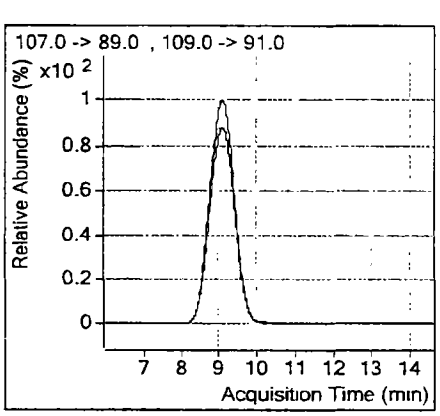
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/4/2012 20:32
Analyst	lores
Data File	04MAY12-perc-030 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2.0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp Concentration	2 00
Injection Volume	50

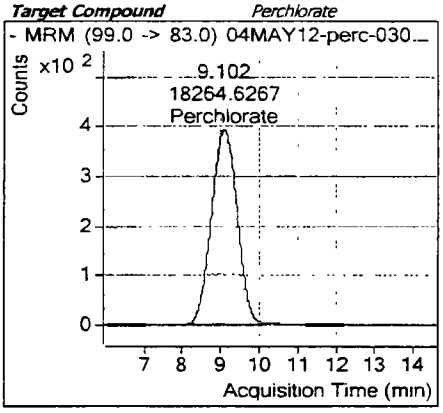
Quantitation Results

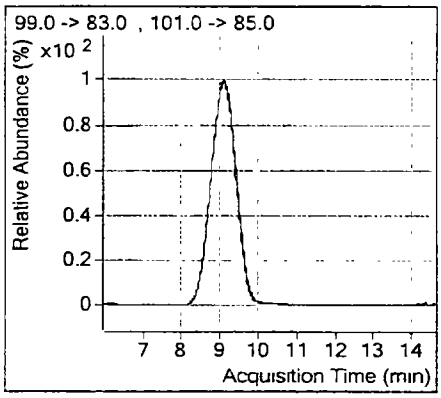
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.102	18265	99	83	1:97282	1.97282	1
Perchlorate-(35Cl18O4)	ISTD	9.102	112705	107	89			1
							-1.4 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	6165	101	85	2 96	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	35594	109	91	3 17	2 30	3 80	In Control

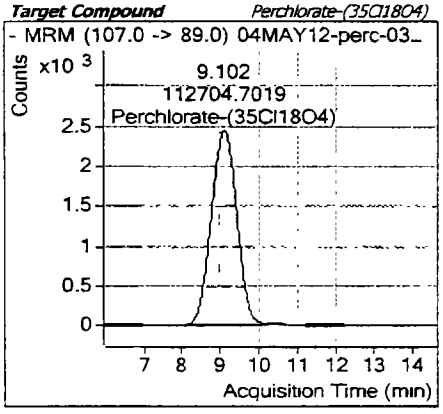
Compound Graphics

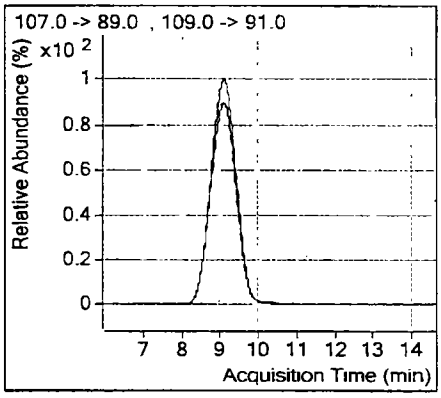
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





Dtl 5-7-12

M 5/9/12

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Analysis Information

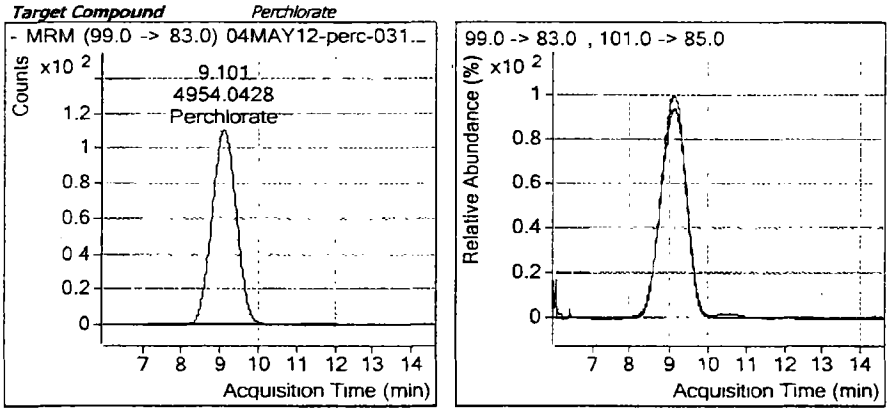
Acquisition Date - Time	5/4/2012 20:48
Analyst	lores
Data File	04MAY12-perc-031.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0 50
Injection Volume	50

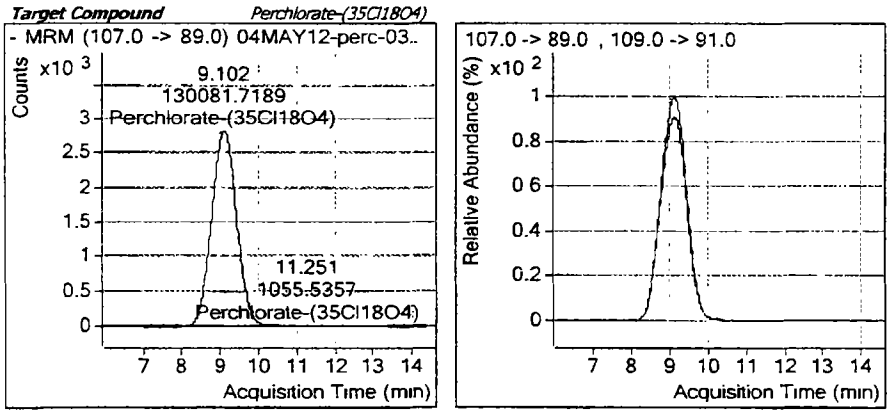
Quantitation Results

Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 101	4954	99	83	**0.47962**	**0.47962**	1
Perchlorate-(35Cl18O4)	ISTD	9 102	130082	107	89			1
							-4.1 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1638	101	85	3 02	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	41212	109	91	3 16	2.30	3 80	In Control

Compound Graphics





Da 5-7-12

mr 5/9/12

Batch Data Path	D.\Masshunter\A5-data\Perc_2RNM102911VE 09\04MAY2012\QuantResults\04MAY2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/4/2012 21:04
Analyst	lores
Data File	04MAY12-perc-032 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

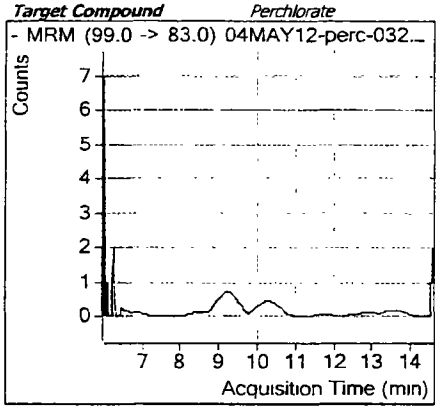
Quantitation Results

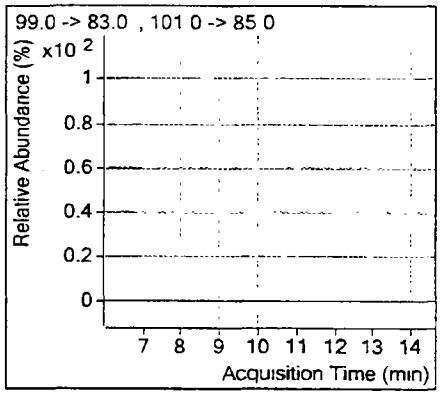
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.101	144489	107	89	Perchlorate = ND		1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	44574	109	91	3.24	2.30	3.80	In Control

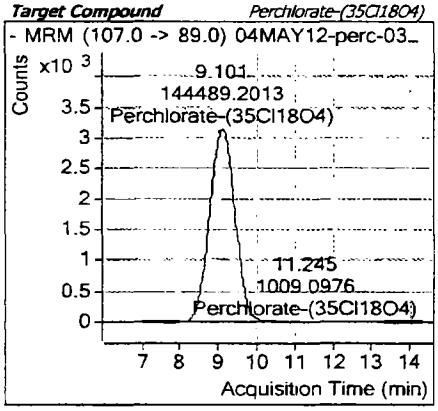
Compound Graphics

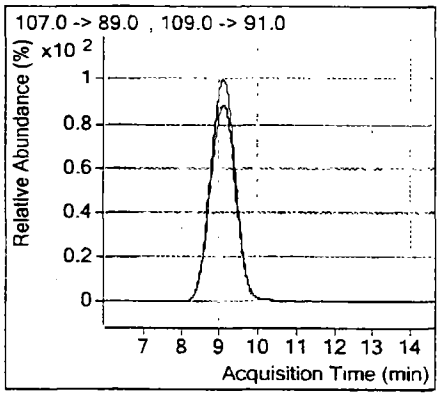
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





DG 5-7-12

MT 5/9/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\07MAY2012\QuantResults\07May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/7/2012 16:35
Analyst	lores
Data File	07MAY12-perc-017 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5 00
Injection Volume	50

Quantitation Results

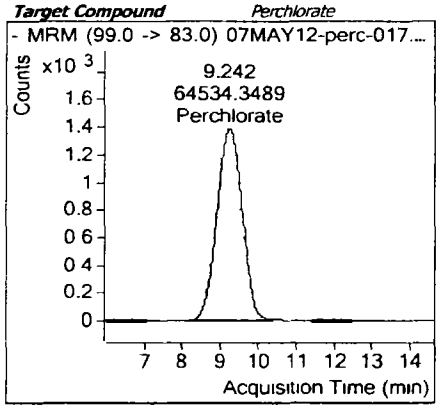
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 242	64534	99	83	**4.78299**	**4.78299**	1
Perchlorate-(35Cl18O4)	ISTD	9 232	163016	107	89			1
							-4.3 %Deviation	

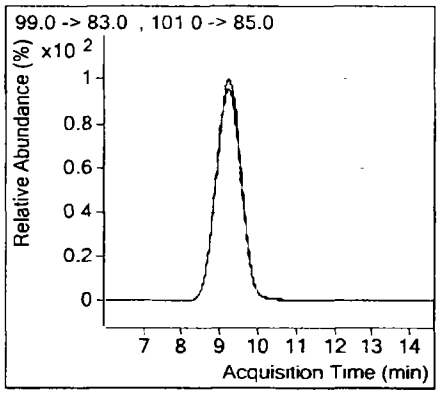
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	21403	101	85	3 02	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	51290	109	91	3 18	2 30	3 80	In Control

Compound Graphics

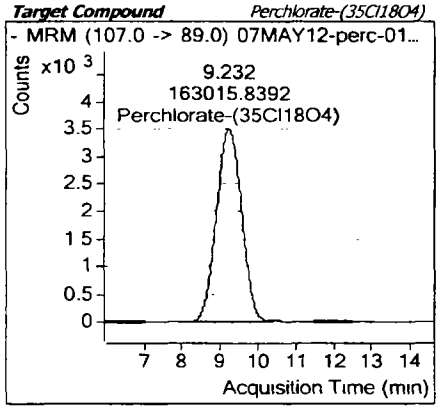
m 5/9/12

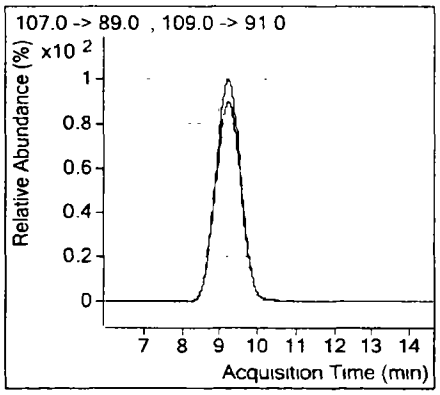
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\07MAY2012\QuantResults\07May2012-Perchlorate batch xml

Analysis Information

Acquisition Date - Time	5/7/2012 16.52
Analyst	lores
Data File	07MAY12-perc-018 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0 50
Injection Volume	50

Quantitation Results

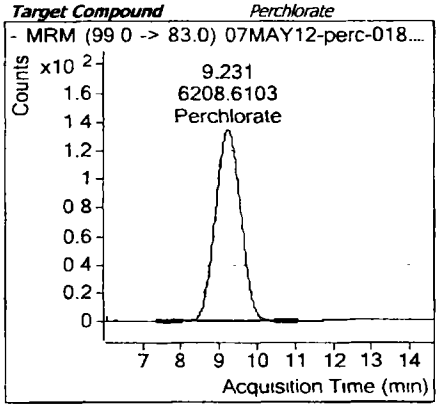
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 231	6209	99	83	**0.48630**	**0.48630**	1
Perchlorate-(35Cl18O4)	ISTD	9 234	162787	107	89			1
							-2.7 %Deviation	

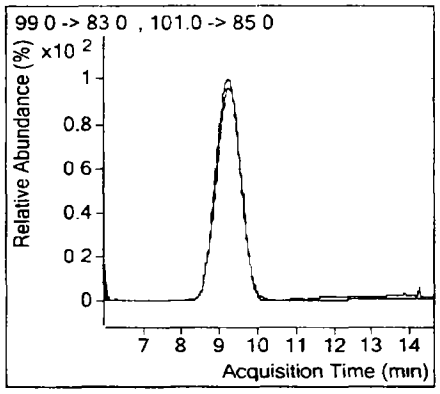
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2069	101	85	3 00	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	51998	109	91	3 13	2 30	3 80	In Control

Compound Graphics

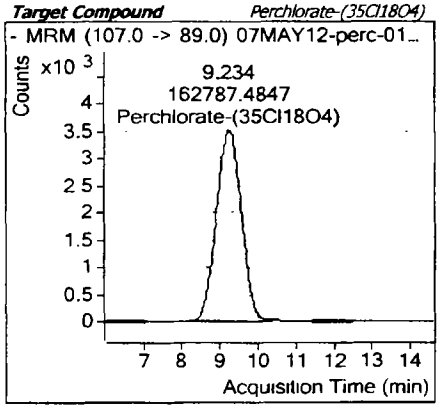
MB 5/9/12

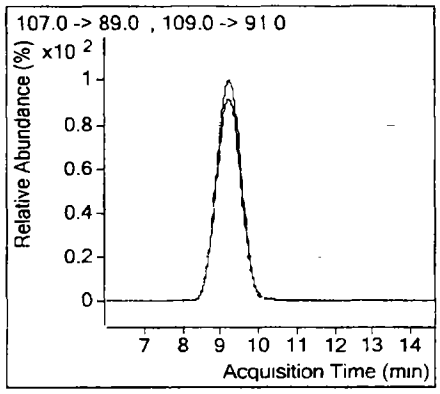
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\07MAY2012\QuantResults\07May2012-Perchlorate batch.xml

Analysis Information

Acquisition Date - Time	5/7/2012 17:57
Analyst	lores
Data File	07MAY12-perc-022 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2 00
Injection Volume	50

Quantitation Results

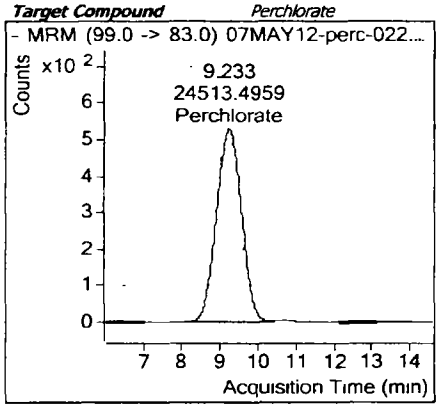
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 233	24513	99	83	**1.91559**	**1.91559**	1
Perchlorate-(35Cl18O4)	ISTD	9 220	155997	107	89			1
							-4.2 %Deviation	

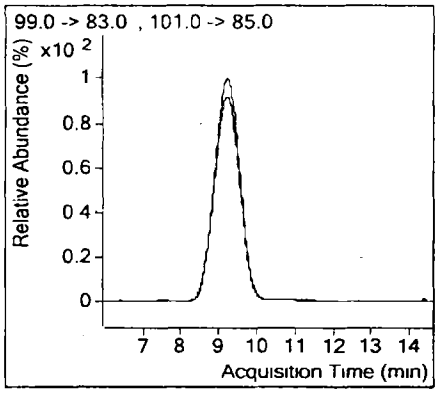
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8084	101	85	3 03	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	48765	109	91	3 20	2 30	3 80	In Control

Compound Graphics

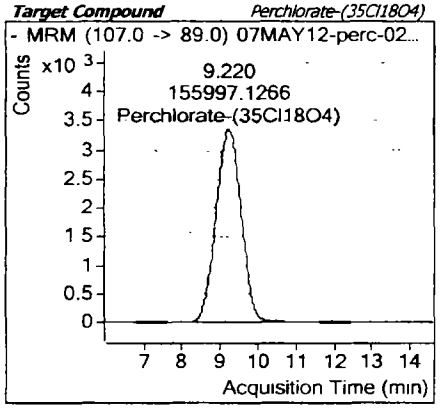
m2 5/9/12

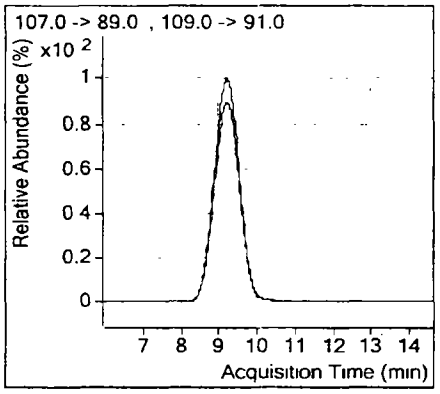
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





Batch Data Path D.\Masshunter\A5-data\Perc_2RNM102911VE 09\07MAY2012\QuantResults\07May2012-Perchlorate batch.xml

Analysis Information

Acquisition Date - Time	5/7/2012 18:13
Analyst	lores
Data File	07MAY12-perc-023 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0 50
Injection Volume	50

Quantitation Results

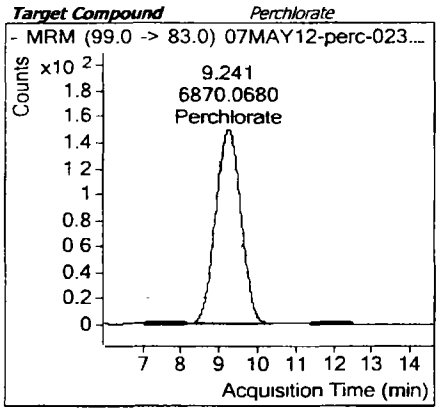
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 241	6870	99	83	**0.51031**	**0.51031**	1
Perchlorate-(35Cl18O4)	ISTD	9 220	171159	107	89			1
							2.1 %Deviation	

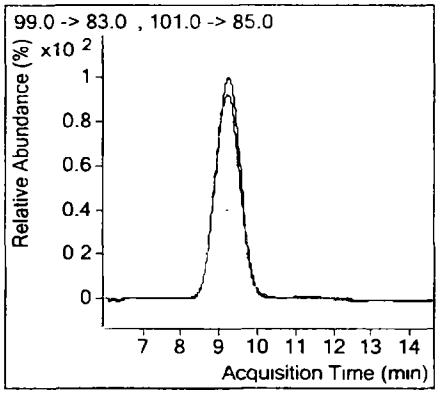
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2219	101	85	3 10	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	52678	109	91	3 25	2 30	3 80	In Control

Compound Graphics

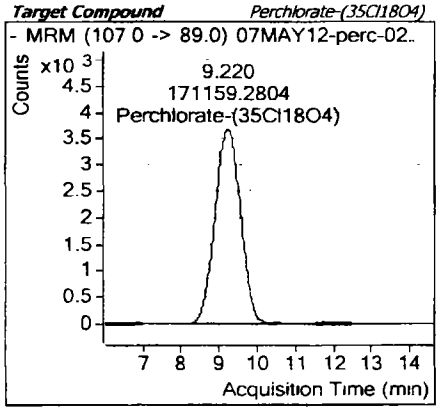
m 5/9/12

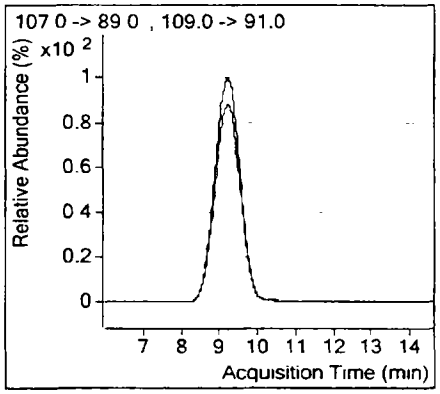
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\07MAY2012\QuantResults\07May2012-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/7/2012 18.29
Analyst	lores
Data File	07MAY12-perc-024 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

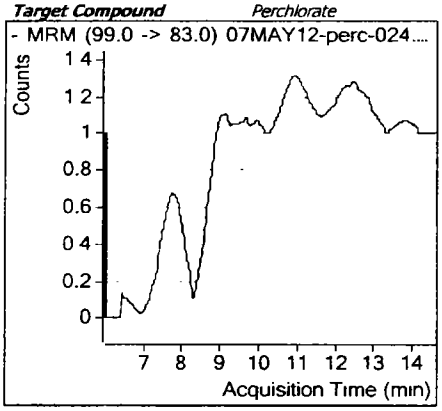
Quantitation Results

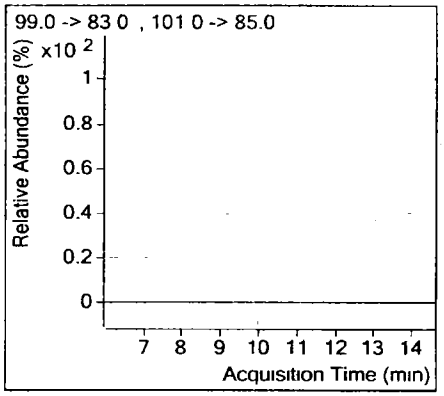
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9 224	190362	107	89	Perchlorate = ND		1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	59064	109	91	3 22	2 30	3 80	In Control

Compound Graphics

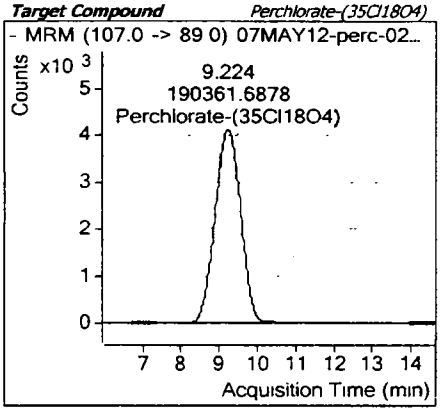
Target Compound *Perchlorate*

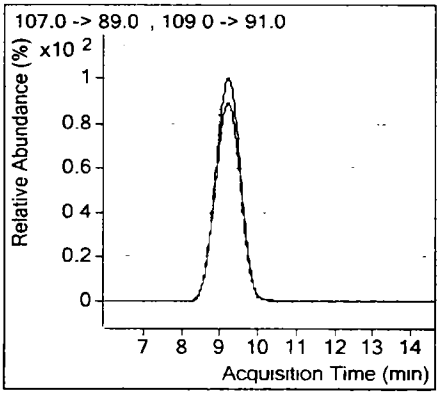




m 5/9/12

Target Compound *Perchlorate-(35Cl18O4)*





METALS

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG No.:

Project: MSA Groundwater Sampling

Client Sample ID	Lab Sample ID
MT-MW04S	240-10598-2
MT-MW06S	240-10598-3

Comments:

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-42093/5 04/28/2012 08:30				CCV 240-42093/46 04/28/2012 12:29				CCV 240-42093/58 04/28/2012 13:41			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.3		80.0	103	99.8		100	100	97.1		100	97
Arsenic	81.8		80.0	102	102		100	102	99.4		100	99
Barium	81.1		80.0	101	102		100	102	98.3		100	98
Beryllium	79.4		80.0	99	98.1		100	98	101		100	101
Cadmium	82.4		80.0	103	103		100	103	99.8		100	100
Chromium	80.8		80.0	101	102		100	102	99.1		100	99
Cobalt	81.5		80.0	102	103		100	103	99.1		100	99
Copper	83.5		80.0	104	106		100	106	102		100	102
Lead	83.1		80.0	104	104		100	104	102		100	102
Molybdenum	82.6		80.0	103	104		100	104	101		100	101
Nickel	82.9		80.0	104	103		100	103	99.1		100	99
Selenium	82.2		80.0	103	103		100	103	101		100	101
Silver	83.9		80.0	105	103		100	103	101		100	101
Thallium	81.6		80.0	102	101		100	101	100		100	100
Tungsten	81.3		80.0	102	102		100	102	100		100	100
Vanadium	80.6		80.0	101	101		100	101	98.3		100	98
Zinc	83.5		80.0	104	102		100	102	100		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-42093/70 04/28/2012 14:51				CCV 240-42093/134 04/28/2012 21:01				CCV 240-42093/146 04/28/2012 22:14			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	98.9		100	99	100		100	100	101		100	101
Arsenic	102		100	102	103		100	103	103		100	103
Barium	100		100	100	101		100	101	99.7		100	100
Beryllium	102		100	102	100		100	100	104		100	104
Cadmium	102		100	102	102		100	102	103		100	103
Chromium	103		100	103	102		100	102	102		100	102
Cobalt	103		100	103	102		100	102	101		100	101
Copper	105		100	105	104		100	104	105		100	105
Lead	105		100	105	106		100	106	105		100	105
Molybdenum	104		100	104	104		100	104	105		100	105
Nickel	104		100	104	103		100	103	103		100	103
Selenium	105		100	105	104		100	104	106		100	106
Silver	103		100	103	104		100	104	103		100	103
Thallium	105		100	105	104		100	104	106		100	106
Tungsten	103		100	103	104		100	104	105		100	105
Vanadium	101		100	101	102		100	102	101		100	101
Zinc	104		100	104	103		100	103	104		100	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-42093/158 04/28/2012 23:21											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	102		100	102								
Arsenic	102		100	102								
Barium	102		100	102								
Beryllium	102		100	102								
Cadmium	104		100	104								
Chromium	102		100	102								
Cobalt	101		100	101								
Copper	104		100	104								
Lead	105		100	105								
Molybdenum	104		100	104								
Nickel	103		100	103								
Selenium	101		100	101								
Silver	104		100	104								
Thallium	104		100	104								
Tungsten	104		100	104								
Vanadium	102		100	102								
Zinc	105		100	105								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	ICV 240-41879/7-A 04/27/2012 17:54				CCVL 240-41879/10-A 04/27/2012 18:00				CCV 240-41879/12-A 04/27/2012 20:27			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.32		2.50	93	5.11		5.00	102	5.25		5.00	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	CCV 240-41879/12-A 04/27/2012 20:52				CCV 240-41879/12-A 04/27/2012 21:17				CCV 240-41879/12-A 04/27/2012 21:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.17		5.00	103	5.39		5.00	108	5.22		5.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	CCV 240-41879/12-A 04/27/2012 22:06											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.25		5.00	105								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	ICV 240-41879/7-A 04/28/2012 10:19				CCVL 240-41879/10-A 04/28/2012 10:26				CCV 240-41879/12-A 04/28/2012 11:31			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.40		2.50	96	5.07		5.00	101	5.10		5.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	CCV 240-41879/12-A 04/28/2012 11:55				CCV 240-41879/12-A 04/28/2012 12:20							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.03		5.00	101	5.14		5.00	103				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-42093/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.07		104	50-150
Arsenic	2.00	2.23	J	112	50-150
Barium	1.00	1.03	J	103	50-150
Beryllium	1.00	1.04		104	50-150
Cadmium	0.500	0.551	J	110	50-150
Chromium	2.00	1.85	J	93	50-150
Cobalt	1.00	1.04		104	50-150
Copper	2.00	2.47		124	50-150
Lead	1.00	1.10		110	50-150
Molybdenum	10.0	10.1		101	50-150
Nickel	2.00	2.85		143	50-150
Selenium	2.00	1.93	J	97	50-150
Silver	0.500	0.599	J	120	50-150
Thallium	1.00	1.25	J	125	50-150
Vanadium	5.00	5.04	J	101	50-150
Tungsten	10.0	9.61	J	96	50-150
Zinc	10.0	9.76	J	98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-41879/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00185

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.193	J	96	50-150

Lab Sample ID: CRA 240-41879/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00185

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.215		107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42093/6 04/28/2012 08:37		CCB 240-42093/47 04/28/2012 12:36		CCB 240-42093/59 04/28/2012 13:48		CCB 240-42093/71 04/28/2012 14:58	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.453	J	0.316	J	0.471	J	0.349	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.475	J	0.375	J	0.758	J	0.491	J
Tungsten	10	0.681	J	10	U	0.610	J	0.401	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

X use use use

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-42093/135 04/28/2012 21:08		CCB 240-42093/147 04/28/2012 22:21		CCB 240-42093/159 04/28/2012 23:28			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	0.159	J	2.0	U		
Arsenic	5.0	5.0	U	5.0	U	5.0	U		
Barium	5.0	5.0	U	5.0	U	5.0	U		
Beryllium	1.0	1.0	U	1.0	U	1.0	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	0.101	J	0.0930	J		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	10	0.516	J	0.558	J	0.356	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	5.0	5.0	U	5.0	U	5.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	2.0	0.459	J	0.899	J	0.470	J		
Tungsten	10	0.456	J	0.790	J	0.392	J		
Vanadium	20	20	U	20	U	20	U		
Zinc	20	20	U	20	U	20	U		

USE USE USE

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41879/8-A 04/27/2012 17:55		CCB 240-41879/11-A 04/27/2012 20:29		CCB 240-41879/11-A 04/27/2012 20:54		CCB 240-41879/11-A 04/27/2012 21:19	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-41879/11-A 04/27/2012 21:43		CCB 240-41879/11-A 04/27/2012 22:08					
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41879/8-A 04/28/2012 10:22		CCB 240-41879/11-A 04/28/2012 11:33		CCB 240-41879/11-A 04/28/2012 11:59		CCB 240-41879/11-A 04/28/2012 12:22	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41803/1-A

Instrument Code: I8 Batch No.: 42093

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	1.67	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	1.10	J		6020
7439-92-1	Lead	0.268	J		6020
7439-98-7	Molybdenum	10	U		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	0.0910	J		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	13.7	J		6020

MT-MW043 Total

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41805/1-A

Instrument Code: I8 Batch No.: 42093

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	2.18	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	1.32	J		6020
7439-92-1	Lead	~~0.197~~	J		6020
7439-98-7	Molybdenum	10	U		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	11.7	J		6020

MT-MW045 Dissolved

MT-MW015 Total and dissolved

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41755/1-A

Instrument Code: H4 Batch No.: 42025

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41812/1-A

Instrument Code: H4 Batch No.: 42155

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICSA 240-42093/9 Instrument ID: I8

Lab File ID: I8042812A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.170**	
Arsenic		**0.431**	
Barium		**0.184**	
Beryllium		**0.0370**	
Cadmium		**-0.527**	
Chromium		**0.373**	
Cobalt		**0.0960**	
Copper		**0.485**	
Lead		**0.0670**	
Molybdenum	**1000**	**1042**	**104**
Nickel		**0.710**	
Selenium		**-0.199**	
Silver		**0.0400**	
Thallium		**0.0950**	
Tungsten		**0.145**	
Vanadium		**0.0690**	
Zinc		**4.99**	
Aluminum	*50000*	*51080*	*102*
Boron		*0.169*	
Calcium	*50000*	*51270*	*103*
Iron	*50000*	*52480*	*105*
Magnesium	*50000*	*51630*	*103*
Manganese		*0.552*	
Potassium	*50000*	*51090*	*102*
Sodium	*50000*	*51920*	*104*
Strontium		*0.338*	
Tin		*0.0850*	
Titanium	*1000*	*1073*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICSAB 240-42093/10 Instrument ID: I8

Lab File ID: I8042812A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**102**	**102**
Barium	**100**	**104**	**104**
Beryllium	**100**	**93.8**	**94**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**110**	**110**
Cobalt	**100**	**103**	**103**
Copper	**100**	**103**	**103**
Lead	**100**	**110**	**110**
Molybdenum	**1100**	**1163**	**106**
Nickel	**100**	**107**	**107**
Selenium	**100**	**105**	**105**
Silver	**100**	**104**	**104**
Thallium	**100**	**108**	**108**
Tungsten	**100**	**103**	**103**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**106**	**106**
Aluminum	*50000*	*50810*	*102*
Boron	*100*	*90.9*	*91*
Calcium	*50000*	*51580*	*103*
Iron	*50000*	*52740*	*105*
Magnesium	*50000*	*51780*	*104*
Manganese	*100*	*105*	*105*
Potassium	*50000*	*50640*	*101*
Sodium	*50000*	*51680*	*103*
Strontium	*100*	*97.6*	*98*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1153*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICSA 240-42093/120 Instrument ID: I8

Lab File ID: I8042812A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.160**	
Arsenic		**0.491**	
Barium		**0.180**	
Beryllium		**0.0750**	
Cadmium		**-0.469**	
Chromium		**0.328**	
Cobalt		**0.128**	
Copper		**0.498**	
Lead		**0.0770**	
Molybdenum	**1000**	**1047**	**105**
Nickel		**0.720**	
Selenium		**0.0050**	
Silver		**0.0490**	
Thallium		**0.335**	
Tungsten		**0.115**	
Vanadium		**0.248**	
Zinc		**5.46**	
Aluminum	*50000*	*52880*	*106*
Boron		*0.472*	
Calcium	*50000*	*51610*	*103*
Iron	*50000*	*51840*	*104*
Magnesium	*50000*	*52500*	*105*
Manganese		*0.585*	
Potassium	*50000*	*51220*	*102*
Sodium	*50000*	*53550*	*107*
Strontium		*0.412*	
Tin		*0.294*	
Titanium	*1000*	*1072*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Lab Sample ID: ICSAB 240-42093/121 Instrument ID: I8

Lab File ID: I8042812A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**101**	**101**
Arsenic	**100**	**103**	**103**
Barium	**100**	**104**	**104**
Beryllium	**100**	**102**	**102**
Cadmium	**100**	**101**	**101**
Chromium	**100**	**109**	**109**
Cobalt	**100**	**103**	**103**
Copper	**100**	**105**	**105**
Lead	**100**	**111**	**111**
Molybdenum	**1100**	**1161**	**106**
Nickel	**100**	**107**	**107**
Selenium	**100**	**104**	**104**
Silver	**100**	**102**	**102**
Thallium	**100**	**111**	**111**
Tungsten	**100**	**104**	**104**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**108**	**108**
Aluminum	*50000*	*52390*	*105*
Boron	*100*	*97.0*	*97*
Calcium	*50000*	*51700*	*103*
Iron	*50000*	*51680*	*103*
Magnesium	*50000*	*52600*	*105*
Manganese	*100*	*109*	*109*
Potassium	*50000*	*50320*	*101*
Sodium	*50000*	*53210*	*106*
Strontium	*100*	*98.0*	*98*
Tin	*100*	*99.8*	*100*
Titanium	*1100*	*1183*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: Lab ID: 240-10570-D-11-C MS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.11		0.20	U	1.00	111	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10621-AL-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	98.1		0.16	J	100	98	44-153		6020
Arsenic	1010		12		1000	100	82-123		6020
Barium	1130		100		1000	102	45-144		6020
Beryllium	962		1.0	U	1000	96	77-124		6020
Cadmium	988		1.0	U	1000	99	78-117		6020
Chromium	1010		2.0	U	1000	101	72-110		6020
Cobalt	999		2.2		1000	100	67-114		6020
Copper	985		2.0	U	1000	98	60-123		6020
Lead	1100		1.0	U	1000	110	73-115		6020
Molybdenum	107		5.1	J	100	102	80-110		6020
Nickel	994		2.7		1000	99	72-111		6020
Selenium	999		5.0	U	1000	100	72-148		6020
Silver	99.3		1.0	U	100	99	10-139		6020
Thallium	264		0.77	J	250	105	69-117		6020
Vanadium	1010		0.46	J	1000	100	70-112		6020
Tungsten	101		0.56	J	100	100	43-133		6020
Zinc	982		20	U	1000	98	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10615-J-4-B MS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	98.0		0.71	J	100	97	44-153		6020
Arsenic	978		0.75	J	1000	98	82-123		6020
Barium	1090		92		1000	99	45-144		6020
Beryllium	980		1.0	U	1000	98	77-124		6020
Cadmium	989		1.0	U	1000	99	78-117		6020
Chromium	983		2.0	U	1000	98	72-110		6020
Cobalt	982		0.13	J	1000	98	67-114		6020
Copper	1010		4.3		1000	100	60-123		6020
Lead	1080		1.0	U	1000	108	73-115		6020
Molybdenum	109		11		100	98	80-110		6020
Nickel	998		0.62	J	1000	100	72-111		6020
Selenium	988		5.0	U	1000	99	72-148		6020
Silver	101		1.0	U	100	101	10-139		6020
Thallium	266		0.80	J	250	106	69-117		6020
Vanadium	964		20	U	1000	96	70-112		6020
Tungsten	96.9		0.62	J	100	96	43-133		6020
Zinc	1000		20	U	1000	100	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10615-G-4-B MS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	96.1		0.29	J	100	96	44-153		6020
Arsenic	966		0.72	J	1000	97	82-123		6020
Barium	1080		89		1000	99	45-144		6020
Beryllium	998		1.0	U	1000	100	77-124		6020
Cadmium	975		1.0	U	1000	98	78-117		6020
Chromium	990		2.0	U	1000	99	72-110		6020
Cobalt	979		0.061	J	1000	98	67-114		6020
Copper	998		0.37	J	1000	100	60-123		6020
Lead	1080		1.0	U	1000	108	73-115		6020
Molybdenum	109		11		100	98	80-110		6020
Nickel	992		0.20	J	1000	99	72-111		6020
Selenium	990		5.0	U	1000	99	72-148		6020
Silver	99.4		1.0	U	100	99	10-139		6020
Thallium	262		1.1	J	250	104	69-117		6020
Vanadium	979		20	U	1000	98	70-112		6020
Tungsten	96.3		0.81	J	100	96	43-133		6020
Zinc	991		5.2	J	1000	99	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-10615-J-4-E MS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.01		0.20	U	1.00	101	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10615-G-4-E MS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.00		0.20	U	1.00	100	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10570-D-11-D MSD

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.06		1.00	106	69-134	5	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10621-AL-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	96.8		100	97	44-153	1	20		6020
Arsenic	995		1000	98	82-123	2	20		6020
Barium	1110		1000	101	45-144	2	20		6020
Beryllium	968		1000	97	77-124	1	20		6020
Cadmium	969		1000	97	78-117	2	20		6020
Chromium	1010		1000	101	72-110	1	20		6020
Cobalt	987		1000	98	67-114	1	20		6020
Copper	971		1000	97	60-123	1	20		6020
Lead	1080		1000	108	73-115	2	20		6020
Molybdenum	106		100	101	80-110	1	20		6020
Nickel	983		1000	98	72-111	1	20		6020
Selenium	988		1000	99	72-148	1	20		6020
Silver	97.6		100	98	10-139	2	20		6020
Thallium	262		250	104	69-117	1	20		6020
Vanadium	996		1000	100	70-112	1	20		6020
Tungsten	100		100	100	43-133	1	20		6020
Zinc	973		1000	97	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10615-J-4-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	96.8		100	96	44-153	1	20		6020
Arsenic	961		1000	96	82-123	2	20		6020
Barium	1080		1000	99	45-144	0	20		6020
Beryllium	976		1000	98	77-124	0	20		6020
Cadmium	982		1000	98	78-117	1	20		6020
Chromium	981		1000	98	72-110	0	20		6020
Cobalt	976		1000	98	67-114	1	20		6020
Copper	992		1000	99	60-123	1	20		6020
Lead	1070		1000	107	73-115	1	20		6020
Molybdenum	109		100	98	80-110	0	20		6020
Nickel	986		1000	99	72-111	1	20		6020
Selenium	978		1000	98	72-148	1	20		6020
Silver	99.9		100	100	10-139	1	20		6020
Thallium	264		250	105	69-117	1	20		6020
Vanadium	966		1000	97	70-112	0	20		6020
Tungsten	95.4		100	95	43-133	2	20		6020
Zinc	986		1000	99	49-156	2	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10615-G-4-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	95.7		100	95	44-153	0	20		6020
Arsenic	974		1000	97	82-123	1	20		6020
Barium	1080		1000	99	45-144	0	20		6020
Beryllium	993		1000	99	77-124	0	20		6020
Cadmium	978		1000	98	78-117	0	20		6020
Chromium	987		1000	99	72-110	0	20		6020
Cobalt	982		1000	98	67-114	0	20		6020
Copper	998		1000	100	60-123	0	20		6020
Lead	1070		1000	107	73-115	1	20		6020
Molybdenum	109		100	98	80-110	0	20		6020
Nickel	994		1000	99	72-111	0	20		6020
Selenium	986		1000	99	72-148	0	20		6020
Silver	101		100	101	10-139	1	20		6020
Thallium	263		250	105	69-117	0	20		6020
Vanadium	968		1000	97	70-112	1	20		6020
Tungsten	96.2		100	95	43-133	0	20		6020
Zinc	997		1000	99	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-10615-J-4-F MSD

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.11		1.00	111	69-134	9	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10615-G-4-F MSD

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.965		1.00	97	69-134	4	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41805/2-A

Lab Name: TestAmerica Canton Job No.: 240-10598-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	95.1		95	80	120		6020
Arsenic	1000	972		97	80	120		6020
Barium	1000	983		98	80	120		6020
Beryllium	1000	993		99	80	120		6020
Cadmium	1000	989		99	80	120		6020
Chromium	1000	976		98	80	120		6020
Cobalt	1000	971		97	80	120		6020
Copper	1000	1020		102	80	120		6020
Lead	1000	1080		108	80	120		6020
Molybdenum	100	94.7		95	80	120		6020
Nickel	1000	998		100	80	120		6020
Selenium	1000	999		100	80	120		6020
Silver	100	102		102	80	120		6020
Thallium	250	264		106	80	120		6020
Vanadium	1000	954		95	80	120		6020
Tungsten	100	92.9		93	80	120		6020
Zinc	1000	1030		103	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41803/2-A

Lab Name: TestAmerica Canton Job No.: 240-10598-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	92.6		93	80	120		6020
Arsenic	1000	940		94	80	120		6020
Barium	1000	946		95	80	120		6020
Beryllium	1000	991		99	80	120		6020
Cadmium	1000	955		95	80	120		6020
Chromium	1000	952		95	80	120		6020
Cobalt	1000	956		96	80	120		6020
Copper	1000	987		99	80	120		6020
Lead	1000	1070		107	80	120		6020
Molybdenum	100	91.9		92	80	120		6020
Nickel	1000	972		97	80	120		6020
Selenium	1000	970		97	80	120		6020
Silver	100	99.4		99	80	120		6020
Thallium	250	258		103	80	120		6020
Vanadium	1000	929		93	80	120		6020
Tungsten	100	90.5		91	80	120		6020
Zinc	1000	992		99	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41755/2-A

Lab Name: TestAmerica Canton Job No.: 240-10598-1

Sample Matrix: Water LCS Source: MTHGICVW_00283

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.18		104	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41812/2-A

Lab Name: TestAmerica Canton Job No.: 240-10598-1

Sample Matrix: Water LCS Source: MTHGICVW_00284

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.93		99	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-10621-AL-1-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10598-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.16	J	10	U	NC		6020
Arsenic	12		12.2	J	NC		6020
Barium	100		102		NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	2.2		2.11	J	NC		6020
Copper	2.0	U	10	U	NC		6020
Lead	1.0	U	5.0	U	NC		6020
Molybdenum	5.1	J	5.00	J	NC		6020
Nickel	2.7		2.63	J	NC		6020
Selenium	5.0	U	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.77	J	1.42	J	NC		6020
Vanadium	0.46	J	100	U	NC		6020
Tungsten	0.56	J	50	U	NC		6020
Zinc	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-10615-J-4-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10598-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.71	J	0.840	J	NC		6020
Arsenic	0.75	J	25	U	NC		6020
Barium	92		91.8		NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	0.13	J	0.475	J	NC		6020
Copper	4.3		5.17	J	NC		6020
Lead	1.0	U	5.0	U	NC		6020
Molybdenum	11		11.4	J	NC		6020
Nickel	0.62	J	1.10	J	NC		6020
Selenium	5.0	U	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.80	J	1.58	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	0.62	J	50	U	NC		6020
Zinc	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10598-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10598-1

SDG No.:

Instrument ID: I8 Date: 07/05/2011 09:44

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Antimony		1000	6020
Arsenic		10000	6020
Barium		10000	6020
Beryllium		10000	6020
Cadmium		10000	6020
Chromium		10000	6020
Cobalt		10000	6020
Copper		10000	6020
Lead		10000	6020
Molybdenum		2000	6020
Nickel		10000	6020
Selenium		10000	6020
Silver		1000	6020
Thallium		10000	6020
Vanadium		10000	6020
Tungsten		2000	6020
Zinc		10000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10598-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41803/1-A	04/26/2012 16:50	41803		50	50
LCS 240-41803/2-A	04/26/2012 16:50	41803		50	50
240-10621-AL-1-B MS	04/26/2012 16:50	41803		50	50
240-10621-AL-1-C MSD	04/26/2012 16:50	41803		50	50
240-10598-2	04/26/2012 16:50	41803		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41805/1-A	04/26/2012 17:01	41805		50	50
LCS 240-41805/2-A	04/26/2012 17:01	41805		50	50
240-10615-J-4-B MS	04/26/2012 17:01	41805		50	50
240-10615-J-4-C MSD	04/26/2012 17:01	41805		50	50
240-10615-G-4-B MS	04/26/2012 17:01	41805		50	50
240-10615-G-4-C MSD	04/26/2012 17:01	41805		50	50
240-10598-2	04/26/2012 17:01	41805		50	50
240-10598-3	04/26/2012 17:01	41805		50	50
240-10598-3	04/26/2012 17:01	41805		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41755/1-A	04/26/2012 15:50	41755		100	100
LCS 240-41755/2-A	04/26/2012 15:50	41755		100	100
240-10570-D-11-C MS	04/26/2012 15:50	41755		100	100
240-10570-D-11-D MSD	04/26/2012 15:50	41755		100	100
240-10598-2	04/26/2012 15:50	41755		100	100
240-10598-2	04/26/2012 15:50	41755		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41812/1-A	04/27/2012 12:40	41812		100	100
LCS 240-41812/2-A	04/27/2012 12:40	41812		100	100
240-10615-J-4-E MS	04/27/2012 12:40	41812		100	100
240-10615-J-4-F MSD	04/27/2012 12:40	41812		100	100
240-10615-G-4-E MS	04/27/2012 12:40	41812		100	100
240-10615-G-4-F MSD	04/27/2012 12:40	41812		100	100
240-10598-3	04/27/2012 12:40	41812		100	100
240-10598-3	04/27/2012 12:40	41812		100	100

ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-42093/1			08:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-42093/2 IC	1		08:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-42093/3 IC	1		08:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-42093/4 IC	1		08:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-42093/5	1		08:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-42093/6	1		08:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-42093/7	1		08:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-42093/8			08:48																				
ICSA 240-42093/9	1		08:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-42093/10	1		08:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42093/11			09:06																				
CCB 240-42093/12			09:13																				
ZZZZZZ			09:19																				
ZZZZZZ			09:24																				
ZZZZZZ			09:31																				
ZZZZZZ			09:37																				
ZZZZZZ			09:42																				
ZZZZZZ			09:49																				
ZZZZZZ			09:56																				
ZZZZZZ			10:02																				
ZZZZZZ			10:09																				
ZZZZZZ			10:16																				
CCV 240-42093/23			10:21																				
CCB 240-42093/24			10:28																				
ZZZZZZ			10:34																				
ZZZZZZ			10:39																				
ZZZZZZ			10:44																				
ZZZZZZ			10:50																				
ZZZZZZ			10:55																				
ZZZZZZ			11:00																				
ZZZZZZ			11:06																				
ZZZZZZ			11:11																				
CRI 240-42093/33			11:17																				
CCV 240-42093/34			11:22																				
CCB 240-42093/35			11:29																				
ZZZZZZ			11:35																				
ZZZZZZ			11:40																				
ZZZZZZ			11:46																				
ZZZZZZ			11:51																				
ZZZZZZ			11:56																				
ZZZZZZ			12:02																				
ZZZZZZ			12:07																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			12:13																			
ZZZZZZ			12:18																			
ZZZZZZ			12:23																			
CCV 240-42093/46	1		12:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/47	1		12:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			12:41																			
ZZZZZZ			12:47																			
ZZZZZZ			12:52																			
MB 240-41805/1-A	1	R	12:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-41805/2-A	1	R	13:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			13:10																			
240-10615-J-4-A SD ^5	5	R	13:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10615-J-4-B MS	1	R	13:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10615-J-4-C MSD	1	R	13:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			13:35																			
CCV 240-42093/58	1		13:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/59	1		13:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10615-G-4-B MS	1	D	13:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10615-G-4-C MSD	1	D	14:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10598-2	1	D	14:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10598-3	1	R	14:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10598-3	1	D	14:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			14:24																			
ZZZZZZ			14:29																			
ZZZZZZ			14:35																			
ZZZZZZ			14:40																			
ZZZZZZ			14:46																			
CCV 240-42093/70	1		14:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/71	1		14:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			15:04																			
ZZZZZZ			15:09																			
ZZZZZZ			15:14																			
ZZZZZZ			15:20																			
ZZZZZZ			15:25																			
ZZZZZZ			15:31																			
ZZZZZZ			15:36																			
ZZZZZZ			15:41																			
ZZZZZZ			15:47																			
ZZZZZZ			15:52																			
CCV 240-42093/82			15:58																			
CCB 240-42093/83			16:05																			
ZZZZZZ			16:10																			

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			16:16																				
ZZZZZZ			16:23																				
ZZZZZZ			16:28																				
ZZZZZZ			16:34																				
ZZZZZZ			16:41																				
ZZZZZZ			16:48																				
ZZZZZZ			16:54																				
ZZZZZZ			16:59																				
ZZZZZZ			17:04																				
CCV 240-42093/94			17:10																				
CCB 240-42093/95			17:17																				
ZZZZZZ			17:22																				
ZZZZZZ			17:28																				
ZZZZZZ			17:33																				
ZZZZZZ			17:39																				
ZZZZZZ			17:44																				
ZZZZZZ			17:49																				
ZZZZZZ			17:55																				
ZZZZZZ			18:00																				
ZZZZZZ			18:06																				
ZZZZZZ			18:11																				
CCV 240-42093/106			18:17																				
CCB 240-42093/107			18:24																				
ZZZZZZ			18:29																				
ZZZZZZ			18:35																				
ZZZZZZ			18:42																				
ZZZZZZ			18:47																				
ZZZZZZ			18:53																				
ZZZZZZ			18:58																				
ZZZZZZ			19:05																				
ZZZZZZ			19:12																				
ZZZZZZ			19:18																				
ZZZZZZ			19:23																				
CCV 240-42093/118			19:29																				
CCB 240-42093/119			19:36																				
ICSA 240-42093/120	1		19:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ICSAB 240-42093/121	1		19:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCV 240-42093/122			19:54																				
CCB 240-42093/123			20:01																				
ZZZZZZ			20:07																				
ZZZZZZ			20:12																				
ZZZZZZ			20:18																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			20:23																				
ZZZZZZ			20:28																				
ZZZZZZ			20:34																				
ZZZZZZ			20:39																				
ZZZZZZ			20:45																				
ZZZZZZ			20:50																				
ZZZZZZ			20:56																				
CCV 240-42093/134	1		21:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/135	1		21:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			21:14																				
ZZZZZZ			21:19																				
ZZZZZZ			21:25																				
ZZZZZZ			21:30																				
MB 240-41803/1-A	1	R	21:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-41803/2-A	1	R	21:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			21:48																				
240-10621-AL-1-A SD ^5	5	R	21:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10621-AL-1-B MS	1	R	21:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10621-AL-1-C MSD	1	R	22:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42093/146	1		22:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/147	1		22:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			22:26																				
ZZZZZZ			22:32																				
ZZZZZZ			22:37																				
ZZZZZZ			22:43																				
240-10598-2	1	R	22:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			22:53																				
ZZZZZZ			22:59																				
ZZZZZZ			23:04																				
ZZZZZZ			23:10																				
ZZZZZZ			23:15																				
CCV 240-42093/158	1		23:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/159	1		23:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			23:34																				
ZZZZZZ			23:39																				
ZZZZZZ			23:44																				
ZZZZZZ			23:50																				
ZZZZZZ			23:55																				
ZZZZZZ			00:01																				
ZZZZZZ			00:06																				
ZZZZZZ			00:12																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			00:17																				
ZZZZZZ			00:23																				
CCV 240-42093/170			00:28																				
CCB 240-42093/171			00:35																				
ZZZZZZ			00:40																				
ZZZZZZ			00:48																				
ZZZZZZ			00:53																				
ZZZZZZ			01:00																				
ZZZZZZ			01:07																				
ZZZZZZ			01:13																				
ZZZZZZ			01:18																				
ZZZZZZ			01:24																				
ZZZZZZ			01:29																				
ZZZZZZ			01:35																				
CCV 240-42093/182			01:40																				
CCB 240-42093/183			01:47																				
ZZZZZZ			01:53																				
ZZZZZZ			01:58																				
ZZZZZZ			02:03																				
ZZZZZZ			02:09																				
ZZZZZZ			02:14																				
ZZZZZZ			02:20																				
ZZZZZZ			02:25																				
ZZZZZZ			02:31																				
ZZZZZZ			02:36																				
ZZZZZZ			02:42																				
CCV 240-42093/194			02:47																				
CCB 240-42093/195			02:54																				
ZZZZZZ			02:59																				
ZZZZZZ			03:04																				
ZZZZZZ			03:10																				
CCV 240-42093/199			03:15																				
CCB 240-42093/200			03:22																				

Prep Types
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-41879/1-A			17:42	X																				
IC 240-41879/2-A			17:44	X																				
IC 240-41879/3-A			17:46	X																				
IC 240-41879/4-A			17:48	X																				
IC 240-41879/5-A			17:50	X																				
IC 240-41879/6-A			17:52	X																				
ICV 240-41879/7-A	1		17:54	X																				
ICB 240-41879/8-A	1		17:55	X																				
CRA 240-41879/9-A	1		17:58	X																				
CCVL 240-41879/10-A	1		18:00	X																				
CCB 240-41879/11-A			18:02																					
ZZZZZZ			18:04																					
ZZZZZZ			18:06																					
ZZZZZZ			18:08																					
ZZZZZZ			18:10																					
ZZZZZZ			18:12																					
ZZZZZZ			18:14																					
ZZZZZZ			18:16																					
ZZZZZZ			18:18																					
ZZZZZZ			18:20																					
ZZZZZZ			18:23																					
CCV 240-41879/12-A			18:25																					
CCB 240-41879/11-A			18:27																					
ZZZZZZ			18:29																					
ZZZZZZ			18:31																					
ZZZZZZ			18:33																					
ZZZZZZ			18:36																					
ZZZZZZ			18:38																					
ZZZZZZ			18:41																					
ZZZZZZ			18:43																					
ZZZZZZ			18:45																					
ZZZZZZ			18:47																					
ZZZZZZ			18:49																					
CCV 240-41879/12-A			18:51																					
CCB 240-41879/11-A			18:53																					
ZZZZZZ			18:55																					
ZZZZZZ			18:57																					
ZZZZZZ			19:00																					
ZZZZZZ			19:01																					
ZZZZZZ			19:03																					
ZZZZZZ			19:05																					
ZZZZZZ			19:07																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			19:10																					
ZZZZZZ			19:12																					
ZZZZZZ			19:14																					
CCV 240-41879/12-A			19:17																					
CCB 240-41879/11-A			19:18																					
ZZZZZZ			19:20																					
ZZZZZZ			19:22																					
ZZZZZZ			19:24																					
ZZZZZZ			19:26																					
ZZZZZZ			19:28																					
ZZZZZZ			19:30																					
ZZZZZZ			19:32																					
ZZZZZZ			19:34																					
ZZZZZZ			19:36																					
ZZZZZZ			19:37																					
CCV 240-41879/12-A			19:39																					
CCB 240-41879/11-A			19:41																					
ZZZZZZ			19:43																					
ZZZZZZ			19:45																					
ZZZZZZ			19:47																					
ZZZZZZ			19:49																					
ZZZZZZ			19:51																					
ZZZZZZ			19:53																					
ZZZZZZ			19:55																					
ZZZZZZ			19:56																					
ZZZZZZ			19:58																					
ZZZZZZ			20:00																					
CCV 240-41879/12-A			20:02																					
CCB 240-41879/11-A			20:04																					
ZZZZZZ			20:06																					
ZZZZZZ			20:08																					
ZZZZZZ			20:10																					
ZZZZZZ			20:12																					
ZZZZZZ			20:14																					
ZZZZZZ			20:16																					
ZZZZZZ			20:18																					
ZZZZZZ			20:21																					
ZZZZZZ			20:23																					
ZZZZZZ			20:25																					
CCV 240-41879/12-A	1		20:27	X																				
CCB 240-41879/11-A	1		20:29	X																				
ZZZZZZ			20:31																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			20:33	
ZZZZZZ			20:36	
ZZZZZZ			20:38	
ZZZZZZ			20:40	
ZZZZZZ			20:42	
ZZZZZZ			20:44	
ZZZZZZ			20:46	
MB 240-41755/1-A	1	T	20:48	X
LCS 240-41755/2-A	1	T	20:50	X
CCV 240-41879/12-A	1		20:52	X
CCB 240-41879/11-A	1		20:54	X
ZZZZZZ			20:56	
240-10570-D-11-C MS	1	D	20:58	X
240-10570-D-11-D MSD	1	D	21:00	X
ZZZZZZ			21:02	
ZZZZZZ			21:04	
ZZZZZZ			21:07	
ZZZZZZ			21:09	
ZZZZZZ			21:11	
ZZZZZZ			21:13	
ZZZZZZ			21:15	
CCV 240-41879/12-A	1		21:17	X
CCB 240-41879/11-A	1		21:19	X
ZZZZZZ			21:21	
ZZZZZZ			21:23	
ZZZZZZ			21:26	
ZZZZZZ			21:28	
ZZZZZZ			21:30	
ZZZZZZ			21:32	
ZZZZZZ			21:34	
ZZZZZZ			21:36	
ZZZZZZ			21:38	
ZZZZZZ			21:40	
CCV 240-41879/12-A	1		21:42	X
CCB 240-41879/11-A	1		21:43	X
240-10598-2	1	T	21:45	X
240-10598-2	1	D	21:47	X
ZZZZZZ			21:49	
ZZZZZZ			21:51	
ZZZZZZ			21:53	
ZZZZZZ			21:55	
ZZZZZZ			21:57	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/27/2012 17:42 End Date: 04/27/2012 22:52

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			22:00																					
ZZZZZZ			22:02																					
ZZZZZZ			22:04																					
CCV 240-41879/12-A	1		22:06	X																				
CCB 240-41879/11-A	1		22:08	X																				
ZZZZZZ			22:10																					
ZZZZZZ			22:12																					
ZZZZZZ			22:14																					
ZZZZZZ			22:16																					
ZZZZZZ			22:18																					
ZZZZZZ			22:20																					
ZZZZZZ			22:22																					
ZZZZZZ			22:24																					
ZZZZZZ			22:25																					
ZZZZZZ			22:28																					
CCV 240-41879/12-A			22:30																					
CCB 240-41879/11-A			22:32																					
ZZZZZZ			22:34																					
ZZZZZZ			22:36																					
ZZZZZZ			22:38																					
ZZZZZZ			22:40																					
ZZZZZZ			22:42																					
ZZZZZZ			22:44																					
ZZZZZZ			22:45																					
ZZZZZZ			22:47																					
CCV 240-41879/12-A			22:50																					
CCB 240-41879/11-A			22:52																					

Prep Types

D = Dissolved

T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
IC 240-41879/1-A			10:06	X
IC 240-41879/2-A			10:08	X
IC 240-41879/3-A			10:10	X
IC 240-41879/4-A			10:13	X
IC 240-41879/5-A			10:15	X
IC 240-41879/6-A			10:17	X
ICV 240-41879/7-A	1		10:19	X
ICB 240-41879/8-A	1		10:22	X
CRA 240-41879/9-A	1		10:24	X
CCVL 240-41879/10-A	1		10:26	X
CCB 240-41879/11-A			10:28	
ZZZZZZ			10:30	
ZZZZZZ			10:32	
ZZZZZZ			10:34	
ZZZZZZ			10:36	
ZZZZZZ			10:38	
ZZZZZZ			10:40	
ZZZZZZ			10:42	
ZZZZZZ			10:44	
ZZZZZZ			10:46	
ZZZZZZ			10:49	
CCV 240-41879/12-A			10:52	
CCB 240-41879/11-A			10:55	
ZZZZZZ			10:57	
ZZZZZZ			10:59	
ZZZZZZ			11:01	
ZZZZZZ			11:03	
ZZZZZZ			11:05	
ZZZZZZ			11:07	
ZZZZZZ			11:08	
ZZZZZZ			11:11	
ZZZZZZ			11:13	
ZZZZZZ			11:15	
CCV 240-41879/12-A			11:17	
CCB 240-41879/11-A			11:19	
ZZZZZZ			11:22	
ZZZZZZ			11:24	
ZZZZZZ			11:26	
ZZZZZZ			11:28	
CCV 240-41879/12-A	1		11:31	X
CCB 240-41879/11-A	1		11:33	X
ZZZZZZ			11:35	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes																					
				Hg																					
ZZZZZZ			11:37																						
ZZZZZZ			11:38																						
ZZZZZZ			11:40																						
ZZZZZZ			11:44																						
ZZZZZZ			11:45																						
ZZZZZZ			11:48																						
ZZZZZZ			11:49																						
MB 240-41812/1-A	1	T	11:51	X																					
LCS 240-41812/2-A	1	T	11:53	X																					
CCV 240-41879/12-A	1		11:55	X																					
CCB 240-41879/11-A	1		11:59	X																					
ZZZZZZ			12:01																						
240-10615-J-4-E MS	1	T	12:03	X																					
240-10615-J-4-F MSD	1	T	12:05	X																					
ZZZZZZ			12:06																						
240-10615-G-4-E MS	1	D	12:08	X																					
240-10615-G-4-F MSD	1	D	12:11	X																					
240-10598-3	1	T	12:13	X																					
240-10598-3	1	D	12:15	X																					
ZZZZZZ			12:16																						
ZZZZZZ			12:18																						
CCV 240-41879/12-A	1		12:20	X																					
CCB 240-41879/11-A	1		12:22	X																					
ZZZZZZ			12:24																						
ZZZZZZ			12:26																						
ZZZZZZ			12:28																						
ZZZZZZ			12:30																						
ZZZZZZ			12:32																						
ZZZZZZ			12:34																						
ZZZZZZ			12:36																						
ZZZZZZ			12:37																						
ZZZZZZ			12:39																						
ZZZZZZ			12:41																						
CCV 240-41879/12-A			12:43																						
CCB 240-41879/11-A			12:45																						
ZZZZZZ			12:47																						
ZZZZZZ			12:50																						
ZZZZZZ			12:52																						
ZZZZZZ			12:54																						
ZZZZZZ			12:56																						
ZZZZZZ			12:58																						
ZZZZZZ			13:00																						

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			13:03																					
ZZZZZZ			13:05																					
ZZZZZZ			13:07																					
CCV 240-41879/12-A			13:09																					
CCB 240-41879/11-A			13:11																					
ZZZZZZ			13:13																					
ZZZZZZ			13:15																					
ZZZZZZ			13:17																					
ZZZZZZ			13:19																					
ZZZZZZ			13:21																					
ZZZZZZ			13:23																					
ZZZZZZ			13:25																					
ZZZZZZ			13:27																					
ZZZZZZ			13:29																					
ZZZZZZ			13:31																					
CCV 240-41879/12-A			13:33																					
CCB 240-41879/11-A			13:35																					
ZZZZZZ			13:37																					
ZZZZZZ			13:39																					
ZZZZZZ			13:41																					
ZZZZZZ			13:42																					
ZZZZZZ			13:44																					
ZZZZZZ			13:47																					
ZZZZZZ			13:49																					
ZZZZZZ			13:51																					
ZZZZZZ			13:53																					
ZZZZZZ			13:55																					
CCV 240-41879/12-A			13:57																					
CCB 240-41879/11-A			13:59																					
ZZZZZZ			14:00																					
ZZZZZZ			14:03																					
ZZZZZZ			14:05																					
ZZZZZZ			14:07																					
ZZZZZZ			14:09																					
ZZZZZZ			14:11																					
ZZZZZZ			14:13																					
ZZZZZZ			14:15																					
ZZZZZZ			14:17																					
ZZZZZZ			14:19																					
CCV 240-41879/12-A			14:22																					
CCB 240-41879/11-A			14:24																					
ZZZZZZ			14:26																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			14:28																					
ZZZZZZ			14:29																					
ZZZZZZ			14:32																					
ZZZZZZ			14:34																					
ZZZZZZ			14:36																					
ZZZZZZ			14:38																					
ZZZZZZ			14:40																					
ZZZZZZ			14:42																					
ZZZZZZ			14:44																					
CCV 240-41879/12-A			14:46																					
CCB 240-41879/11-A			14:48																					
ZZZZZZ			14:50																					
ZZZZZZ			14:52																					
ZZZZZZ			14:54																					
ZZZZZZ			14:56																					
CCV 240-41879/12-A			14:58																					
CCB 240-41879/11-A			15:00																					

Prep Types

D = Dissolved

T = Total/NA

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/28/2012 End Date: 04/28/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-42093/2 IC	08:11	78		88		93		91		93	
STD3 240-42093/3 IC	08:18	72		82		86		83		87	
STD4 240-42093/4 IC	08:25	92		99		99		99		98	
ICV 240-42093/5	08:30	79		89		92		90		92	
ICB 240-42093/6	08:37	93		98		99		98		98	
CRI 240-42093/7	08:43	90		97		98		97		97	
ICSA 240-42093/9	08:53	66		78		79		80		84	
ICSAB 240-42093/10	08:59	57		69		74		76		81	
CCV 240-42093/46	12:29	69		75		79		77		80	
CCB 240-42093/47	12:36	91		87		87		87		87	
MB 240-41805/1-A	12:58	82		82		87		86		86	
LCS 240-41805/2-A	13:03	78		80		85		84		87	
240-10615-J-4-A SD	13:16	83		79		82		82		83	
240-10615-J-4-B MS	13:21	73		75		80		79		82	
240-10615-J-4-C MSD	13:28	78		76		79		79		81	
CCV 240-42093/58	13:41	71		72		78		76		78	
CCB 240-42093/59	13:48	92		82		85		84		84	
240-10615-G-4-B MS	13:53	77		76		79		79		81	
240-10615-G-4-C MSD	14:00	80		76		79		77		80	
240-10598-2	14:07	90		79		80		80		81	
240-10598-3	14:13	76		72		75		74		75	
240-10598-3	14:18	75		72		75		74		75	
CCV 240-42093/70	14:51	67		68		73		71		74	
CCB 240-42093/71	14:58	91		80		80		80		80	
ICSA 240-42093/120	19:41	65		66		67		66		69	
ICSAB 240-42093/121	19:47	57		61		65		64		68	
CCV 240-42093/134	21:01	61		67		70		68		70	
CCB 240-42093/135	21:08	80		73		74		74		73	
MB 240-41803/1-A	21:36	73		68		73		72		73	
LCS 240-41803/2-A	21:41	70		68		73		72		73	
240-10621-AL-1-A SD	21:54	72		68		72		71		71	
240-10621-AL-1-B MS	21:59	59		63		65		63		67	
240-10621-AL-1-C	22:06	61		62		65		64		67	
CCV 240-42093/146	22:14	67		65		68		66		68	
CCB 240-42093/147	22:21	81		71		74		73		73	
240-10598-2	22:48	71		68		71		71		71	
CCV 240-42093/158	23:21	59		63		68		66		67	
CCB 240-42093/159	23:28	77		70		73		72		72	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/28/2012 End Date: 04/28/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-42093/2 IC	08:11			96							
STD3 240-42093/3 IC	08:18			91							
STD4 240-42093/4 IC	08:25			99							
ICV 240-42093/5	08:30			95							
ICB 240-42093/6	08:37			98							
CRI 240-42093/7	08:43			97							
ICSA 240-42093/9	08:53			86							
ICSAB 240-42093/10	08:59			85							
CCV 240-42093/46	12:29			84							
CCB 240-42093/47	12:36			89							
MB 240-41805/1-A	12:58			88							
LCS 240-41805/2-A	13:03			89							
240-10615-J-4-A SD	13:16			85							
240-10615-J-4-B MS	13:21			85							
240-10615-J-4-C MSD	13:28			85							
CCV 240-42093/58	13:41			82							
CCB 240-42093/59	13:48			84							
240-10615-G-4-B MS	13:53			83							
240-10615-G-4-C MSD	14:00			83							
240-10598-2	14:07			83							
240-10598-3	14:13			82							
240-10598-3	14:18			81							
CCV 240-42093/70	14:51			78							
CCB 240-42093/71	14:58			82							
ICSA 240-42093/120	19:41			71							
ICSAB 240-42093/121	19:47			71							
CCV 240-42093/134	21:01			73							
CCB 240-42093/135	21:08			75							
MB 240-41803/1-A	21:36			74							
LCS 240-41803/2-A	21:41			76							
240-10621-AL-1-A SD	21:54			74							
240-10621-AL-1-B MS	21:59			70							
240-10621-AL-1-C	22:06			70							
CCV 240-42093/146	22:14			72							
CCB 240-42093/147	22:21			75							
240-10598-2	22:48			74							
CCV 240-42093/158	23:21			72							
CCB 240-42093/159	23:28			74							

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Batch Number: 41803 Batch Start Date: 04/27/12 08:00 Batch Analyst: Nicholas, Courtney

Batch Method: 3005A Batch End Date: 04/27/12 17:00

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTHCL 00028	MTHNO3 00024	MTICPMS2 00007	MTICPMSA 00006
MB 240-41803/1		3005A, 6020		50 mL	50 mL	2.5 mL	1 mL		
LCS 240-41803/2		3005A, 6020		50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10621-AL-1 MS		3005A, 6020	R	50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10621-AL-1 MSD		3005A, 6020	R	50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10598-G-2	MT-MW04S	3005A, 6020	R	50 mL	50 mL	2.5 mL	1 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTICPMSB 00006					
MB 240-41803/1		3005A, 6020							
LCS 240-41803/2		3005A, 6020		0.5 mL					
240-10621-AL-1 MS		3005A, 6020	R	0.5 mL					
240-10621-AL-1 MSD		3005A, 6020	R	0.5 mL					
240-10598-G-2	MT-MW04S	3005A, 6020	R						

Batch Notes	
Filter Paper Lot Number	4645986
Pipette ID	383363
Digestion Tube/Cup Lot #	1111173

Basis	Basis Description
R	Total Recoverable

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Batch Number: 41805 Batch Start Date: 04/27/12 12:00 Batch Analyst: Nicholas, Courtney

Batch Method: 3005A Batch End Date: 04/27/12 19:15

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTHCL 00028	MTHNO3 00024	MTICPMS2 00007	MTICPMSA 00006
MB 240-41805/1		3005A, 6020		50 mL	50 mL	2.5 mL	1 mL		
LCS 240-41805/2		3005A, 6020		50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10615-J-4 MS		3005A, 6020	R	50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10615-J-4 MSD		3005A, 6020	R	50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10615-G-4 MS		3005A, 6020	D	50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10615-G-4 MSD		3005A, 6020	D	50 mL	50 mL	2.5 mL	1 mL	0.5 mL	0.5 mL
240-10598-H-2	MT-MW04S	3005A, 6020	D	50 mL	50 mL	2.5 mL	1 mL		
240-10598-G-3	MT-MW06S	3005A, 6020	R	50 mL	50 mL	2.5 mL	1 mL		
240-10598-H-3	MT-MW06S	3005A, 6020	D	50 mL	50 mL	2.5 mL	1 mL		

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTICPMSB 00006
MB 240-41805/1		3005A, 6020		
LCS 240-41805/2		3005A, 6020		0.5 mL
240-10615-J-4 MS		3005A, 6020	R	0.5 mL
240-10615-J-4 MSD		3005A, 6020	R	0.5 mL
240-10615-G-4 MS		3005A, 6020	D	0.5 mL
240-10615-G-4 MSD		3005A, 6020	D	0.5 mL
240-10598-H-2	MT-MW04S	3005A, 6020	D	
240-10598-G-3	MT-MW06S	3005A, 6020	R	
240-10598-H-3	MT-MW06S	3005A, 6020	D	

Batch Notes	
Filter Paper Lot Number	4645986
Pipette ID	383363
Digestion Tube/Cup Lot #	1111173

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Batch Number: 41805 Batch Start Date: 04/27/12 12:00 Batch Analyst: Nicholas, Courtney

Batch Method: 3005A Batch End Date: 04/27/12 19:15

Basis	Basis Description
R	Total Recoverable
D	Dissolved

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Batch Number: 41755 Batch Start Date: 04/26/12 15:50 Batch Analyst: Nicholas, Courtney

Batch Method: 7470A Batch End Date: 04/26/12 17:50

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTH2S04 00007	MTHGICVW 00283	MTHNO3 00024	MTK2S208RGNT 00017
MB 240-41755/1		7470A, 7470A		100 mL	100 mL	5 mL		2.5 mL	8 mL
LCS 240-41755/2		7470A, 7470A		100 mL	100 mL	5 mL	1 mL	2.5 mL	8 mL
240-10570-D-11 MS		7470A, 7470A	D	100 mL	100 mL	5 mL	0.2 mL	2.5 mL	8 mL
240-10570-D-11 MSD		7470A, 7470A	D	100 mL	100 mL	5 mL	0.2 mL	2.5 mL	8 mL
240-10598-G-2	MT-MW04S	7470A, 7470A	T	100 mL	100 mL	5 mL		2.5 mL	8 mL
240-10598-H-2	MT-MW04S	7470A, 7470A	D	100 mL	100 mL	5 mL		2.5 mL	8 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTKMN04W 00020					
MB 240-41755/1		7470A, 7470A		15 mL					
LCS 240-41755/2		7470A, 7470A		15 mL					
240-10570-D-11 MS		7470A, 7470A	D	15 mL					
240-10570-D-11 MSD		7470A, 7470A	D	15 mL					
240-10598-G-2	MT-MW04S	7470A, 7470A	T	15 mL					
240-10598-H-2	MT-MW04S	7470A, 7470A	D	15 mL					

Batch Notes	
Pipette ID	432085 383364

Basis	Basis Description
T	Total/NA
D	Dissolved

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Batch Number: 41812 Batch Start Date: 04/27/12 12:40 Batch Analyst: Nicholas, Courtney

Batch Method: 7470A Batch End Date: 04/27/12 14:40

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTH2S04 00007	MTHGICVW 00284	MTHNO3 00024	MTK2S208RGNT 00017
MB 240-41812/1		7470A, 7470A		100 mL	100 mL	5 mL		2.5 mL	8 mL
LCS 240-41812/2		7470A, 7470A		100 mL	100 mL	5 mL	1 mL	2.5 mL	8 mL
240-10615-J-4 MS		7470A, 7470A	T	100 mL	100 mL	5 mL	0.2 mL	2.5 mL	8 mL
240-10615-J-4 MSD		7470A, 7470A	T	100 mL	100 mL	5 mL	0.2 mL	2.5 mL	8 mL
240-10615-G-4 MS		7470A, 7470A	D	100 mL	100 mL	5 mL	0.2 mL	2.5 mL	8 mL
240-10615-G-4 MSD		7470A, 7470A	D	100 mL	100 mL	5 mL	0.2 mL	2.5 mL	8 mL
240-10598-G-3	MT-MW06S	7470A, 7470A	T	100 mL	100 mL	5 mL		2.5 mL	8 mL
240-10598-H-3	MT-MW06S	7470A, 7470A	D	100 mL	100 mL	5 mL		2.5 mL	8 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTKMN04W 00020					
MB 240-41812/1		7470A, 7470A		15 mL					
LCS 240-41812/2		7470A, 7470A		15 mL					
240-10615-J-4 MS		7470A, 7470A	T	15 mL					
240-10615-J-4 MSD		7470A, 7470A	T	15 mL					
240-10615-G-4 MS		7470A, 7470A	D	15 mL					
240-10615-G-4 MSD		7470A, 7470A	D	15 mL					
240-10598-G-3	MT-MW06S	7470A, 7470A	T	15 mL					
240-10598-H-3	MT-MW06S	7470A, 7470A	D	15 mL					

Batch Notes	
Pipette ID	432085-383364

Basis	Basis Description
T	Total/NA
D	Dissolved

METALS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10598-1

SDG No.:

Batch Number: 41879 Batch Start Date: 04/27/12 08:45 Batch Analyst: Sutherland, Aaron

Batch Method: 7470A Batch End Date: 04/27/12 10:45

Lab Sample ID	Client Sample ID	Method Chain	Basis	InitialAmount	FinalAmount	MTH2S04 00007	MTHGCALW 00185	MTHGICVW 00284	MTHNO3 00024
ICV 240-41879/7		7470A, 7470A		100 mL	100 mL	5 mL		0.5 mL	2.5 mL
ICB 240-41879/8		7470A, 7470A		100 mL	100 mL	5 mL			2.5 mL
CRA 240-41879/9		7470A, 7470A		100 mL	100 mL	5 mL	0.2 mL		2.5 mL
CCVL 240-41879/10		7470A, 7470A		100 mL	100 mL	5 mL	5 mL		2.5 mL
CCB 240-41879/11		7470A, 7470A		100 mL	100 mL	5 mL			2.5 mL
CCV 240-41879/12		7470A, 7470A		100 mL	100 mL	5 mL	5 mL		2.5 mL

Lab Sample ID	Client Sample ID	Method Chain	Basis	MTK2S208RGNT 00017	MTKMN04W 00020				
ICV 240-41879/7		7470A, 7470A		8 mL	15 mL				
ICB 240-41879/8		7470A, 7470A		8 mL	15 mL				
CRA 240-41879/9		7470A, 7470A		8 mL	15 mL				
CCVL 240-41879/10		7470A, 7470A		8 mL	15 mL				
CCB 240-41879/11		7470A, 7470A		8 mL	15 mL				
CCV 240-41879/12		7470A, 7470A		8 mL	15 mL				

Batch Notes	
Pipette ID	432085-383364-383363-383366

Basis	Basis Description

MT-MW065
Total

240-10598-g-3-a, 4/28/2012 14:13:35 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		76.158%	81.230	32.680
%RSD		5.071	2.103	2.333
Run	**Time**	**23Na**	**25Mg**	**27Al**
		ppb	ppb	ppb
x		T 86510.000	18960.000	M 1195.000
%RSD		T 0.828	0.521	M 0.832
Run	**Time**	**35Cl**	**39K**	**43Ca**
		ppb	ppb	ppb
x		T 0.000	T 6808.000	13420.000
%RSD		T 0.000	T 0.861	0.413
Run	**Time**	**45Sc**	**45Sc**	**47Ti**
		ppb	ppb	ppb
x		T 72.077%	74.886%	0.663
%RSD		T 0.553	0.771	41.100
Run	**Time**	**51V**	**52Cr**	**53Cl O**
		ppb	ppb	ppb
x		0.147	0.114	0.560
%RSD		156.900	58.330	74.370
Run	**Time**	**55Mn**	**56Fe**	**59Co**
		ppb	ppb	ppb
x		TM 8610.000	12.100	M 542.700
%RSD		TM 0.651	10.810	M 0.651
Run	**Time**	**60Ni**	**65Cu**	**66Zn**
		ppb	ppb	ppb
x		M 1182.000	46.330	M 1902.000
%RSD		M 0.928	2.040	M 0.218
Run	**Time**	**72Ge**	**75As**	**77Ar Cl**
		ppb	ppb	ppb
x		74.115%	1.481	0.271
%RSD		0.244	3.459	10.890
Run	**Time**	**78Se**	**88Sr**	**95Mo**
		ppb	ppb	ppb
x		1.205	103.000	0.150
%RSD		29.180	0.577	23.320
Run	**Time**	**105Pd**	**107Ag**	**109Ag Cl**
		ppb	ppb	ppb
x		0.000	0.020	-4.812
%RSD		0.000	20.090	19.850
Run	**Time**	**111Cd**	**115In**	**118Sn**
		ppb	ppb	ppb
x		2.032	75.183%	0.060
%RSD		1.717	0.241	43.470
Run	**Time**	**121Sb**	**137Ba**	**159Tb**
		ppb	ppb	ppb
x		0.087	96.100	0.000
%RSD		13.340	0.269	0.000
Run	**Time**	**165Ho**	**182W**	**205Tl**
		ppb	ppb	ppb
x		81.805%	0.202	0.771
%RSD		0.946	0.157	2.738
Run	**Time**	**208Pb**	**209Bi**	
		ppb	ppb	
x		2.292	0.000	
%RSD		0.784	0.000	

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO:	**T. APANAVAGE**	**DATE:**	**JULY 2, 2012**
FROM:	**J. KALINYAK**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / 1,4-DIOXANE / GRO / DRO / PERCHLORATE**
LOCKHEED - MSA
SAMPLE DELIVERY GROUP (SDG) 240-10670-1

SAMPLES: 4 / Aqueous / VOC

MT-MW01S-042512	MT-MW03S-042512	MT-MW05S-042512
TB-042512		

3 / Aqueous / 1,4-Dioxane / GRO / DRO / Perchlorate

MT-MW01S-042512	MT-MW03S-042512	MT-MW05S-042512

Overview

The sample set for Lockheed - MSA, SDG 240-10670-1, consisted of four (4) aqueous samples including one (1) aqueous trip blank sample. All aqueous samples were analyzed for volatile organic compounds (VOC). Three (3) aqueous samples were analyzed for 1,4-dioxane, gasoline range organics (GRO), and diesel range organics (DRO) as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on April 26, 2012 and analyzed by TestAmerica Laboratories, Inc., Canton for all analyses with the exception of the perchlorate analyses which were subcontracted to TestAmerica Laboratories Inc, West Sacramento. All analyses were conducted in accordance with EPA SW-846 Methods 8260C for VOCs, 8270C for 1,4-dioxane, 8015B for GRO, 8015B for DRO, and 6850 for perchlorates, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factor (RRF) was less than the 0.05 criteria for tert-butyl alcohol on instrument A3UX16 on 04/29/12. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and vinyl acetate were also less than the 0.05 criteria for instrument A3UX16 on 04/30/12 @ 11:50.
  Affected Samples: All samples
  Action: The sample non-detected results for tert-butyl alcohol and vinyl acetate were qualified rejected, (UR).

- Fluorotrimethyl-silane and trimethyl-silanol were detected as tentatively identified compounds (TICs) by the laboratory for samples MT-MW03S-042512 and TB-042512, respectively.
  Action: Fluorotrimethyl-silane and trimethyl-silanol are considered present due to column bleed on the laboratory instrument. The sample positive TIC results for fluorotrimethyl-silane and trimethyl-silanol for these samples were qualified rejected, (R).

Minor Problems

- The total petroleum hydrocarbon (TPH) C6-C10 (GRO) was detected in the method blank at the following maximum concentration affecting all samples.

Analytes	Maximum Conc. µg/L	Action Level µg/L
TPH C6-C10 (1)	32.9	164.5

(1) Method blank MB 240-42055/7 affecting all samples.

An action level of five times the maximum level for TPH C6-C10 has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample GRO results if less than the action level were qualified (B), for method blank contamination.

- The TPH C10-C32 (DRO) was detected in the method blank at the following maximum concentration affecting all samples.

Analytes	Maximum Conc. µg/L	Action Level µg/L
TPH C10-C32 (1)	422	2110

(1) Method blank MB 240-42055/7 affecting all samples.

An action level of five times the maximum level for TPH C10-C32 has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample DRO results if less than the action level were qualified (B), for method blank contamination.

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

- The following VOC tentatively identified compounds (TIC) were associated with the samples as listed below. The instrument was not calibrated for these TICs and therefore they were qualified estimated, (NJ), and assumed to be presumptively present.

Sample	TICs
MT-MW01S-042512	butane
MT-MW05S-042512	2-methyl butane

Notes

The laboratory VOC contaminant was detected in the method blank at the following maximum concentration affecting all samples.

Analytes	Maximum Conc. µg/l	Action Level µg/l
1,2,3-Trichlorobenzene [1]	0.288	1.440

[1] Method blank MB 240-42171/5 affecting all samples.

An action level of five times the maximum level for 1,2,3-trichlorobenzene has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No samples were qualified for 1,2,3-trichlorobenzene method blank contamination.

The VOC MS and the MSD for a spiked sample from another SDG (240-10350-A) had %Rs for 2-chloroethyl vinyl ether less than the quality control limit (0%). No validation action was necessary as the sample was not from this SDG.

The sample MT-MW05S-042512 1,4-dioxane analysis surrogates 2-fluorophenol, phenol-d5, and 2,4,6-tribromophenol %Rs were less than the quality control limit (and less than 10% for two of the surrogates) affecting the acid fraction SVOC analytes. As 1,4-dioxane is associated with base/neutral surrogates, no validation action was necessary for the sample 1,4-dioxane result.

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol and vinyl acetate sample results were rejected due to calibration and CCV RRF criteria non-compliances. Sample DRO and GRO results were qualified for method blank contamination.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). Some VOC TICs were qualified estimated as the instrument was not calibrated for these analytes. Sample positive silane and silanol TICs were rejected as these analytes were due to instrument column bleed.

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260C, 8270C, 8015B, and 6850, and the Region III EPA Functional Guidelines for Organic Data Validation (9/94).

Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist

TetraTech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512			TB-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2			240-10670-1		
FRACTION: OV	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE	0.15	U		0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE	0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE	0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE	0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE	0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE	0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE	0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE	0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE	0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE	0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE	0.13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE	0.57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE	0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE	0.41	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE	0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE	0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE	0.32	U		0.32	U		0.32	U		0.32	U	
ACETONE	1.1	U		1.1	U		1.1	U		1.1	U	
BENZENE	0.13	J	P	0.13	U		0.13	U		0.13	U	
BROMOBENZENE	0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE	0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE	0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM	0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE	0.41	U		0.41	U		0.41	U		0.41	U	

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512			TB-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2			240-10670-1		
FRACTION: OV	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BUTANE	1.4	NJ	Z1									
BUTANE, 2-METHYL-							2.5	NJ	Z1			
CARBON DISULFIDE	0.13	U		0.51	J	P	0.13	U		0.13	U	
CARBON TETRACHLORIDE	0.13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE	0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE	0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE	0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM	0.16	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE	0.3	U		0.3	U		0.35	J	P	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U		0.17	U		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE	0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER	1.5	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE	0.17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE	0.3	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE	0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES	0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE	0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE	0.24	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE	0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE	0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE	0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE	0.13	U		0.13	U		0.13	U		0.13	U	
SILANE, FLUOROTRIMETHYL-				2.8	R	Z2						
SILANOL, TRIMETHYL-										2.5	R	Z2
STYRENE	0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER	0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE	0.13	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE	0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE	0.29	J	P	0.13	U		0.13	U		0.13	U	
TOTAL XYLENES	0.28	U		0.28	U		0.28	U		0.28	U	

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512			TB-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2			240-10670-1		
FRACTION: OV	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		0.17	U		0.17	U		0.35	J	P	0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2		
FRACTION: OS	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.49	U		0.51	U		0.51	U	

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2		
FRACTION: PET	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		64	B	A	49	B	A	52	B	A
TPH (C10-C32)		540	B	A	290	B	A	430	B	A

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2		
FRACTION: MISC	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U		0.082	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW01S-042512 | Lab Sample ID: 240-10670-3

Matrix: Water | Lab File ID: UXM5282.D

Analysis Method: 8260C | Date Collected: 04/25/2012 13:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	0.13	J	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW01S-042512 | Lab Sample ID: 240-10670-3

Matrix: Water | Lab File ID: UXM5282.D

Analysis Method: 8260C | Date Collected: 04/25/2012 13:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	0.29	J	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW01S-042512 | Lab Sample ID: 240-10670-3

Matrix: Water | Lab File ID: UXM5282.D

Analysis Method: 8260C | Date Collected: 04/25/2012 13:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		63-129
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
2037-26-5	Toluene-d8 (Surr)	86		74-115
1868-53-7	Dibromofluoromethane (Surr)	81		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW01S-042512 | Lab Sample ID: 240-10670-3

Matrix: Water | Lab File ID: UXM5282.D

Analysis Method: 8260C | Date Collected: 04/25/2012 13:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 16:40

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 1.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
106-97-8	Butane	1.95	1.4	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW03S-042512 | Lab Sample ID: 240-10670-4

Matrix: Water | Lab File ID: UXM5283.D

Analysis Method: 8260C | Date Collected: 04/25/2012 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 17:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	0.51	J	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW03S-042512 | Lab Sample ID: 240-10670-4

Matrix: Water | Lab File ID: UXM5283.D

Analysis Method: 8260C | Date Collected: 04/25/2012 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 17:03

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW03S-042512 Lab Sample ID: 240-10670-4

Matrix: Water Lab File ID: UXM5283.D

Analysis Method: 8260C Date Collected: 04/25/2012 14:50

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 17:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	93		66-117
2037-26-5	Toluene-d8 (Surr)	91		74-115
1868-53-7	Dibromofluoromethane (Surr)	86		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW03S-042512 Lab Sample ID: 240-10670-4

Matrix: Water Lab File ID: UXM5283.D

Analysis Method: 8260C Date Collected: 04/25/2012 14:50

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 17:03

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2.8

CAS NO.	COMPOUND NAME	RT	RESULT	Q
420-56-4	Silane, fluorotrimethyl-	2.12	2.8	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW05S-042512 | Lab Sample ID: 240-10670-2

Matrix: Water | Lab File ID: UXM5281.D

Analysis Method: 8260C | Date Collected: 04/25/2012 10:51

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 16:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW05S-042512 | Lab Sample ID: 240-10670-2

Matrix: Water | Lab File ID: UXM5281.D

Analysis Method: 8260C | Date Collected: 04/25/2012 10:51

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 16:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	0.35	J	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	0.35	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW05S-042512 Lab Sample ID: 240-10670-2

Matrix: Water Lab File ID: UXM5281.D

Analysis Method: 8260C Date Collected: 04/25/2012 10:51

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 16:17

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	81		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
2037-26-5	Toluene-d8 (Surr)	86		74-115
1868-53-7	Dibromofluoromethane (Surr)	80		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW05S-042512 | Lab Sample ID: 240-10670-2

Matrix: Water | Lab File ID: UXM5281.D

Analysis Method: 8260C | Date Collected: 04/25/2012 10:51

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 16:17

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 2.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q
78-78-4	Butane, 2-methyl-	2.49	2.5	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: TB-042512 | Lab Sample ID: 240-10670-1

Matrix: Water | Lab File ID: UXM5280.D

Analysis Method: 8260C | Date Collected: 04/25/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: TB-042512 Lab Sample ID: 240-10670-1

Matrix: Water Lab File ID: UXM5280.D

Analysis Method: 8260C Date Collected: 04/25/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 15:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: TB-042512 | Lab Sample ID: 240-10670-1

Matrix: Water | Lab File ID: UXM5280.D

Analysis Method: 8260C | Date Collected: 04/25/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 15:54

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	83		63-129
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
2037-26-5	Toluene-d8 (Surr)	85		74-115
1868-53-7	Dibromofluoromethane (Surr)	82		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: TB-042512 Lab Sample ID: 240-10670-1

Matrix: Water Lab File ID: UXM5280.D

Analysis Method: 8260C Date Collected: 04/25/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 15:54

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	2.5	T J N

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW01S-042512 Lab Sample ID: 240-10670-3

Matrix: Water Lab File ID: 20504027.D

Analysis Method: 8270C Date Collected: 04/25/2012 13:35

Extract. Method: 3520C Date Extracted: 05/01/2012 10:12

Sample wt/vol: 1000(mL) Date Analyzed: 05/04/2012 17:29

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 42787 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	83		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	56		27-111
4165-62-2	Phenol-d5 (Surr)	58		10-110
1718-51-0	Terphenyl-d14 (Surr)	64		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW03S-042512 | Lab Sample ID: 240-10670-4

Matrix: Water | Lab File ID: 20504028.D

Analysis Method: 8270C | Date Collected: 04/25/2012 14:50

Extract. Method: 3520C | Date Extracted: 05/01/2012 10:12

Sample wt/vol: 960(mL) | Date Analyzed: 05/04/2012 17:48

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42787 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.51

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	53		28-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	81		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	53		27-111
4165-62-2	Phenol-d5 (Surr)	59		10-110
1718-51-0	Terphenyl-d14 (Surr)	40		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW05S-042512 | Lab Sample ID: 240-10670-2

Matrix: Water | Lab File ID: 20504026.D

Analysis Method: 8270C | Date Collected: 04/25/2012 10:51

Extract. Method: 3520C | Date Extracted: 05/01/2012 10:12

Sample wt/vol: 960(mL) | Date Analyzed: 05/04/2012 17:10

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42787 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.51

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	40		28-110
367-12-4	2-Fluorophenol (Surr)	6	X	10-110
118-79-6	2,4,6-Tribromophenol (Surr)	15	X	22-120
4165-60-0	Nitrobenzene-d5 (Surr)	39		27-111
4165-62-2	Phenol-d5 (Surr)	6	X	10-110
1718-51-0	Terphenyl-d14 (Surr)	71		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW01S-042512 | Lab Sample ID: 240-10670-3

Matrix: Water | Lab File ID: YF042814.D

Analysis Method: 8015B | Date Collected: 04/25/2012 13:35

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2012 21:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10) GRO	64	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW03S-042512 | Lab Sample ID: 240-10670-4

Matrix: Water | Lab File ID: YF042815.D

Analysis Method: 8015B | Date Collected: 04/25/2012 14:50

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2012 22:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10) GRO	49	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	65		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW05S-042512 Lab Sample ID: 240-10670-2

Matrix: Water Lab File ID: YF042813.D

Analysis Method: 8015B Date Collected: 04/25/2012 10:51

Sample wt/vol: 5(mL) Date Analyzed: 04/28/2012 20:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42055 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10) GRO	52	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	66		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW05S-042512 | Lab Sample ID: 240-10670-2

Matrix: Water | Lab File ID: P6F04305.D

Analysis Method: 8015B | Date Collected: 04/25/2012 10:51

Extraction Method: 3520C | Date Extracted: 04/27/2012 10:39

Sample wt/vol: 1050(mL) | Date Analyzed: 04/30/2012 11:56

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42140 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32) DRO	430	J B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	47		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW03S-042512 | Lab Sample ID: 240-10670-4

Matrix: Water | Lab File ID: P6F04307.D

Analysis Method: 8015B | Date Collected: 04/25/2012 14:50

Extraction Method: 3520C | Date Extracted: 04/27/2012 10:39

Sample wt/vol: 1030(mL) | Date Analyzed: 04/30/2012 12:58

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42140 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32) DRO	290	J B	490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	45		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: MT-MW01S-042512 | Lab Sample ID: 240-10670-3

Matrix: Water | Lab File ID: P6F04306.D

Analysis Method: 8015B | Date Collected: 04/25/2012 13:35

Extraction Method: 3520C | Date Extracted: 04/27/2012 10:39

Sample wt/vol: 960(mL) | Date Analyzed: 04/30/2012 12:27

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42140 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32) DRO	540	B	520	250

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	22		10-110

TestAmerica Canton

Client Sample ID: MT-MW01S-042512

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E010442-002	**Work Order #...:** MTAK21AA		**Matrix.....:** WATER	
Date Sampled...: 04/25/12	**Date Received..:** 04/28/12			
Prep Date.....: 05/07/12	**Analysis Date..:** 05/15/12			
Prep Batch #...: 2128058				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MT-MW03S-042512

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E010442-003	**Work Order #...:**	MTAK31AA	**Matrix.....:**	WATER
Date Sampled...:	04/25/12	**Date Received..:**	04/28/12		
Prep Date.....:	05/07/12	**Analysis Date..:**	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MT-MW05S-042512

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E010442-001	**Work Order #...:**	MTAK11AA	**Matrix.....:**	WATER
Date Sampled...:	04/25/12	**Date Received..:**	04/28/12		
Prep Date.....:	05/07/12	**Analysis Date..:**	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

APPENDIX C

SUPPORT DOCUMENTATION

HOLDTIME

SDG 240-10670-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HG	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HG	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
M	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
M	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
M	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HGF	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HGF	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HGF	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
MF	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
MF	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
MF	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
PCL	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	5/7/2012	5/15/2012	12	8	20
PCL	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	5/7/2012	5/15/2012	12	8	20
PCL	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	5/7/2012	5/15/2012	12	8	20

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	5/1/2012	5/4/2012	6	3	9
OS	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	5/1/2012	5/4/2012	6	3	9
OS	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	5/1/2012	5/4/2012	6	3	9
OV	UG/L	TB-042512	240-10670-1	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	TB-042512	240-10670-1	TB	4/25/2012	4/30/2012	4/30/2012	5	0	5
DRO	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/30/2012	2	3	5
DRO	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/30/2012	2	3	5
DRO	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/30/2012	2	3	5
GRO	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/28/2012	4/28/2012	3	0	3
GRO	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/28/2012	4/28/2012	3	0	3
GRO	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/28/2012	4/28/2012	3	0	3

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech INC.	Client Project Manager: Tony Aparavasse	Site Contact: Walt Payn	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 301 528-3021		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐ Job/SDG No.:
Project Name: MSB-Ground Water Sampling	Method of Shipment/Carrier: Fed EX			
Project Number: 112JC04021-02	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C / Grab G	VOCs	Total PPM	Diss PPM	1,4 Dioxane	DRO	GRO	Perchlorate	Sample Specific Notes / Special Instructions:
TB-042512	4-25-12	—		X						2					N	G	X							
MT-MW05s-042512		1051		X					2	5			5				X	X	X	X	X	X	X	
MT-MW01s-042512		1335		X					2	5			5				X	X	X	X	X	X	X	
MT-MW03s-042512	↓	1450		X					2	5			5		↓	↓	X	X	X	X	X	X	X	

Loc: 240
10670
US

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

	Company	Date/Time		Company	Date/Time
Relinquished by:	TT INC.	4-25-12 / 1520	Received by:	TestAmerica	4/25/12 / 1520
Relinquished by:	TestAmerica	4/25/12 / 1725	Received by:		
Relinquished by:			Received in Laboratory by:	TA WC	4/26/12 9:15

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TAL-0018 (1008)

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10440

Client Tetra Tech Site Name _____ By: _____ (Signature)

Cooler Received on 4/26/12 Opened on 4/26/12

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	~~Multiple~~ on Back
(IR GUN# ~~5G~~)	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
MW05S	<2<2	4/26/12	[illegible]
MW01S	<2<2		
MW03S	<2<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client Cooler	1.4	0.4	SG	ICE
	1.5	0.5		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10670-1

Login Number: 10670
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10670-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/26/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.4 and 0.5 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042512 (240-10670-1), MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10350-5 in batch 240-42171. tert-Butyl alcohol exceeded the rpd limit.

Refer to the QC report for details.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/01/2012 and analyzed on 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr), 2-Fluorophenol (Surr) and Phenol-d5 (Surr) failed the surrogate recovery criteria low for MT-MW05S-042512 (240-10670-2). Refer to the QC report for details.

Acid surrogates were out of control limits in sample MT-MW05S-042512 (240-10670-2). Since only Base Neutral compounds were requested no corrective action was necessary.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/28/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42055/7 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/27/2012 and analyzed on 04/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Total Petroleum Hydrocarbons (C10-C32) was detected in method blank MB 240-41890/15-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

Several analytes were detected in method blank MB 240-41956/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY
Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

Mercury was detected in method blank MB 240-41887/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10670-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10670-1TB	TB-042512	Water	04/25/2012 0000	04/26/2012 0915
240-10670-2	MT-MW05S-042512	Water	04/25/2012 1051	04/26/2012 0915
240-10670-3	MT-MW01S-042512	Water	04/25/2012 1335	04/26/2012 0915
240-10670-4	MT-MW03S-042512	Water	04/25/2012 1450	04/26/2012 0915

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10670-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

DATA REPORTING QUALIFIERS

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10670-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Indicates an Estimated Value for TICs
	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
	T	Result is a tentatively identified compound (TIC) and an estimated value.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	F	RPD of the MS and MSD exceeds the control limits
	N	This flag indicates the presumptive evidence of a compound.
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	X	Surrogate is outside control limits
GC VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

DATA REPORTING QUALIFIERS

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10670-1

Lab Section	Qualifier	Description
Metals		
	B	Compound was found in the blank and sample.
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42092/2	UXM5239.D	04/29/2012	15:41
	STD8260 240-42092/3	UXM5240.D	04/29/2012	16:03
	STD8260 240-42092/4	UXM5241.D	04/29/2012	16:26
	STD8260 240-42092/5	UXM5242.D	04/29/2012	16:49
	STD8260 240-42092/6	UXM5243.D	04/29/2012	17:12
	STD8260 240-42092/7	UXM5244.D	04/29/2012	17:34
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50
	ICV 240-42092/14	UXM5251.D	04/29/2012	20:13

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-10670-1 | Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 | GC Column: DB-624 | ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 | Calibration End Date: 04/29/2012 17:34 | Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.3038	0.2649	0.2905	0.2889	0.3016	Ave		0.2829			0.1000	7.8		15.0			
Chloromethane	0.4695 0.4320	0.4893	0.4830	0.4487	0.4452	Ave		0.4613			0.1000	4.9		15.0			
Vinyl chloride	0.4202 0.4041	0.4409	0.4365	0.4256	0.4202	Ave		0.4246			0.1000	3.1		15.0			
Bromomethane	0.1730 0.1493	0.1760	0.1733	0.1676	0.1710	Ave		0.1684			0.0500	5.8		15.0			
Chloroethane	0.2470 0.2229	0.2473	0.2344	0.2374	0.2336	Ave		0.2371				3.9		15.0			
Trichlorofluoromethane	0.2704 0.3132	0.3068	0.3031	0.3070	0.3204	Ave		0.3035			0.1000	5.7		15.0			
~~Acrolein~~	0.0469 0.0473	0.0483	0.0502	0.0508	0.0498	Ave		0.~~0489~~				3.3		15.0			
1,1-Dichloroethene	0.2340 0.2501	0.2402	0.2424	0.2499	0.2511	Ave		0.2446			0.1000	2.8		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1512 0.1622	0.1553	0.1500	0.1479	0.1608	Ave		0.1546			0.0500	3.8		15.0			
Acetone	0.2162 0.0864	0.1595	0.1181	0.1099	0.0970	Lin1	0.2842	0.0868			0.0500				0.9960		0.9950
Iodomethane	0.3345 0.3288	0.3415	0.3505	0.3469	0.3574	Ave		0.3433				3.1		15.0			
Carbon disulfide	0.6238 0.8183	0.6509	0.6976	0.7556	0.8104	Ave		0.7261			0.1000	11.0		15.0			
~~Acetonitrile~~	0.0391 0.0299	0.0368	0.0353	0.0335	0.0333	Ave		~~0.0346~~				9.2		15.0			
Methyl acetate	0.2451 0.2094	0.2377	0.2404	0.2374	0.2264	Ave		0.2327			0.1000	5.6		15.0			
Methylene Chloride	0.4532 0.2926	0.3791	0.3449	0.3188	0.3120	Lin1	0.1763	0.2950			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0187 0.0171	0.0206	0.0189	0.0189	0.0192	Ave		0.0189				6.0		15.0			
Acrylonitrile	0.1145 0.1022	0.1105	0.1139	0.1170	0.1105	Ave		0.1114				4.6		15.0			
trans-1,2-Dichloroethene	0.2839 0.2770	0.2945	0.2944	0.2851	0.2889	Ave		0.2873			0.1000	2.4		15.0			
Methyl tert-butyl ether	0.8507 0.8216	0.8205	0.8460	0.8461	0.8566	Ave		0.8402			0.1000	1.8		15.0			
Hexane	0.0529 0.0560	0.0521	0.0488	0.0501	0.0574	Ave		0.0529				6.3		15.0			
1,1-Dichloroethane	0.5478 0.5504	0.5906	0.5789	0.5698	0.5773	Ave		0.5691			0.1000	3.0		15.0			
Vinyl acetate	0.0438 0.0547	0.0420	0.0492	0.0562	0.0568	Ave		0.0505				13.0		15.0			
2-Butanone	0.1431 0.1214	0.1392	0.1413	0.1375	0.1314	Ave		0.1356			0.0500	5.9		15.0			
cis-1,2-Dichloroethene	0.3153 0.3006	0.3006	0.3107	0.3096	0.3157	Ave		0.3087			0.1000	2.2		15.0			
2,2-Dichloropropane	0.2459 0.3076	0.2799	0.2938	0.3057	0.3261	Ave		0.2932				9.5		15.0			
Bromochloromethane	0.1255 0.1262	0.1225	0.1298	0.1329	0.1330	Ave		0.1283				3.3		15.0			
Tetrahydrofuran	0.0875 0.0744	0.0826	0.0830	0.0854	0.0842	Ave		0.0828				5.4		15.0			
Chloroform	0.5169 0.5153	0.5299	0.5388	0.5290	0.5477	Ave		0.5296				2.4		15.0			
1,1,1-Trichloroethane	0.3234 0.3831	0.3500	0.3674	0.3840	0.3986	Ave		0.3678			0.1000	7.4		15.0			
Cyclohexane	0.4217 0.4832	0.4863	0.4431	0.4476	0.4809	Ave		0.4605			0.1000	5.8		15.0			
1,1-Dichloropropene	0.4359 0.4194	0.4199	0.4223	0.4252	0.4356	Ave		0.4264				1.8		15.0			
Carbon tetrachloride	0.2456 0.3072	0.2543	0.2617	0.2867	0.3066	Ave		0.2770			0.1000	9.7		15.0			
1,2-Dichloroethane	0.4838 0.4518	0.4761	0.4673	0.4667	0.4711	Ave		0.4694			0.1000	2.3		15.0			
Benzene	1.2256 1.2453	1.2535	1.2750	1.2420	1.2666	Ave		1.2513			0.5000	1.4		15.0			
Trichloroethene	0.2714 0.2655	0.2671	0.2733	0.2695	0.2719	Ave		0.2698			0.2000	1.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3056 0.3781	0.3553	0.3486	0.3331	0.3656	Ave		0.3477			0.1000	7.4		15.0			
1,2-Dichloropropane	0.2994 0.3048	0.3058	0.3148	0.3132	0.3116	Ave		0.3083			0.1000	1.9		15.0			
Dibromomethane	0.1675 0.1555	0.1521	0.1644	0.1597	0.1644	Ave		0.1606				3.7		15.0			
~~1,4-Dioxane~~	0.0023 0.0020	0.0024	0.0025	0.0025	0.0025	Ave		~~0.0024~~				8.2		15.0			
Bromodichloromethane	0.2586 0.3533	0.2732	0.3036	0.3210	0.3455	Ave		0.3092			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1532 0.1582	0.1459	0.1670	0.1699	0.1653	Ave		0.1599				5.8		15.0			
cis-1,3-Dichloropropene	0.3061 0.4576	0.3249	0.3845	0.4238	0.4469	Lin1	-0.212	0.4568			0.1500				0.9990		0.9950
4-Methyl-2-pentanone	0.2451 0.2575	0.2540	0.2759	0.2780	0.2752	Ave		0.2643			0.0500	5.3		15.0			
Toluene	1.7728 1.9294	1.8880	1.8619	1.8474	1.9604	Ave		1.8766			0.4000	3.5		15.0			
trans-1,3-Dichloropropene	0.3835 0.6056	0.4211	0.4964	0.5287	0.6010	Lin1	-0.314	0.6041			0.1000				0.9980		0.9950
Ethyl methacrylate	0.4455 0.5778	0.5229	0.5765	0.5788	0.6242	Ave		0.5543				11.0		15.0			
1,1,2-Trichloroethane	0.3279 0.3212	0.3141	0.3421	0.3341	0.3447	Ave		0.3307			0.1000	3.6		15.0			
1,3-Dichloropropane	0.6891 0.6635	0.6944	0.7152	0.6928	0.7223	Ave		0.6962				3.0		15.0			
Tetrachloroethene	0.2452 0.2600	0.2630	0.2668	0.2612	0.2738	Ave		0.2617			0.2000	3.6		15.0			
2-Hexanone	0.2323 0.2576	0.2818	0.2796	0.2822	0.2852	Ave		0.2698			0.0500	7.8		15.0			
Dibromochloromethane	0.1872 0.3114	0.2160	0.2464	0.2709	0.3057	Lin1	-0.171	0.3097							0.9980		0.9950
1,2-Dibromoethane	0.2962 0.3220	0.3089	0.3344	0.3261	0.3462	Ave		0.3223				5.5		15.0			
Chlorobenzene	1.0759 1.0855	1.1279	1.1114	1.0941	1.1299	Ave		1.1041			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	0.2665 0.3469	0.2706	0.3066	0.3249	0.3538	Ave		0.3116				12.0		15.0			
Ethylbenzene	0.5227 0.5869	0.5825	0.6026	0.5858	0.6163	Ave		0.5828				5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6757 0.7551	0.7220	0.7191	0.7176	0.7638	Ave		0.7256				4.3		15.0			
o-Xylene	0.6806 0.7276	0.7176	0.7304	0.7130	0.7551	Ave		0.7207				3.4		15.0			
Styrene	1.0565 1.2902	1.1310	1.1966	1.1904	1.2870	Ave		1.1920			0.3000	7.6		15.0			
Bromoform	0.0815 0.1487	0.0938	0.1133	0.1171	0.1413	Lin1	-0.094	0.1455			0.1000				0.9950		0.9950
Isopropylbenzene	1.5492 1.8304	1.6861	1.6648	1.6944	1.8507	Ave		1.7126			0.1000	6.6		15.0			
1,1,2,2-Tetrachloroethane	0.8553 0.8338	0.9184	0.9469	0.9293	0.9310	Ave		0.9025			0.3000	5.1		15.0			
Bromobenzene	0.8074 0.7779	0.8287	0.8325	0.8084	0.8409	Ave		0.8159				2.8		15.0			
1,2,3-Trichloropropane	0.2880 0.2558	0.2803	0.2925	0.2919	0.2938	Ave		0.2837				5.1		15.0			
trans-1,4-Dichloro-2-butene	0.2181 0.2689	0.2471	0.2346	0.2535	0.2845	Ave		0.2511				9.5		15.0			
n-Propylbenzene	0.7292 0.8665	0.8823	0.8741	0.8947	0.9118	Ave		0.8598				7.7		15.0			
2-Chlorotoluene	0.8583 0.7918	0.8579	0.8258	0.8361	0.8474	Ave		0.8362				3.0		15.0			
1,3,5-Trimethylbenzene	2.5787 2.8481	2.7830	2.7962	2.7951	2.9477	Ave		2.7914				4.3		15.0			
4-Chlorotoluene	0.8421 0.8602	0.8907	0.8940	0.8564	0.9136	Ave		0.8762				3.1		15.0			
tert-Butylbenzene	2.2870 2.5025	2.5077	2.4568	2.4969	2.5752	Ave		2.4710				4.0		15.0			
1,2,4-Trimethylbenzene	2.7586 2.9544	2.8331	2.8754	2.9504	3.0668	Ave		2.9065				3.7		15.0			
sec-Butylbenzene	2.8024 3.1977	3.0238	2.9596	3.0216	3.2137	Ave		3.0365				5.1		15.0			
1,3-Dichlorobenzene	1.5037 1.4698	1.4901	1.5135	1.5069	1.5495	Ave		1.5056			0.6000	1.8		15.0			
p-Isopropyltoluene	2.2069 2.6255	2.4647	2.4703	2.4761	2.6715	Ave		2.4858				6.6		15.0			
1,4-Dichlorobenzene	1.6073 1.5308	1.6512	1.5577	1.5557	1.6211	Ave		1.5873			0.5000	2.9		15.0			
n-Butylbenzene	2.0896 2.4436	2.2004	2.2368	2.2659	2.4792	Ave		2.2859				6.5		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4966 1.3945	1.5126	1.5119	1.4682	1.5239	Ave		1.4846			0.4000	3.2		15.0			
1,2-Dibromo-3-Chloropropane	0.0886 0.0950	0.0916	0.0904	0.0972	0.1086	Ave		0.0952			0.0500	7.6		15.0			
1,3,5-Trichlorobenzene	0.7904 0.7093	0.7633	0.7631	0.7837	0.8038	Ave		0.7690				4.3		15.0			
1,2,4-Trichlorobenzene	0.6476 0.5852	0.7228	0.7185	0.6951	0.7215	Ave		0.6818			0.2000	8.1		15.0			
Hexachlorobutadiene	0.2814 0.2092	0.2884	0.2495	0.2645	0.2531	Ave		0.2577				11.0		15.0			
Naphthalene	1.9527 1.6802	2.0647	2.2163	2.2497	2.2115	Ave		2.0625				11.0		15.0			
1,2,3-Trichlorobenzene	0.6221 0.4278	0.6296	0.6285	0.6505	0.5938	Ave		0.5920				14.0		15.0			
Dibromofluoromethane (Surr)	0.2331 0.2366	0.2278	0.2460	0.2403	0.2499	Ave		0.2389				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4238 0.3659	0.3675	0.3946	0.3884	0.3801	Ave		0.3867				5.5		15.0			
Toluene-d8 (Surr)	1.5539 1.5702	1.4814	1.5599	1.5466	1.5977	Ave		1.5516				2.5		15.0			
4-Bromofluorobenzene (Surr)	0.5499 0.5492	0.5504	0.5556	0.5412	0.5764	Ave		0.5538				2.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
~~Propionitrile~~	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		~~0.0386~~				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
~~Isobutyl alcohol~~	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		~~0.0086~~				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
~~n-Heptane~~	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		~~0.0406~~				12.0		15.0			
~~n-Butanol~~	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	~~0.0070~~							0.9990		0.9950
~~2-Nitropropane~~	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	~~0.0378~~	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	35885 1980706	77645	213757	441965	926938	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	68054 2816599	143417	355421	686521	1368025	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	60917 2635065	129233	321221	651141	1291232	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	25083 973652	51574	127563	256449	525557	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	35804 1453341	72482	172479	363159	717903	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	39202 2042282	89918	223037	469710	984559	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	68008 3085342	141530	369770	777854	1531686	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	33918 1630889	70410	178421	382278	771598	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	21921 1057686	45508	110360	226331	494002	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	62683 1127237	93486	173839	336387	595897	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	48493 2144017	100103	257965	530730	1098294	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	90427 5335771	190797	513352	1156089	2490300	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	56749 1947368	107775	259776	513045	1022838	10.0 400	20.0	50.0	100	200
Methyl acetate	FB	Ave	71069 2730691	139317	353813	726384	1391336	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	65695 1907926	111106	253801	487762	958858	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	54296 2230486	121019	278401	577732	1181799	20.0 800	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	33199 1332502	64764	167664	357877	679313	2.00 80.0	4.00	10.0	20.0	40.0
trans-1,2-Dichloroethene	FB	Ave	41156 1805850	86315	216661	436186	887809	1.00 40.0	2.00	5.00	10.0	20.0
Methyl tert-butyl ether	FB	Ave	123316 5356990	240492	622584	1294546	2632357	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	7664 364870	15284	35939	76608	176542	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	79407 3589145	173107	426021	871835	1773954	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	6355 356768	12300	36192	86048	174699	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	41482 1583175	81587	207910	420664	807827	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	45701 1960017	88112	228624	473715	970100	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	35648 2005803	82038	216190	467681	1002264	1.00 40.0	2.00	5.00	10.0	20.0
Bromochloromethane	FB	Ave	18189 822935	35913	95509	203401	408648	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	12689 485231	24197	61085	130645	258628	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	74928 3359863	155328	396473	809345	1683052	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	46880 2498258	102599	270389	587525	1225053	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	61130 3150583	142538	326094	684755	1477804	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	63188 2734618	123064	310759	650531	1338590	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Ave	35596 2003224	74531	192609	438606	942348	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	70126 2945634	139538	343914	713992	1447593	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	177668 8119748	367399	938261	1900238	3892190	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	39339 1731358	78290	201140	412335	835509	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	44297 2465241	104143	256548	509583	1123367	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	43403 1987718	89635	231666	479240	957503	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	24282 1014093	44570	121000	244410	505175	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	16576 659305	35560	90656	190747	391761	50.0 2000	100	250	500	1000
Bromodichloromethane	FB	Ave	37481 2303873	80071	223410	491180	1061629	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	44406 2063070	85505	245756	519803	1016253	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Lin1	44366 2983706	95217	282978	648461	1373441	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	71052 3358613	148911	406020	850832	1691407	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	173321 8413844	364692	910325	1915731	3926815	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Lin1	37498 2640993	81347	242683	548215	1203917	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Ave	43557 2519754	100996	281867	600178	1250367	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	32062 1400847	60672	167279	346503	690523	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	67375 2893528	134135	349671	718457	1446895	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	23974 1134016	50793	130464	270912	548439	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	45416 2246833	108870	273438	585245	1142606	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Lin1	18304 1357782	41724	120488	280880	612329	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	28960 1404286	59664	163482	338113	693547	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	105191 4733672	217868	543385	1134607	2263366	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	26058 1512891	52279	149910	336962	708703	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	51103 2559405	112518	294632	607431	1234615	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	132121 6585856	278940	703188	1488195	3060062	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	66541 3173134	138606	357130	739399	1512511	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Ave	103288 5626230	218474	585061	1234437	2578106	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Lin1	7969 648344	18118	55408	121431	283016	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	151460 7982152	325696	813952	1757043	3707115	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	39154 1824334	86153	226349	464104	921979	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	36958 1702050	77737	198983	403705	832802	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	13182 559668	26291	69913	145766	291005	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Ave	9983 588408	23177	56072	126610	281722	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	33381 1896081	82760	208940	446839	902975	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	39291 1732447	80476	197398	417562	839275	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	118040 6231859	261059	668378	1395891	2919244	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	38548 1882105	83551	213705	427671	904798	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	104687 5475645	235235	587256	1246967	2550345	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	126276 6464529	265761	687322	1473461	3037207	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	128284 6996931	283652	707440	1509023	3182710	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	68832 3216077	139781	361776	752571	1534518	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	101022 5744842	231206	590475	1236559	2645753	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	73576 3349475	154891	372339	776907	1605428	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	95655 5346731	206411	534670	1131581	2455279	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	68510 3051238	141891	361399	733205	1509157	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	4054 207890	8593	21620	48540	107543	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	36183 1552119	71605	182409	391395	796044	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	29643 1280551	67798	171750	347154	714527	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Ave	12883 457756	27055	59629	132088	250690	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCB	Ave	89388 3676449	193683	529762	1123493	2190121	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	28475 936111	59064	150229	324862	588048	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	33786 1543057	66758	181044	367622	767961	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	61436 2385669	107729	290422	594253	1168069	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	151916 6847384	286160	762662	1603788	3200285	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	53765 2394878	106312	271656	561195	1154675	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:
Ave = Average ISTD
Lin1 = Linear 1/conc ISTD

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	74598 3240218	146412	376630	789014	1566079	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44644 1851341	89012	231543	484302	943782	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	17177 965704	36949	93484	214615	456905	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	175389 9021702	381358	989616	2099629	4197719	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	67037 3335483	138884	364302	785295	1565439	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	114038 5829697	234431	633692	1358093	2727406	1.00 40.0	2.00	5.00	10.0	20.0
Propionitrile	FB	Ave	10519 484864	19537	53643	122521	239365	2.00 80.0	4.00	10.0	20.0	40.0
Ethyl acetate	FB	Ave	76413 3443932	143929	384742	808060	1641769	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	24236 1201419	53633	136829	298324	582158	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	23378 1085228	43306	121353	274103	534944	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	88590 4733198	188598	508209	1098573	2224035	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	5104 272147	10152	29307	62019	127766	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Lin1	12500 823386	29417	83258	186498	409174	20.0 800	40.0	100	200	400
2-Nitropropane	FB	Qua	10528 633675	19709	59496	119215	263103	2.00 80.0	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Lin1	32243 1979275	60655	200382	427297	962192	10.0 400	20.0	50.0	100	200
1,2,3-Trimethylbenzene	DCB	Ave	110047 6167616	248432	651353	1415601	2917084	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
2-Methylnaphthalene	DCB	Qua	52371 3134049	125934	353992	839119	1833171	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2340	0.1000	8.27	10.0	-17.3	20.0
Chloromethane	Ave	0.4613	0.4720	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.4246	0.4443	0.1000	10.5	10.0	4.6	20.0
Bromomethane	Ave	0.1684	0.1539	0.0500	9.14	10.0	-8.6	20.0
Chloroethane	Ave	0.2371	0.2329	0.0500	9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.3035	0.3240	0.1000	10.7	10.0	6.8	20.0
Acrolein	Ave	0.0489	0.0264		16.2	30.0	-46.0*	20.0
1,1-Dichloroethene	Ave	0.2446	0.2652	0.1000	10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1709	0.0500	11.1	10.0	10.6	20.0
Acetone	Lin1		0.1057	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.3433	0.3416		9.95	10.0	-0.5	20.0
Carbon disulfide	Ave	0.7261	0.7042	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0346	0.0393		34.0	30.0	13.4	20.0
Methyl acetate	Ave	0.2327	0.2751	0.1000	11.8	10.0	18.2	20.0
Methylene Chloride	Lin1		0.3299	0.1000	10.6	10.0	6.0	20.0
tert-Butyl alcohol	Ave	0.0189	0.0195		207	200	3.2	20.0
Acrylonitrile	Ave	0.1114	0.1186		31.9	30.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.8405	0.1000	10.0	10.0	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2952	0.1000	10.3	10.0	2.7	20.0
Hexane	Ave	0.0529	0.0579		10.9	10.0	9.4	20.0
1,1-Dichloroethane	Ave	0.5691	0.6028	0.1000	10.6	10.0	5.9	20.0
Vinyl acetate	Ave	0.0505	0.0387		7.67	10.0	-23.3*	20.0
2-Butanone	Ave	0.1356	0.1389	0.0500	20.5	20.0	2.4	20.0
2,2-Dichloropropane	Ave	0.2932	0.2855		9.74	10.0	-2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.3186	0.1000	10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1283	0.1312		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0828	0.0852		10.3	10.0	2.9	20.0
Chloroform	Ave	0.5296	0.5462	0.2000	10.3	10.0	3.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3794	0.1000	10.3	10.0	3.2	20.0
Cyclohexane	Ave	0.4605	0.4767	0.1000	10.4	10.0	3.5	20.0
1,1-Dichloropropene	Ave	0.4264	0.4383		10.3	10.0	2.8	20.0
Carbon tetrachloride	Ave	0.2770	0.2912	0.1000	10.5	10.0	5.1	20.0
1,2-Dichloroethane	Ave	0.4694	0.4938	0.1000	10.5	10.0	5.2	20.0
Benzene	Ave	1.251	1.319	0.5000	10.5	10.0	5.4	20.0
Trichloroethene	Ave	0.2698	0.2968	0.2000	11.0	10.0	10.0	20.0
1,2-Dichloropropane	Ave	0.3083	0.3319	0.1000	10.8	10.0	7.7	20.0
Methylcyclohexane	Ave	0.3477	0.3665	0.1000	10.5	10.0	5.4	20.0
Dibromomethane	Ave	0.1606	0.1738		10.8	10.0	8.2	20.0
Bromodichloromethane	Ave	0.3092	0.3331	0.1000	10.8	10.0	7.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1599	0.1722		10.8	10.0	7.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.4089	0.1500	9.41	10.0	-5.9	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2914	0.0500	22.1	20.0	10.3	20.0
Toluene	Ave	1.877	1.918	0.4000	10.2	10.0	2.2	20.0
trans-1,3-Dichloropropene	Lin1		0.5291	0.1000	9.28	10.0	-7.2	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3442	0.1000	10.4	10.0	4.1	20.0
1,3-Dichloropropane	Ave	0.6962	0.7105		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	0.2617	0.2644	0.2000	10.1	10.0	1.0	20.0
2-Hexanone	Ave	0.2698	0.2927	0.0500	21.7	20.0	8.5	20.0
Dibromochloromethane	Lin1		0.2623		9.02	10.0	-9.8	20.0
1,2-Dibromoethane	Ave	0.3223	0.3341		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	1.104	1.136	0.3000	10.3	10.0	2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3283		10.5	10.0	5.4	20.0
Ethylbenzene	Ave	0.5828	0.6250		10.7	10.0	7.2	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7452		20.5	20.0	2.7	20.0
o-Xylene	Ave	0.7207	0.7518		10.4	10.0	4.3	20.0
Styrene	Ave	1.192	1.255	0.3000	10.5	10.0	5.3	20.0
Bromoform	Lin1		0.1220	0.1000	9.03	10.0	-9.7	20.0
Isopropylbenzene	Ave	1.713	1.779	0.1000	10.4	10.0	3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.9195	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8159	0.8010		9.82	10.0	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2982		10.5	10.0	5.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2617		20.8	20.0	4.2	20.0
n-Propylbenzene	Ave	0.8598	0.9010		10.5	10.0	4.8	20.0
2-Chlorotoluene	Ave	0.8362	0.8214		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.836		10.2	10.0	1.6	20.0
4-Chlorotoluene	Ave	0.8762	0.8813		10.1	10.0	0.6	20.0
tert-Butylbenzene	Ave	2.471	2.497		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.988		10.3	10.0	2.8	20.0
sec-Butylbenzene	Ave	3.036	3.064		10.1	10.0	0.9	20.0
1,3-Dichlorobenzene	Ave	1.506	1.484	0.6000	9.85	10.0	-1.5	20.0
p-Isopropyltoluene	Ave	2.486	2.579		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.584	0.5000	9.98	10.0	-0.2	20.0
n-Butylbenzene	Ave	2.286	2.295		10.0	10.0	0.4	20.0
1,2-Dichlorobenzene	Ave	1.485	1.504	0.4000	10.1	10.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.1049	0.0500	11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6660	0.2000	9.77	10.0	-2.3	20.0
Hexachlorobutadiene	Ave	0.2577	0.2217		8.60	10.0	-14.0	20.0
Naphthalene	Ave	2.063	2.211		10.7	10.0	7.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5920	0.6250		10.6	10.0	5.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2274		9.72	10.2	-4.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3583		9.46	10.2	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.552	1.491		9.81	10.2	-3.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5469		10.1	10.2	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3065		9.63	10.0	-3.7	20.0
Diisopropyl ether	Ave	0.2775	0.2745		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		527	500	5.4	20.0
Cyclohexanone	Lin1		0.0256		52.9	200	-73.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	3.178		10.7	10.0	6.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab File ID: BFB2916.D BFB Injection Date: 04/30/2012

Instrument ID: A3UX16 BFB Injection Time: 11:22

Analysis Batch No.: 42171

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.2	
75	30.0 - 60.0 % of mass 95	53.9	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.1	
173	Less than 2.0 % of mass 174	0.1	(0.2)1
174	50.0 - 120.00 % of mass 95	66.2	
175	5.0 - 9.0 % of mass 174	4.8	(7.3)1
176	95.0 - 101.0 % of mass 174	63.9	(96.5)1
177	5.0 - 9.0 % of mass 176	4.2	(6.6)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-42171/2	UXM5270.D	04/30/2012	11:50
	CCV 240-42171/3	UXM5271.D	04/30/2012	12:13
	LCS 240-42171/4	UXM5272.D	04/30/2012	12:36
	MB 240-42171/5	UXM5273.D	04/30/2012	12:59
TB-042512	240-10670-1	UXM5280.D	04/30/2012	15:54
MT-MW05S-042512	240-10670-2	UXM5281.D	04/30/2012	16:17
MT-MW01S-042512	240-10670-3	UXM5282.D	04/30/2012	16:40
MT-MW03S-042512	240-10670-4	UXM5283.D	04/30/2012	17:03
	240-10350-A-5 MS	UXM5284.D	04/30/2012	17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012	17:48

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2885	0.1000	10.2	10.0	2.0	20.0
Chloromethane	Ave	0.4613	0.4195	0.1000	9.10	10.0	-9.0	20.0
Vinyl chloride	Ave	0.4246	0.4029	0.1000	9.49	10.0	-5.1	20.0
Bromomethane	Ave	0.1684	0.1518	0.0500	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2371	0.2197	0.0500	9.27	10.0	-7.3	20.0
Trichlorofluoromethane	Ave	0.3035	0.3119	0.1000	10.3	10.0	2.8	20.0
~~Acrolein~~	Ave	0.0489	0.0440		89.9	100	-10.1	20.0
1,1-Dichloroethene	Ave	0.2446	0.2428	0.1000	9.93	10.0	-0.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1669	0.0500	10.8	10.0	8.0	20.0
Acetone	Lin1		0.0864	0.0500	16.6	20.0	-17.0	20.0
Iodomethane	Ave	0.3433	0.3500		10.2	10.0	1.9	20.0
Carbon disulfide	Ave	0.7261	0.7265	0.1000	10.0	10.0	0.0	20.0
~~Acetonitrile~~	Ave	0.0346	0.0292		84.2	100	-15.8	20.0
Methyl acetate	Ave	0.2327	0.1967	0.1000	16.9	20.0	-15.5	20.0
Methylene Chloride	Lin1		0.3004	0.1000	9.58	10.0	-4.2	20.0
tert-Butyl alcohol	Ave	0.0189	0.0158		167	200	-16.6	20.0
Acrylonitrile	Ave	0.1114	0.0998		17.9	20.0	-10.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7869	0.1000	9.36	10.0	-6.4	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2775	0.1000	9.66	10.0	-3.4	20.0
Hexane	Ave	0.0529	0.0551		10.4	10.0	4.1	20.0
1,1-Dichloroethane	Ave	0.5691	0.5381	0.1000	9.45	10.0	-5.5	20.0
Vinyl acetate	Ave	0.0505	0.0473		9.37	10.0	-6.3	20.0
2-Butanone	Ave	0.1356	0.1228	0.0500	18.1	20.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2944	0.1000	9.54	10.0	-4.6	20.0
2,2-Dichloropropane	Ave	0.2932	0.3012		10.3	10.0	2.7	20.0
Bromochloromethane	Ave	0.1283	0.1246		9.71	10.0	-2.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		8.61	10.0	-13.9	20.0
Chloroform	Ave	0.5296	0.5127	0.2000	9.68	10.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3764	0.1000	10.2	10.0	2.3	20.0
Cyclohexane	Ave	0.4605	0.4777	0.1000	10.4	10.0	3.7	20.0
1,1-Dichloropropene	Ave	0.4264	0.4061		9.53	10.0	-4.7	20.0
Carbon tetrachloride	Ave	0.2770	0.2871	0.1000	10.4	10.0	3.7	20.0
1,2-Dichloroethane	Ave	0.4694	0.4390	0.1000	9.35	10.0	-6.5	20.0
Benzene	Ave	1.251	1.173	0.5000	9.38	10.0	-6.2	20.0
Trichloroethene	Ave	0.2698	0.2578	0.2000	9.56	10.0	-4.4	20.0
1,2-Dichloropropane	Ave	0.3083	0.2961	0.1000	9.61	10.0	-3.9	20.0
Methylcyclohexane	Ave	0.3477	0.3809	0.1000	11.0	10.0	9.5	20.0
Dibromomethane	Ave	0.1606	0.1478		9.20	10.0	-8.0	20.0
~~1,4-Dioxane~~	Ave	0.0024	0.0019		403	500	-19.5	20.0
Bromodichloromethane	Ave	0.3092	0.3153	0.1000	10.2	10.0	2.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1599	0.1432		17.9	20.0	-10.4	20.0
cis-1,3-Dichloropropene	Lin1		0.3918	0.1500	9.04	10.0	-9.6	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2348	0.0500	17.8	20.0	-11.1	20.0
Toluene	Ave	1.877	1.787	0.4000	9.52	10.0	-4.8	20.0
trans-1,3-Dichloropropene	Lin1		0.5043	0.1000	8.87	10.0	-11.3	20.0
Ethyl methacrylate	Ave	0.5543	0.5335		9.62	10.0	-3.8	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3148	0.1000	9.52	10.0	-4.8	20.0
1,3-Dichloropropane	Ave	0.6962	0.6368		9.15	10.0	-8.5	20.0
Tetrachloroethene	Ave	0.2617	0.2605	0.2000	9.95	10.0	-0.5	20.0
2-Hexanone	Ave	0.2698	0.2379	0.0500	17.6	20.0	-11.8	20.0
Dibromochloromethane	Lin1		0.2633		9.05	10.0	-9.5	20.0
1,2-Dibromoethane	Ave	0.3223	0.3055		9.48	10.0	-5.2	20.0
Chlorobenzene	Ave	1.104	1.033	0.3000	9.36	10.0	-6.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3137		10.1	10.0	0.7	20.0
Ethylbenzene	Ave	0.5828	0.5604		9.61	10.0	-3.9	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7011		19.3	20.0	-3.4	20.0
o-Xylene	Ave	0.7207	0.6828		9.47	10.0	-5.3	20.0
Styrene	Ave	1.192	1.161	0.3000	9.74	10.0	-2.6	20.0
Bromoform	Lin1		0.1180	0.1000	8.76	10.0	-12.4	20.0
Isopropylbenzene	Ave	1.713	1.674	0.1000	9.78	10.0	-2.2	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.8145	0.3000	9.03	10.0	-9.7	20.0
Bromobenzene	Ave	0.8159	0.7672		9.40	10.0	-6.0	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2411		8.50	10.0	-15.0	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2253		8.97	10.0	-10.3	20.0
n-Propylbenzene	Ave	0.8598	0.8408		9.78	10.0	-2.2	20.0
2-Chlorotoluene	Ave	0.8362	0.7704		9.21	10.0	-7.9	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.685		9.62	10.0	-3.8	20.0
4-Chlorotoluene	Ave	0.8762	0.8030		9.16	10.0	-8.4	20.0
tert-Butylbenzene	Ave	2.471	2.377		9.62	10.0	-3.8	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.768		9.52	10.0	-4.8	20.0
sec-Butylbenzene	Ave	3.036	2.929		9.65	10.0	-3.5	20.0
1,3-Dichlorobenzene	Ave	1.506	1.415	0.6000	9.40	10.0	-6.0	20.0
p-Isopropyltoluene	Ave	2.486	2.404		9.67	10.0	-3.3	20.0
1,4-Dichlorobenzene	Ave	1.587	1.474	0.5000	9.29	10.0	-7.1	20.0
n-Butylbenzene	Ave	2.286	2.220		9.71	10.0	-2.9	20.0
1,2-Dichlorobenzene	Ave	1.485	1.388	0.4000	9.35	10.0	-6.5	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.0894	0.0500	9.39	10.0	-6.1	20.0
1,3,5-Trichlorobenzene	Ave	0.7690	0.7641		9.94	10.0	-0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6748	0.2000	9.90	10.0	-1.0	20.0
Hexachlorobutadiene	Ave	0.2577	0.2544		9.87	10.0	-1.3	20.0
Naphthalene	Ave	2.063	1.886		9.14	10.0	-8.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5920	0.5682		9.60	10.0	-4.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2170		9.27	10.2	-9.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3153		8.32	10.2	-18.5	20.0
Toluene-d8 (Surr)	Ave	1.552	1.338		8.81	10.2	-13.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5067		9.34	10.2	-8.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2389	0.2197		9.39	10.2	-8.1	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3395		8.96	10.2	-12.2	20.0
Toluene-d8 (Surr)	Ave	1.552	1.410		9.28	10.2	-9.1	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5352		9.87	10.2	-3.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42171/3 Calibration Date: 04/30/2012 12:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5271.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4967		9.39	10.0	-6.1	20.0
Ethyl ether	Ave	0.3182	0.2722		8.56	10.0	-14.4	20.0
3-Chloro-1-propene	Ave	0.1408	0.1458		10.4	10.0	3.5	20.0
Diisopropyl ether	Ave	0.2775	0.2702		48.7	50.0	-2.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.4999		9.70	10.0	-3.0	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.8664		9.74	10.0	-2.6	20.0
~~Propionitrile~~	Ave	0.0386	~~0.0384~~		19.9	20.0	-0.6	20.0
Ethyl acetate	Ave	0.2719	0.2478		18.2	20.0	-8.9	20.0
Methacrylonitrile	Ave	0.1921	0.1753		9.13	10.0	-8.7	20.0
~~Isobutyl alcohol~~	Ave	0.0086	~~0.0076~~		176	200	-12.2	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6972		9.74	10.0	-2.6	20.0
~~n-Heptane~~	Ave	0.0406	~~0.0438~~		10.8	10.0	7.7	20.0
~~n-Butanol~~	Lin1		~~0.0054~~		165	200	-17.6	20.0
~~2-Nitropropane~~	Qua		~~0.0379~~		18.5	20.0	-7.5	20.0
~~Cyclohexanone~~	Lin1		0.0798		79.4	100	~~-20.6~~	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.888		9.68	10.0	-3.2	20.0
2-Methylnaphthalene	Qua		0.8088		16.2	20.0	-19.0	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab File ID: UXM5273.D Lab Sample ID: MB 240-42171/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 04/30/2012 12:59

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42171/4	UXM5272.D	04/30/2012 12:36
TB-042512	240-10670-1	UXM5280.D	04/30/2012 15:54
MT-MW05S-042512	240-10670-2	UXM5281.D	04/30/2012 16:17
MT-MW01S-042512	240-10670-3	UXM5282.D	04/30/2012 16:40
MT-MW03S-042512	240-10670-4	UXM5283.D	04/30/2012 17:03
	240-10350-A-5 MS	UXM5284.D	04/30/2012 17:25
	240-10350-C-5 MSD	UXM5285.D	04/30/2012 17:48

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.288	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42171/5

Matrix: Water | Lab File ID: UXM5273.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42171 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	96		66-117
2037-26-5	Toluene-d8 (Surr)	92		74-115
1868-53-7	Dibromofluoromethane (Surr)	86		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42171/5

Matrix: Water Lab File ID: UXM5273.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:59

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42171 Units: ug/L

Number TICs Found: 1 TIC Result Total: 0.197

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	0.197	J

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.29	93	72-116	
1,1,1-Trichloroethane	10.0	9.17	92	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.61	86	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.47	95	74-151	
1,1-Dichloroethane	10.0	9.12	91	82-115	
1,1-Dichloroethene	10.0	9.37	94	78-131	
1,1-Dichloropropene	10.0	8.82	88	83-114	
1,2,3-Trichlorobenzene	10.0	9.27	93	54-126	
1,2,3-Trichloropropane	10.0	8.58	86	73-129	
1,2,3-Trimethylbenzene	10.0	9.34	93	70-130	
1,2,4-Trichlorobenzene	10.0	9.24	92	48-135	
1,2,4-Trimethylbenzene	10.0	9.09	91	76-120	
1,2-Dibromo-3-Chloropropane	10.0	8.48	85	42-136	
1,2-Dichlorobenzene	10.0	8.87	89	81-110	
1,2-Dichloroethane	10.0	9.10	91	71-127	
1,2-Dichloropropane	10.0	9.15	92	81-115	
1,3-Dichlorobenzene	10.0	9.09	91	80-110	
1,3-Dichloropropane	10.0	8.52	85	79-116	
1,4-Dichlorobenzene	10.0	8.91	89	82-110	
2,2-Dichloropropane	10.0	9.51	95	50-129	
2-Chloroethyl vinyl ether	10.0	8.76 J	88	52-131	
2-Chlorotoluene	10.0	8.59	86	76-116	
2-Hexanone	20.0	17.5	88	55-133	
Bromobenzene	10.0	9.12	91	76-115	
Bromochloromethane	10.0	9.21	92	77-120	
4-Chlorotoluene	10.0	8.82	88	77-115	
p-Isopropyltoluene	10.0	9.20	92	74-120	
Acetone	20.0	16.4	82	43-136	
Benzene	10.0	9.16	92	83-112	
Bromoform	10.0	8.16	82	40-131	
Bromomethane	10.0	7.64	76	11-185	
Carbon disulfide	10.0	8.61	86	62-142	
Carbon tetrachloride	10.0	9.19	92	66-128	
Chlorobenzene	10.0	8.95	90	85-110	
Chloroethane	10.0	8.17	82	25-153	
Chloroform	10.0	8.84	88	79-117	
Chloromethane	10.0	7.91	79	44-126	
cis-1,2-Dichloroethene	10.0	9.23	92	80-113	
cis-1,3-Dichloropropene	10.0	8.36	84	61-115	
Hexachlorobutadiene	10.0	8.77	88	36-134	
Dibromomethane	10.0	9.18	92	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5272.D

Lab ID: LCS 240-42171/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	9.60	96	72-121	
Dichlorodifluoromethane	10.0	5.86	59	19-129	
Ethylbenzene	10.0	9.06	91	83-112	
1,2-Dibromoethane	10.0	8.75	88	79-113	
Diisopropyl ether	10.0	8.74 J	87	77-118	
Naphthalene	10.0	8.79	88	32-141	
m-Xylene & p-Xylene	20.0	18.0	90	83-113	
n-Butylbenzene	10.0	8.83	88	66-125	
Isopropylbenzene	10.0	9.08	91	75-114	
n-Propylbenzene	10.0	9.50	95	74-121	
2-Butanone	20.0	16.7	84	60-126	
4-Methyl-2-pentanone	20.0	17.3	87	63-128	
sec-Butylbenzene	10.0	8.78	88	70-117	
Methyl tert-butyl ether	10.0	8.66	87	52-144	
Methylene Chloride	10.0	8.84	88	66-131	
o-Xylene	10.0	9.15	92	83-113	
Styrene	10.0	9.27	93	79-114	
tert-Butylbenzene	10.0	8.95	90	71-115	
Tetrachloroethene	10.0	9.17	92	79-114	
Toluene	10.0	8.87	89	84-111	
trans-1,2-Dichloroethene	10.0	9.08	91	83-117	
trans-1,3-Dichloropropene	10.0	8.11	81	58-117	
Trichloroethene	10.0	9.17	92	76-117	
Trichlorofluoromethane	10.0	9.25	93	49-157	
Vinyl acetate	10.0	8.12	81	46-161	
Vinyl chloride	10.0	8.25	83	53-127	
tert-Butyl alcohol	200	167	84	70-130	
Xylenes, Total	30.0	27.2	91	83-112	
Dibromochloromethane	10.0	8.13	81	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	1.0 U	9.57	96	64-118	
1,1,1-Trichloroethane	10.0	1.0 U	9.42	94	68-121	
1,1,2,2-Tetrachloroethane	10.0	1.0 U	9.56	96	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	1.0 U	11.6	116	70-152	
1,1-Dichloroethane	10.0	1.0 U	9.26	93	79-116	
1,1-Dichloroethene	10.0	1.0 U	10.0	100	74-135	
1,1-Dichloropropene	10.0	1.0 U	9.55	96	80-114	
1,2,3-Trichlorobenzene	10.0	1.0 U	9.86	99	45-129	
1,2,3-Trichloropropane	10.0	1.0 U	9.72	97	67-132	
1,2,3-Trimethylbenzene	10.0	5.0 U	9.43	94	70-130	
1,2,4-Trichlorobenzene	10.0	1.0 U	9.37	94	38-138	
1,2,4-Trimethylbenzene	10.0	1.0 U	9.37	94	67-124	
1,2-Dibromo-3-Chloropropane	10.0	2.0 U	9.54	95	32-139	
1,2-Dichlorobenzene	10.0	1.0 U	9.15	92	75-111	
1,2-Dichloroethane	10.0	1.0 U	9.37	94	68-129	
1,2-Dichloropropane	10.0	1.0 U	9.68	97	78-115	
1,3-Dichlorobenzene	10.0	1.0 U	9.16	92	73-110	
1,3-Dichloropropane	10.0	1.0 U	9.44	94	74-118	
1,4-Dichlorobenzene	10.0	1.0 U	9.01	90	75-110	
2,2-Dichloropropane	10.0	1.0 U	9.23	92	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	10 U	0	10-150	F
2-Chlorotoluene	10.0	1.0 U	8.96	90	69-117	
2-Hexanone	20.0	10 U	21.3	107	47-139	
Bromobenzene	10.0	1.0 U	9.39	94	71-116	
Bromochloromethane	10.0	1.0 U	9.28	93	73-121	
4-Chlorotoluene	10.0	1.0 U	8.98	90	71-116	
p-Isopropyltoluene	10.0	1.0 U	9.57	96	64-122	
Acetone	20.0	10 U	17.7	89	33-145	
Benzene	10.0	1.0 U	9.36	94	72-121	
Bromoform	10.0	1.0 U	8.55	86	32-128	
Bromomethane	10.0	1.0 U	4.44	44	10-186	
Carbon disulfide	10.0	1.0 U	8.83	88	57-147	
Carbon tetrachloride	10.0	1.0 U	9.67	97	59-129	
Chlorobenzene	10.0	1.0 U	9.37	94	80-110	
Chloroethane	10.0	1.0 U	6.84	68	21-165	
Chloroform	10.0	1.0 U	9.03	90	76-118	
Chloromethane	10.0	1.0 U	7.92	79	33-132	
cis-1,2-Dichloroethene	10.0	1.0 U	9.38	94	70-120	
cis-1,3-Dichloropropene	10.0	1.0 U	8.26	83	51-110	
Hexachlorobutadiene	10.0	1.0 U	8.51	85	27-132	
Dibromomethane	10.0	1.0 U	9.68	97	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5284.D

Lab ID: 240-10350-A-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	1.0 U	9.64	96	67-120	
Dichlorodifluoromethane	10.0	1.0 U	7.19	72	17-128	
Ethylbenzene	10.0	1.0 U	9.51	95	75-116	
1,2-Dibromoethane	10.0	1.0 U	9.96	100	74-113	
Diisopropyl ether	10.0	10 U	8.79 J	88	73-118	
Naphthalene	10.0	1.0 U	9.96	100	15-158	
m-Xylene & p-Xylene	20.0	2.0 U	19.0	95	75-117	
n-Butylbenzene	10.0	1.0 U	9.11	91	56-127	
Isopropylbenzene	10.0	1.0 U	9.45	95	68-116	
n-Propylbenzene	10.0	1.0 U	9.58	96	64-124	
2-Butanone	20.0	10 U	19.4	97	54-129	
4-Methyl-2-pentanone	20.0	10 U	20.9	105	56-131	
sec-Butylbenzene	10.0	1.0 U	9.33	93	60-119	
Methyl tert-butyl ether	10.0	5.0 U	9.03	90	46-144	
Methylene Chloride	10.0	1.0 U	8.65	87	63-128	
o-Xylene	10.0	1.0 U	9.39	94	76-116	
Styrene	10.0	1.0 U	9.60	96	71-117	
tert-Butylbenzene	10.0	1.0 U	9.33	93	61-119	
Tetrachloroethene	10.0	1.0 U	10.0	100	70-117	
Toluene	10.0	1.0 U	9.36	94	78-114	
trans-1,2-Dichloroethene	10.0	1.0 U	9.18	92	80-119	
trans-1,3-Dichloropropene	10.0	1.0 U	8.16	82	46-116	
Trichloroethene	10.0	1.0 U	9.41	94	66-120	
Trichlorofluoromethane	10.0	1.0 U	8.71	87	46-157	
Vinyl acetate	10.0	2.0 U	8.93	89	43-157	
Vinyl chloride	10.0	1.0 U	9.08	91	49-130	
tert-Butyl alcohol	200	50 U	217	109	70-130	
Xylenes, Total	30.0	2.0 U	28.4	95	76-116	
Dibromochloromethane	10.0	1.0 U	8.56	86	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.67	97	1	30	64-118	
1,1,1-Trichloroethane	10.0	9.09	91	4	30	68-121	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	5	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.92	99	16	30	70-152	
1,1-Dichloroethane	10.0	9.28	93	0	30	79-116	
1,1-Dichloroethene	10.0	9.69	97	3	30	74-135	
1,1-Dichloropropene	10.0	9.22	92	4	30	80-114	
1,2,3-Trichlorobenzene	10.0	8.21	82	18	30	45-129	
1,2,3-Trichloropropane	10.0	9.80	98	1	30	67-132	
1,2,3-Trimethylbenzene	10.0	9.03	90	4	30	70-130	
1,2,4-Trichlorobenzene	10.0	7.84	78	18	30	38-138	
1,2,4-Trimethylbenzene	10.0	9.00	90	4	30	67-124	
1,2-Dibromo-3-Chloropropane	10.0	9.69	97	2	30	32-139	
1,2-Dichlorobenzene	10.0	8.74	87	5	30	75-111	
1,2-Dichloroethane	10.0	9.04	90	4	30	68-129	
1,2-Dichloropropane	10.0	9.25	93	5	30	78-115	
1,3-Dichlorobenzene	10.0	8.99	90	2	30	73-110	
1,3-Dichloropropane	10.0	9.43	94	0	30	74-118	
1,4-Dichlorobenzene	10.0	8.88	89	1	30	75-110	
2,2-Dichloropropane	10.0	8.87	89	4	30	38-127	
2-Chloroethyl vinyl ether	10.0	10 U	0	NC	30	10-150	F
2-Chlorotoluene	10.0	9.37	94	4	30	69-117	
2-Hexanone	20.0	20.5	103	4	30	47-139	
Bromobenzene	10.0	9.57	96	2	30	71-116	
Bromochloromethane	10.0	8.92	89	4	30	73-121	
4-Chlorotoluene	10.0	9.06	91	1	30	71-116	
p-Isopropyltoluene	10.0	8.93	89	7	30	64-122	
Acetone	20.0	13.9	70	24	30	33-145	
Benzene	10.0	9.16	92	2	30	72-121	
Bromoform	10.0	8.51	85	0	30	32-128	
Bromomethane	10.0	5.19	52	16	30	10-186	
Carbon disulfide	10.0	8.03	80	9	30	57-147	
Carbon tetrachloride	10.0	9.13	91	6	30	59-129	
Chlorobenzene	10.0	9.23	92	2	30	80-110	
Chloroethane	10.0	6.73	67	2	30	21-165	
Chloroform	10.0	8.90	89	1	30	76-118	
Chloromethane	10.0	8.81	88	11	30	33-132	
cis-1,2-Dichloroethene	10.0	9.27	93	1	30	70-120	
cis-1,3-Dichloropropene	10.0	7.99	80	3	30	51-110	
Hexachlorobutadiene	10.0	6.53	65	26	30	27-132	
Dibromomethane	10.0	9.52	95	2	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5285.D

Lab ID: 240-10350-C-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	10.0	9.34	93	3	30	67-120	
Dichlorodifluoromethane	10.0	5.82	58	21	30	17-128	
Ethylbenzene	10.0	9.29	93	2	30	75-116	
1,2-Dibromoethane	10.0	9.55	96	4	30	74-113	
Diisopropyl ether	10.0	8.71 J	87	1	30	73-118	
Naphthalene	10.0	8.36	84	17	30	15-158	
m-Xylene & p-Xylene	20.0	18.3	92	4	30	75-117	
n-Butylbenzene	10.0	8.35	84	9	30	56-127	
Isopropylbenzene	10.0	9.07	91	4	30	68-116	
n-Propylbenzene	10.0	9.61	96	0	30	64-124	
2-Butanone	20.0	17.6	88	10	30	54-129	
4-Methyl-2-pentanone	20.0	20.2	101	3	30	56-131	
sec-Butylbenzene	10.0	8.71	87	7	30	60-119	
Methyl tert-butyl ether	10.0	8.88	89	2	30	46-144	
Methylene Chloride	10.0	8.38	84	3	30	63-128	
o-Xylene	10.0	9.08	91	3	30	76-116	
Styrene	10.0	9.26	93	4	30	71-117	
tert-Butylbenzene	10.0	9.04	90	3	30	61-119	
Tetrachloroethene	10.0	9.57	96	4	30	70-117	
Toluene	10.0	9.29	93	1	30	78-114	
trans-1,2-Dichloroethene	10.0	8.99	90	2	30	80-119	
trans-1,3-Dichloropropene	10.0	8.50	85	4	30	46-116	
Trichloroethene	10.0	9.19	92	2	30	66-120	
Trichlorofluoromethane	10.0	8.33	83	4	30	46-157	
Vinyl acetate	10.0	9.09	91	2	30	43-157	
Vinyl chloride	10.0	8.71	87	4	30	49-130	
tert-Butyl alcohol	200	159	79	31	30	70-130	F
Xylenes, Total	30.0	27.4	91	4	30	76-116	
Dibromochloromethane	10.0	8.69	87	2	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042512	240-10670-1	82	83	85	88
MT-MW05S-042512	240-10670-2	80	81	86	89
MT-MW01S-042512	240-10670-3	81	83	86	90
MT-MW03S-042512	240-10670-4	86	87	91	93
	MB 240-42171/5	86	87	92	96
	LCS 240-42171/4	84	80	83	90
	240-10350-A-5 MS	86	84	90	93
	240-10350-C-5 MSD	86	83	89	88

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: STD8260 240-42092/4 Date Analyzed: 04/29/2012 16:26

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5241.D Heated Purge: (Y/N) N

Calibration ID: 8426

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1530000	5.70	1036987	8.39	499405	10.64
UPPER LIMIT		3060000	6.20	2073974	8.89	998810	11.14
LOWER LIMIT		765000	5.20	518494	7.89	249703	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42092/14		1382789	5.70	929711	8.39	462842	10.64
CCVIS 240-42171/2		1827438	5.70	1228317	8.39	614323	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: CCVIS 240-42171/2 Date Analyzed: 04/30/2012 11:50

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5270.D Heated Purge: (Y/N) N

Calibration ID: 8428

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1827438	5.70	1228317	8.39	614323	10.64
UPPER LIMIT		3654876	6.20	2456634	8.89	1228646	11.14
LOWER LIMIT		913719	5.20	614159	7.89	307162	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42171/3		1675303	5.70	1143405	8.39	543922	10.64
LCS 240-42171/4		1858112	5.70	1240826	8.39	615173	10.64
MB 240-42171/5		1636782	5.70	1107392	8.39	536650	10.64
240-10670-1	TB-042512	1728642	5.70	1158395	8.39	560774	10.64
240-10670-2	MT-MW05S-042512	1739898	5.70	1159226	8.39	556455	10.64
240-10670-3	MT-MW01S-042512	1708185	5.70	1126282	8.39	536921	10.64
240-10670-4	MT-MW03S-042512	1629127	5.70	1072431	8.39	520849	10.64
240-10350-A-5 MS		1710874	5.70	1135916	8.39	559548	10.64
240-10350-C-5 MSD		1786806	5.70	1151558	8.39	541302	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

Method 8270C

Semivolatile Organic Compounds (GC/MS) by Method 8270C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab File ID: 20502001.D DFTPP Injection Date: 05/02/2012

Instrument ID: A4HP7 DFTPP Injection Time: 10:03

Analysis Batch No.: 42463

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	60.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	45.5	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	50.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.2	
365	Greater than 0.75% of mass 198	2.0	
441	Present, but less than mass 443	7.0	
442	40.0 - 110.0% of mass 198	44.8	
443	15.0 - 24.0% of mass 442	8.8	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-42463/2	20502002.D	05/02/2012	10:23
	STD4 240-42463/3	20502003.D	05/02/2012	10:42
	STD3 240-42463/4	20502004.D	05/02/2012	11:01
	STD2 240-42463/5	20502005.D	05/02/2012	11:19
	STD1 240-42463/6	20502006.D	05/02/2012	11:38
	STD9 240-42463/7	20502007.D	05/02/2012	11:57
	STD8 240-42463/8	20502008.D	05/02/2012	12:16
	STD7 240-42463/9	20502009.D	05/02/2012	12:35
	STD6 240-42463/10	20502010.D	05/02/2012	12:54
	ICV 240-42463/11	20502011.D	05/02/2012	13:13
	ICV 240-42463/29	20502029.D	05/02/2012	19:09

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42463

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2012 10:23 Calibration End Date: 05/02/2012 12:54 Calibration ID: 8490

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42463/6	20502006.D
Level 2	STD2 240-42463/5	20502005.D
Level 3	STD3 240-42463/4	20502004.D
Level 4	STD4 240-42463/3	20502003.D
Level 5	STD5 240-42463/2	20502002.D
Level 6	STD6 240-42463/10	20502010.D
Level 7	STD7 240-42463/9	20502009.D
Level 8	STD8 240-42463/8	20502008.D
Level 9	STD9 240-42463/7	20502007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5797	0.7266 0.5728	0.4617 0.6094	0.5087 0.5684	0.4851	Ave		0.5640				15.0		15.0			
N-Nitrosodimethylamine	0.8841	0.7933 0.8811	0.7168 0.9316	0.7448 0.9112	0.7452	Ave		0.8260				10.0		15.0			
Pyridine	1.5075	1.3258 1.5146	1.1707 1.6776	1.1870 1.6034	1.1707	Ave		1.3947				15.0		15.0			
Ethyl methacrylate	1.1731	0.9728 1.1757	1.0484 1.2864	1.0037 1.2062	1.0290	Ave		1.1119				10.0		15.0			
Benzaldehyde	1.3735 0.7433	1.0441 +++++	1.0548 +++++	1.0867 +++++	0.9578	Ave		1.0434				20.0	*	15.0			
3-Chloropropionitrile	1.0012	0.9519 1.0222	0.9033 1.1093	0.8667 1.0492	0.8718	Ave		0.9719				9.1		15.0			
Malononitrile	1.5032	1.4102 1.2671	1.3756 1.2102	1.4463 1.0266	1.4564	Ave		1.3370				12.0		15.0			
Benzoic acid	0.2334	+++++ 0.2441	+++++ 0.2610	0.1647 0.2825	0.2322	Qua	0.0075	0.1951	0.0017						0.9990		0.9900
Phenol	1.7085	1.5885 1.7359	1.4815 1.9095	1.5782 1.8649	1.5731	Ave		1.6800				9.0		15.0			
Aniline	2.1278	1.9210 2.1146	1.8743 2.3821	2.0349 2.3349	1.9327	Ave		2.0903				9.0		15.0			
Bis(2-chloroethyl)ether	1.2927	1.2120 1.4453	1.3088 1.4464	1.1722 1.4211	1.1887	Ave		1.3109				8.8		15.0			
2-Chlorophenol	1.5020	1.3476 1.5269	1.3800 1.6760	1.4496 1.6251	1.4098	Ave		1.4896				7.8		15.0			
1,3-Dichlorobenzene	1.6350	1.3701 1.6113	1.5553 1.7820	1.5792 1.6988	1.5113	Ave		1.5929				7.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 42463

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2012 10:23 Calibration End Date: 05/02/2012 12:54 Calibration ID: 8490

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42463/6	20502006.D
Level 2	STD2 240-42463/5	20502005.D
Level 3	STD3 240-42463/4	20502004.D
Level 4	STD4 240-42463/3	20502003.D
Level 5	STD5 240-42463/2	20502002.D
Level 6	STD6 240-42463/10	20502010.D
Level 7	STD7 240-42463/9	20502009.D
Level 8	STD8 240-42463/8	20502008.D
Level 9	STD9 240-42463/7	20502007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	295395	15059 438022	23147 625497	45772 673269	99759	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	450536	16441 673759	35936 956142	67018 1079397	153230	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	768213	27478 1158210	58696 1721786	106807 1899329	240725	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Ethyl methacrylate	DCB	Ave	597788	20162 899063	52561 1320239	90314 1428878	211595	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	6716 378785	21639 +++++	52883 +++++	97785 +++++	196945	0.100 10.0	0.500 +++++	1.00 +++++	2.00 +++++	5.00
3-Chloropropionitrile	DCB	Ave	510186	19728 781632	45289 1138488	77990 1242817	179271	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Malononitrile	DCB	Ave	766019	29227 968969	68966 1242126	130144 1216141	299474	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Qua	875958	+++++ 1316669	+++++ 1896774	116824 2481316	377621	20.0	+++++ 30.0	+++++ 40.0	4.00 50.0	10.0
Phenol	DCB	Ave	870609	32922 1327444	74279 1959830	142015 2209157	323473	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	1084265	39813 1617005	93973 2444854	183107 2765811	397413	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	658742	25119 1105232	65620 1484510	105481 1683453	244438	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	765390	27929 1167612	69190 1720143	130437 1925074	289895	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	833174	28397 1232139	77977 1828913	142098 2012335	310759	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Caprolactam	NPT	Qua	213594	+++++ 328191	11115 466991	31422 +++++	84526	10.0	+++++ 15.0	1.00 20.0	2.00 +++++	5.00

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-42463/11 Calibration Date: 05/02/2012 13:13

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20502011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5264		9.33	10.0	-6.7	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.8251		9.99	10.0	-0.1	50.0
Pyridine	Ave	1.395	1.479		10.6	10.0	6.0	50.0
Ethyl methacrylate	Ave	1.112	1.109		9.97	10.0	-0.3	50.0
3-Chloropropionitrile	Ave	0.9719	0.9803		10.1	10.0	0.9	50.0
Malononitrile	Ave	1.337	1.496		11.2	10.0	11.9	50.0
Benzaldehyde	Ave	1.043	0.6145		5.89	10.0	-41.1	50.0
Phenol	Ave	1.680	1.722		10.2	10.0	2.5	20.0
Aniline	Ave	2.090	2.144		10.3	10.0	2.6	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.327		10.1	10.0	1.2	50.0
2-Chlorophenol	Ave	1.490	1.506		10.1	10.0	1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.567		9.84	10.0	-1.6	50.0
1,4-Dichlorobenzene	Ave	1.646	1.623		9.86	10.0	-1.4	20.0
Benzyl alcohol	Ave	0.8859	0.8898		10.0	10.0	0.4	50.0
1,2-Dichlorobenzene	Ave	1.544	1.517		9.83	10.0	-1.7	50.0
2-Methylphenol	Ave	1.290	1.293		10.0	10.0	0.2	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.616		9.29	10.0	-7.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.366		10.3	10.0	3.2	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.8701	0.0500	9.68	10.0	-3.2	50.0
Acetophenone	Ave	1.873	1.869		9.98	10.0	-0.2	50.0
Hexachloroethane	Ave	0.5453	0.5299		9.72	10.0	-2.8	50.0
Nitrobenzene	Ave	0.3636	0.3573		9.83	10.0	-1.7	50.0
Isophorone	Ave	0.6461	0.6605		10.2	10.0	2.2	50.0
2,4-Dimethylphenol	Ave	0.3785	0.3876		10.2	10.0	2.4	50.0
2-Nitrophenol	Ave	0.2067	0.2181		10.5	10.0	5.5	20.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3733		10.3	10.0	2.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3789		10.1	10.0	1.3	50.0
Benzoic acid	Qua		0.2340		20.3	20.0	1.5	50.0
2,4-Dichlorophenol	Ave	0.3173	0.3295		10.4	10.0	3.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3617		10.4	10.0	3.9	50.0
Naphthalene	Ave	1.144	1.159		10.1	10.0	1.3	50.0
4-Chloroaniline	Ave	0.4747	0.4591		9.67	10.0	-3.3	50.0
Hexachlorobutadiene	Ave	0.1832	0.1824		9.96	10.0	-0.4	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.3260		9.86	10.0	-1.4	50.0
Caprolactam	Qua		0.1203		10.5	10.0	5.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3207		10.6	10.0	6.1	20.0
2-Methylnaphthalene	Ave	0.7358	0.7408		10.1	10.0	0.7	50.0
1-Methylnaphthalene	Ave	0.7008	0.7068		10.1	10.0	0.8	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5505		9.87	10.0	-1.3	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3366	0.0500	10.3	10.0	3.3	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab File ID: 20504001.D DFTPP Injection Date: 05/04/2012

Instrument ID: A4HP7 DFTPP Injection Time: 09:24

Analysis Batch No.: 42787

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	63.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	61.5	
70	Less than 2.0% of mass 69	0.4	(0.6)1
127	25.0 - 75.0% of mass 198	61.4	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	25.9	
365	Greater than 0.75% of mass 198	3.0	
441	Present, but less than mass 443	11.0	
442	40.0 - 110.0% of mass 198	71.9	
443	15.0 - 24.0% of mass 442	13.9	(19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-42787/2	20504002.D	05/04/2012	09:42
	CCV 240-42787/4	20504004.D	05/04/2012	10:20
	MB 240-42319/22-A	20504005.D	05/04/2012	10:39
	LCS 240-42319/23-A	20504006.D	05/04/2012	10:57
	240-10623-N-4-A MS	20504011.D	05/04/2012	12:31
	240-10623-P-4-A MSD	20504012.D	05/04/2012	12:49
MT-MW05S-042512	240-10670-2	20504026.D	05/04/2012	17:10
MT-MW01S-042512	240-10670-3	20504027.D	05/04/2012	17:29
MT-MW03S-042512	240-10670-4	20504028.D	05/04/2012	17:48

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42787/2 Calibration Date: 05/04/2012 09:42

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20504002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5147		9.13	10.0	-8.7	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.7894		9.56	10.0	-4.4	50.0
Pyridine	Ave	1.395	1.305		9.35	10.0	-6.5	50.0
Ethyl methacrylate	Ave	1.112	1.085		9.76	10.0	-2.4	50.0
3-Chloropropionitrile	Ave	0.9719	0.7970		8.20	10.0	-18.0	50.0
Malononitrile	Ave	1.337	1.282		9.59	10.0	-4.1	50.0
Benzaldehyde	Ave	1.043	0.6837		6.55	10.0	-34.5	50.0
Phenol	Ave	1.680	1.659		9.87	10.0	-1.3	20.0
Aniline	Ave	2.090	2.047		9.79	10.0	-2.1	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.492		11.4	10.0	13.8	50.0
2-Chlorophenol	Ave	1.490	1.515		10.2	10.0	1.7	50.0
1,3-Dichlorobenzene	Ave	1.593	1.618		10.2	10.0	1.6	50.0
1,4-Dichlorobenzene	Ave	1.646	1.651		10.0	10.0	0.3	50.0
Benzyl alcohol	Ave	0.8859	0.8461		9.55	10.0	-4.5	50.0
1,2-Dichlorobenzene	Ave	1.544	1.543		10.0	10.0	0.0	50.0
2-Methylphenol	Ave	1.290	1.264		9.79	10.0	-2.1	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.620		9.31	10.0	-6.9	50.0
3 & 4 Methylphenol	Ave	1.324	1.318		9.96	10.0	-0.4	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.8955	0.0500	9.96	10.0	-0.4	50.0
Acetophenone	Ave	1.873	1.930		10.3	10.0	3.1	50.0
Hexachloroethane	Ave	0.5453	0.5812		10.7	10.0	6.6	50.0
Nitrobenzene	Ave	0.3636	0.3799		10.4	10.0	4.5	50.0
Isophorone	Ave	0.6461	0.6547		10.1	10.0	1.3	50.0
2,4-Dimethylphenol	Ave	0.3785	0.3787		10.0	10.0	0.0	50.0
2-Nitrophenol	Ave	0.2067	0.2099		10.2	10.0	1.5	20.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3340		9.19	10.0	-8.1	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3742		10.0	10.0	0.0	50.0
Benzoic acid	Qua		0.1954		17.4	20.0	-13.0	50.0
2,4-Dichlorophenol	Ave	0.3173	0.2927		9.22	10.0	-7.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3279		9.42	10.0	-5.8	50.0
Naphthalene	Ave	1.144	1.109		9.69	10.0	-3.1	50.0
4-Chloroaniline	Ave	0.4747	0.4510		9.50	10.0	-5.0	50.0
Hexachlorobutadiene	Ave	0.1832	0.1632		8.91	10.0	-10.9	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.3012		9.11	10.0	-8.9	50.0
Caprolactam	Qua		0.1171		10.2	10.0	2.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3115		10.3	10.0	3.0	20.0
2-Methylnaphthalene	Ave	0.7358	0.7205		9.79	10.0	-2.1	50.0
1-Methylnaphthalene	Ave	0.7008	0.6837		9.76	10.0	-2.4	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5328		9.55	10.0	-4.5	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3398	0.0500	10.4	10.0	4.3	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab File ID: 20504005.D Lab Sample ID: MB 240-42319/22-A

Matrix: Water Date Extracted: 05/01/2012 10:12

Instrument ID: A4HP7 Date Analyzed: 05/04/2012 10:39

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42319/23-A	20504006.D	05/04/2012 10:57
	240-10623-N-4-A MS	20504011.D	05/04/2012 12:31
	240-10623-P-4-A MSD	20504012.D	05/04/2012 12:49
MT-MW05S-042512	240-10670-2	20504026.D	05/04/2012 17:10
MT-MW01S-042512	240-10670-3	20504027.D	05/04/2012 17:29
MT-MW03S-042512	240-10670-4	20504028.D	05/04/2012 17:48

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42319/22-A

Matrix: Water | Lab File ID: 20504005.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/01/2012 10:12

Sample wt/vol: 1000(mL) | Date Analyzed: 05/04/2012 10:39

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42787 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	60		28-110
367-12-4	2-Fluorophenol (Surr)	71		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	85		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	67		27-111
4165-62-2	Phenol-d5 (Surr)	72		10-110
1718-51-0	Terphenyl-d14 (Surr)	90		37-119

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20504006.D

Lab ID: LCS 240-42319/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	10.2	51	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20504011.D

Lab ID: 240-10623-N-4-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.8	2.3	12.7	53	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20504012.D

Lab ID: 240-10623-P-4-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	11.8	50	8	30	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MT-MW05S-042512	240-10670-2	6 X	6 X	39	40	15 X	71
MT-MW01S-042512	240-10670-3	61	58	56	51	83	64
MT-MW03S-042512	240-10670-4	61	59	53	53	81	40
	MB 240-42319/22-A	71	72	67	60	85	90
	LCS 240-42319/23-A	62	68	66	60	99	80
	240-10623-N-4-A MS	63	66	64	62	89	63
	240-10623-P-4-A MSD	68	69	66	58	89	64

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		203831	3.51	750748	4.40	449631	5.66
UPPER LIMIT		407662	4.01	1501496	4.90	899262	6.16
LOWER LIMIT		101916	3.01	375374	3.90	224816	5.16
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		219450	3.51	793338	4.40	481824	5.66
ICV 240-42463/29		242991	3.51	881103	4.40	540358	5.66
CCV 240-42787/2 CCVIS		179592	3.42	711543	4.31	398182	5.57

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		701859	6.74	609578	8.73	444154	10.12
UPPER LIMIT		1403718	7.24	1219156	9.23	888308	10.62
LOWER LIMIT		350930	6.24	304789	8.23	222077	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		750463	6.74	697064	8.71	502891	10.10
ICV 240-42463/29		886222	6.74	821260	8.72	566597	10.12
CCV 240-42787/2 CCVIS		635458	6.64	630030	8.61	474108	9.93

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: CCV 240-42787/2 Date Analyzed: 05/04/2012 09:42

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20504002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		179592	3.42	711543	4.31	398182	5.57
UPPER LIMIT		359184	3.92	1423086	4.81	796364	6.07
LOWER LIMIT		89796	2.92	355772	3.81	199091	5.07
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42787/4		160196	3.42	700703	4.31	414289	5.57
MB 240-42319/22-A		192020	3.42	723583	4.31	432587	5.57
LCS 240-42319/23-A		187950	3.42	733913	4.31	431552	5.57
240-10623-N-4-A MS		194222	3.42	740766	4.31	440091	5.57
240-10623-P-4-A MSD		226364	3.42	864840	4.31	529556	5.57
240-10670-2	MT-MW05S-042512	220671	3.42	889505	4.31	509659	5.57
240-10670-3	MT-MW01S-042512	210329	3.42	821841	4.31	497101	5.57
240-10670-4	MT-MW03S-042512	231318	3.42	927902	4.31	546380	5.57

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: CCV 240-42787/2 Date Analyzed: 05/04/2012 09:42

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20504002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		635458	6.64	630030	8.61	474108	9.93
UPPER LIMIT		1270916	7.14	1260060	9.11	948216	10.43
LOWER LIMIT		317729	6.14	315015	8.11	237054	9.43
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42787/4		647849	6.64	609763	8.61	463017	9.93
MB 240-42319/22-A		716018	6.64	654282	8.60	484735	9.93
LCS 240-42319/23-A		700940	6.64	663757	8.61	496305	9.93
240-10623-N-4-A MS		714597	6.65	740981	8.62	595192	9.95
240-10623-P-4-A MSD		824289	6.65	774384	8.64	595819	9.98
240-10670-2	MT-MW05S-042512	856705	6.65	794494	8.61	622203	9.94
240-10670-3	MT-MW01S-042512	799659	6.64	763367	8.60	597274	9.93
240-10670-4	MT-MW03S-042512	889624	6.65	803060	8.61	641121	9.94

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

Method 8015B - GRO

Gasoline Range Organics (GC) by Method 8015B

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Total Petroleum Hydrocarbons (C6-C10)	Ave	31810312 471343808	64091921	113029874	235565977	346880438	100 1600	200	400	800	1200
C6-C12	Ave	37547242 517161889	72788086	126621830	259357128	381833988	100 1600	200	400	800	1200
Trifluorotoluene (Surr)	Ave	3841333 4831084	3750122	3958818	4240925	4607363	10.0 10.0	10.0	10.0	10.0	10.0

Curve Type Legend:
Ave = Average

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Total Petroleum Hydrocarbons (C6-C10)	11.810	11.810	11.810	11.810	11.810	11.810					4.817 - 18.802	11.810
C6-C12	13.469	13.469	13.469	13.469	13.469	13.469					4.917 - 22.022	13.469
Trifluorotoluene (Surr)	9.768	9.772	9.769	9.772	9.771	9.774					9.522 - 10.022	9.771

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.81	4.82	18.80
C6-C12	13.47	4.92	22.02
Trifluorotoluene (Surr)	9.77	9.52	10.02

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: CCV 240-42055/6 Date Analyzed: 04/28/2012 16:30

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF042806.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.75		
UPPER LIMIT				9.85		
LOWER LIMIT				9.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-42055/6 CCVRT		04/28/2012 16:30	YF042806.D	9.75		
MB 240-42055/7		04/28/2012 17:07	YF042807.D	9.75		
LCS 240-42055/8		04/28/2012 17:45	YF042808.D	9.76		
240-10598-B-2 MS		04/28/2012 18:59	YF042810.D	9.75		
240-10598-B-2 MSD		04/28/2012 19:36	YF042811.D	9.76		
240-10670-2	MT-MW05S-042512	04/28/2012 20:51	YF042813.D	9.75		
240-10670-3	MT-MW01S-042512	04/28/2012 21:28	YF042814.D	9.75		
240-10670-4	MT-MW03S-042512	04/28/2012 22:06	YF042815.D	9.75		
CCV 240-42055/16		04/28/2012 22:43	YF042816.D	9.75		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42055/6 Calibration Date: 04/28/2012 16:30

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042806.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	319489		852	800	6.5	15.0
C6-C12	Ave	336931	355619		844	800	5.5	15.0
Trifluorotoluene (Surr)	Ave	420494	318723		7.58	10.0	-24.2*	15.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42055/6 Calibration Date: 04/28/2012 16:30

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042806.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.80	4.81	18.78
C6-C12	13.41	4.91	21.91
Trifluorotoluene (Surr)	9.75	9.50	10.00

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42055/16 Calibration Date: 04/28/2012 22:43

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042816.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	304088		811	800	1.4	15.0
C6-C12	Ave	336931	340309		808	800	1.0	15.0
Trifluorotoluene (Surr)	Ave	420494	314986		7.49	10.0	-25.1*	15.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42055/16 Calibration Date: 04/28/2012 22:43

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042816.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.80	4.81	18.78
C6-C12	13.41	4.91	21.91
Trifluorotoluene (Surr)	9.75	9.50	10.00

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: MB 240-42055/7

Matrix: Water Date Extracted: 04/28/2012 17:07

Lab File ID:(1) YF042807.D Lab File ID:(2)

Date Analyzed:(1) 04/28/2012 17:07 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-42055/8	04/28/2012 17:45	
	240-10598-B-2 MS	04/28/2012 18:59	
	240-10598-B-2 MSD	04/28/2012 19:36	
MT-MW05S-042512	240-10670-2	04/28/2012 20:51	
MT-MW01S-042512	240-10670-3	04/28/2012 21:28	
MT-MW03S-042512	240-10670-4	04/28/2012 22:06	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42055/7

Matrix: Water | Lab File ID: YF042807.D

Analysis Method: 8015B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 04/28/2012 17:07

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42055 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10) GRO	32.9	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042808.D

Lab ID: LCS 240-42055/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	896	112	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042810.D

Lab ID: 240-10598-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	49 J	963	114	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042811.D

Lab ID: 240-10598-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	930	110	4	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MT-MW05S-042512	240-10670-2	66
MT-MW01S-042512	240-10670-3	63
MT-MW03S-042512	240-10670-4	65
	MB 240-42055/7	63
	LCS 240-42055/8	73
	240-10598-B-2 MS	75
	240-10598-B-2 MSD	71

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

Method 8015B - DRO

Diesel Range Organics (DRO) (GC) by Method 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: A2HP6F Start Date: 04/26/2012 12:11

Analysis Batch Number: 41691 End Date: 04/26/2012 22:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-41691/4 IC		04/26/2012 12:11	1	P6F04264.D	RTX-5 0.53(mm)
STD2 240-41691/5 IC		04/26/2012 12:42	1	P6F04265.D	RTX-5 0.53(mm)
STD3 240-41691/6 IC		04/26/2012 13:13	1	P6F04266.D	RTX-5 0.53(mm)
STD4 240-41691/7 IC		04/26/2012 13:45	1	P6F04267.D	RTX-5 0.53(mm)
STD5 240-41691/8 IC		04/26/2012 14:16	1	P6F04268.D	RTX-5 0.53(mm)
ICV 240-41691/9		04/26/2012 14:47	1	P6F04269.D	RTX-5 0.53(mm)
STD1 240-41691/10 IC		04/26/2012 15:18	1		RTX-5 0.53(mm)
STD2 240-41691/11 IC		04/26/2012 15:49	1		RTX-5 0.53(mm)
STD3 240-41691/12 IC		04/26/2012 16:20	1		RTX-5 0.53(mm)
STD4 240-41691/13 IC		04/26/2012 16:51	1		RTX-5 0.53(mm)
STD5 240-41691/14 IC		04/26/2012 17:23	1		RTX-5 0.53(mm)
ICV 240-41691/15		04/26/2012 17:54	1		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 18:25	500		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 18:56	1		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 19:27	5		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 19:58	5		RTX-5 0.53(mm)
RINSE 240-41691/20		04/26/2012 20:29	1		RTX-5 0.53(mm)
CCV 240-41691/21		04/26/2012 20:59	1		RTX-5 0.53(mm)
CCV 240-41691/24		04/26/2012 22:33	1		RTX-5 0.53(mm)

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198430 174115	188482	182432	173562	Ave		183404.386				5.7		20.0			
n-Nonane	213382 212758	214563	217346	210050	Ave		213619.735				1.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Diesel	Ave	19843021	37696404	91215944	173562318	348230992	100	200	500	1000	2000
n-Nonane	Ave	2133821	4291261	10867284	21005029	42551511	10.0	20.0	50.0	100	200

Curve Type Legend:
Ave = Average

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Diesel	9.493	9.493	9.493	9.493	9.493						5.280 - 13.709	9.493
n-Nonane	4.296	4.295	4.296	4.296	4.298						4.246 - 4.346	4.296

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-41691/9 Calibration Date: 04/26/2012 14:47

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04269.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	171101		467	500	-6.7	20.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICV 240-41691/9 Calibration Date: 04/26/2012 14:47

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04269.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.49	5.28	13.71

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Sample No.: CCVRT 240-42140/4 Date Analyzed: 04/30/2012 11:25

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm)

Lab File ID (Standard): P6F04304.D Heated Purge: (Y/N) N

Calibration ID: 8406

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				4.29		
UPPER LIMIT				4.39		
LOWER LIMIT				4.19		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-42140/4		04/30/2012 11:25	P6F04304.D	4.29		
240-10670-2	MT-MW05S-042512	04/30/2012 11:56	P6F04305.D	4.29		
240-10670-3	MT-MW01S-042512	04/30/2012 12:27	P6F04306.D	4.29		
240-10670-4	MT-MW03S-042512	04/30/2012 12:58	P6F04307.D	4.29		
MB 240-41890/15-A		04/30/2012 19:13	P6F04319.D	4.29		
LCS 240-41890/16-A		04/30/2012 19:44	P6F04320.D	4.29		
CCV 240-42140/21		04/30/2012 20:15	P6F04321.D	4.30		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCVRT 240-42140/4 Calibration Date: 04/30/2012 11:25

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04304.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	184302		502	500	0.5	15.0
n-Nonane	Ave	213620	221736		51.9	50.0	3.8	15.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCVRT 240-42140/4 Calibration Date: 04/30/2012 11:25

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04304.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.49	5.27	13.70
n-Nonane	4.29	4.24	4.34

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42140/21 Calibration Date: 04/30/2012 20:15

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04321.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	202278		552	500	10.3	15.0
n-Nonane	Ave	213620	238934		55.9	50.0	11.8	15.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCV 240-42140/21 Calibration Date: 04/30/2012 20:15

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04321.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.49	5.27	13.70
n-Nonane	4.30	4.24	4.34

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: MB 240-41890/15-A

Matrix: Water Date Extracted: 04/27/2012 10:39

Lab File ID:(1) P6F04319.D Lab File ID:(2)

Date Analyzed:(1) 04/30/2012 19:13 Date Analyzed:(2)

Instrument ID:(1) A2HP6F Instrument ID:(2)

GC Column:(1) RTX-5 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MT-MW05S-042512	240-10670-2	04/30/2012 11:56	
MT-MW01S-042512	240-10670-3	04/30/2012 12:27	
MT-MW03S-042512	240-10670-4	04/30/2012 12:58	
	LCS 240-41890/16-A	04/30/2012 19:44	

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10670-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-41890/15-A

Matrix: Water | Lab File ID: P6F04319.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3520C | Date Extracted: 04/27/2012 10:39

Sample wt/vol: 1000(mL) | Date Analyzed: 04/30/2012 19:13

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42140 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32) DRO	422	J	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	62		10-110

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P6F04320.D

Lab ID: LCS 240-41890/16-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	1860	74	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-5 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	C91 #
MT-MW05S-042512	240-10670-2	47
MT-MW01S-042512	240-10670-3	22
MT-MW03S-042512	240-10670-4	45
	MB 240-41890/15-A	62
	LCS 240-41890/16-A	47

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

ICAL Data

Perchlorates

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-14 15:01		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.10	0.00	Pass	0.69	0.70	0.10	-0.01	Pass	92868	0	Pass
301.98	302.00	0.10	-0.02	Pass	0.71	0.70	0.10	0.01	Pass	388044	0	Pass
601.93	601.98	0.10	-0.05	Pass	0.69	0.70	0.10	-0.01	Pass	1062794	0	Pass
1033.92	1033.99	0.10	-0.07	Pass	0.70	0.70	0.10	0.00	Pass	516938	0	Pass
1333.91	1333.97	0.10	-0.06	Pass	0.70	0.70	0.10	0.00	Pass	846657	0	Pass
1633.89	1633.95	0.10	-0.06	Pass	0.73	0.70	0.10	0.03	Pass	712638	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.01	112.99	0.10	0.02	Pass	0.68	0.70	0.10	-0.02	Pass	288847	0	Pass
302.00	302.00	0.10	0.00	Pass	0.69	0.70	0.10	-0.01	Pass	311553	0	Pass
601.99	601.98	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	485145	0	Pass
1034.00	1033.99	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	254185	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	651822	0	Pass
1633.93	1633.95	0.10	-0.02	Pass	0.68	0.70	0.10	-0.02	Pass	468989	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.30	-0.01	Pass	1.20	1.20	0.60	0.00	Pass	107551	0	Pass
301.93	302.00	0.30	-0.07	Pass	1.30	1.20	0.60	0.10	Pass	539361	0	Pass
601.92	601.98	0.30	-0.06	Pass	1.30	1.20	0.60	0.10	Pass	1600495	0	Pass
1033.87	1033.99	0.30	-0.12	Pass	1.33	1.20	0.60	0.13	Pass	998141	0	Pass
1333.85	1333.97	0.30	-0.12	Pass	1.31	1.20	0.60	0.11	Pass	1909805	0	Pass
1633.87	1633.95	0.30	-0.08	Pass	1.23	1.20	0.60	0.03	Pass	1817124	0	Pass

TestAmerica West Sacramento(916) 373-5600 Page 945 of 986

05/30/2012 95 of 141

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.03	112.99	0.30	0.04	Pass	1.16	1.20	0.60	-0.04	Pass	377641	0	Pass
301.98	302.00	0.30	-0.02	Pass	1.23	1.20	0.60	0.03	Pass	451748	0	Pass
601.93	601.98	0.30	-0.05	Pass	1.25	1.20	0.60	0.05	Pass	765433	0	Pass
1033.93	1033.99	0.30	-0.06	Pass	1.25	1.20	0.60	0.05	Pass	484189	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.28	1.20	0.60	0.08	Pass	1182818	0	Pass
1633.91	1633.95	0.30	-0.04	Pass	1.25	1.20	0.60	0.05	Pass	937789	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.79	2.50	1.25	0.29	Pass	131443	0	Pass
301.87	302.00	0.50	-0.13	Pass	2.81	2.50	1.25	0.31	Pass	756159	0	Pass
601.87	601.98	0.50	-0.11	Pass	2.85	2.50	1.25	0.35	Pass	2040963	0	Pass
1033.88	1033.99	0.50	-0.11	Pass	2.82	2.50	1.25	0.32	Pass	1462657	0	Pass
1333.93	1333.97	0.50	-0.04	Pass	2.73	2.50	1.25	0.23	Pass	2934488	0	Pass
1633.95	1633.95	0.50	0.00	Pass	2.60	2.50	1.25	0.10	Pass	3099613	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.88	112.99	0.50	-0.11	Pass	2.52	2.50	1.25	0.02	Pass	484114	0	Pass
301.92	302.00	0.50	-0.08	Pass	2.56	2.50	1.25	0.06	Pass	643280	0	Pass
601.90	601.98	0.50	-0.08	Pass	2.55	2.50	1.25	0.05	Pass	1318633	0	Pass
1033.99	1033.99	0.50	0.00	Pass	2.41	2.50	1.25	-0.09	Pass	1008315	0	Pass
1333.95	1333.97	0.50	-0.02	Pass	2.47	2.50	1.25	-0.03	Pass	2453702	0	Pass
1634.01	1633.95	0.50	0.06	Pass	2.42	2.50	1.25	-0.08	Pass	2229412	0	Pass

NOTE: 1) Actual abundances depend on many factors and are instrument specific.
To change the minimum abundance, edit the values on the "Options" sheet.

TestAmerica West Sacramento (916) 373-5600
Page 946 of 986
05/30/2012 96 of 141

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\14MAY2012\QuantResults\14May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
14MAY12-perc-003.d	Blank No IS	P2-A5		Sample	5/14/2012 15:41
14MAY12-perc-004.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/14/2012 15:57
14MAY12-perc-005.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-B2	1	Calibration	5/14/2012 16:13
14MAY12-perc-006.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/14/2012 16:29
14MAY12-perc-007.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/14/2012 16:46
14MAY12-perc-008.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/14/2012 17:02
14MAY12-perc-009.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/14/2012 17:18
14MAY12-perc-010.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/14/2012 17:34
14MAY12-perc-011.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/14/2012 17:51
14MAY12-perc-012.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/14/2012 18:07
14MAY12-perc-013.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/14/2012 18:23
14MAY12-perc-014.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/14/2012 18:39
14MAY12-perc-015.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/14/2012 18:55
14MAY12-perc-016.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/14/2012 19:12
14MAY12-perc-017.d	G2E090000-MB, 2130084, 2.00mL/2.00mL, 331.0-L	P1-A1		Sample	5/14/2012 19:28
14MAY12-perc-018.d	G2E090000-LCS, 2130084, 2.00mL/2.00mL	P1-A2	LCS_0.5	QC	5/14/2012 19:44
14MAY12-perc-019.d	G2E010443-1, 2130084, 2.00mL/2.00mL	P1-A3		Sample	5/14/2012 20:00
14MAY12-perc-020.d	G2E010443-2, 2130084, 2.00mL/2.00mL	P1-A4		Sample	5/14/2012 20:16
14MAY12-perc-021.d	G2E010443-3, 2130084, 2.00mL/2.00mL	P1-A5		Sample	5/14/2012 20:33
14MAY12-perc-022.d	G2E010443-4, 2130084, 2.00mL/2.00mL	P1-A6		Sample	5/14/2012 20:49
14MAY12-perc-023.d	G2E010443-5, 2130084, 2.00mL/2.00mL	P1-A7		Sample	5/14/2012 21:05
14MAY12-perc-024.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/14/2012 21:21
14MAY12-perc-025.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/14/2012 21:38
14MAY12-perc-026.d	G2E070437-1, 2130084, 2.00mL/2.00mL	P1-A8		Sample	5/14/2012 21:54
14MAY12-perc-027.d	G2E070437-1MS, 2130084, 2.00mL/2.00mL	P1-A9	MS_5	QC	5/14/2012 22:10
14MAY12-perc-028.d	G2E070437-1SD, 2130084, 2.00mL/2.00mL	P1-B1	MS_5	QC	5/14/2012 22:26

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
14MAY12-perc-005.d	1	☑	3563	0.7751	0.1500
14MAY12-perc-006.d	2	☑	5522	0.8235	0.3000
14MAY12-perc-007.d	3	☑	8313	0.7655	0.5000
14MAY12-perc-008.d	4	☑	18858	0.7690	1.0000
14MAY12-perc-009.d	5	☑	33046	0.7757	2.0000
14MAY12-perc-010.d	6	☑	80010	0.7926	5.0000
14MAY12-perc-011.d	7	☑	150271	0.8131	10.0000
14MAY12-perc-012.d	8	☑	274191	0.8454	20.0000
14MAY12-perc-016.d	CCV3	☑	7440	0.7634	0.5000
14MAY12-perc-031.d	CCV3	☑	6623	0.7837	0.5000
14MAY12-perc-061.d	CCV3	☑	7104	0.8224	0.5000
14MAY12-perc-024.d	CCV5	☑	30242	0.8042	2.0000
14MAY12-perc-042.d	CCV5	☑	18445	0.7921	2.0000
14MAY12-perc-060.d	CCV5	☑	16877	0.7762	2.0000
14MAY12-perc-015.d	CCV6	☑	74706	0.7810	5.0000
14MAY12-perc-030.d	CCV6	☑	67483	0.7884	5.0000
14MAY12-perc-050.d	CCV6	☑	47377	0.7973	5.0000
14MAY12-perc-073.d	CCV6	☑	63827	0.8162	5.0000
14MAY12-perc-014.d	ICV	☑	88291	0.8279	5.0000
14MAY12-perc-018.d	LCS_0.5	☑	6937	0.7922	0.5000
14MAY12-perc-065.d	LCS_0.5	☑	5533	0.7210	0.5000
14MAY12-perc-066.d	LCS_0.5	☑	5509	0.7213	0.5000
14MAY12-perc-034.d	LCS_5	☑	48910	0.7612	5.0000
14MAY12-perc-035.d	LCS_5	☑	50205	0.8001	5.0000
14MAY12-perc-062.d	LODV	☑	2264	0.8218	0.1500
14MAY12-perc-074.d	LODV	☑	1905	0.7910	0.1500
14MAY12-perc-068.d	MS_0.5	☑	5452	0.8081	0.5000
14MAY12-perc-069.d	MS_0.5	☑	5658	0.7835	0.5000
14MAY12-perc-027.d	MS_5	☑	77333	1.2649	5.0000
14MAY12-perc-028.d	MS_5	☑	87232	1.3817	5.0000

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate (35Cl18O4)*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
14MAY12-perc-005.d	1	☑	306483	30648.2528	10.0000
14MAY12-perc-006.d	2	☑	223525	22352.5077	10.0000
14MAY12-perc-007.d	3	☑	217168	21716.8481	10.0000
14MAY12-perc-008.d	4	☑	245210	24521.0230	10.0000
14MAY12-perc-009.d	5	☑	212997	21299.6906	10.0000
14MAY12-perc-010.d	6	☑	201883	20188.3139	10.0000
14MAY12-perc-011.d	7	☑	184820	18482.0256	10.0000
14MAY12-perc-012.d	8	☑	162173	16217.2955	10.0000
14MAY12-perc-016.d	CCV3	☑	194925	19492.5007	10.0000
14MAY12-perc-031.d	CCV3	☑	169030	16903.0052	10.0000
14MAY12-perc-061.d	CCV3	☑	172762	17276.2276	10.0000
14MAY12-perc-024.d	CCV5	☑	188033	18803.2699	10.0000
14MAY12-perc-042.d	CCV5	☑	116434	11643.3691	10.0000
14MAY12-perc-060.d	CCV5	☑	108719	10871.8619	10.0000
14MAY12-perc-015.d	CCV6	☑	191311	19131.0723	10.0000
14MAY12-perc-030.d	CCV6	☑	171180	17117.9934	10.0000
14MAY12-perc-050.d	CCV6	☑	118836	11883.6480	10.0000
14MAY12-perc-073.d	CCV6	☑	156397	15639.7233	10.0000
14MAY12-perc-014.d	ICV	☑	213300	21329.9939	10.0000
14MAY12-perc-018.d	LCS_0.5	☑	175112	17511.1655	10.0000
14MAY12-perc-065.d	LCS_0.5	☑	153463	15346.2666	10.0000
14MAY12-perc-066.d	LCS_0.5	☑	152750	15275.0139	10.0000
14MAY12-perc-034.d	LCS_5	☑	128504	12850.3900	10.0000
14MAY12-perc-035.d	LCS_5	☑	125496	12549.6250	10.0000
14MAY12-perc-062.d	LODV	☑	183633	18363.2653	10.0000
14MAY12-perc-074.d	LODV	☑	160526	16052.5827	10.0000
14MAY12-perc-068.d	MS_0.5	☑	134950	13495.0416	10.0000
14MAY12-perc-069.d	MS_0.5	☑	144423	14442.3010	10.0000
14MAY12-perc-027.d	MS_5	☑	122278	12227.7853	10.0000
14MAY12-perc-028.d	MS_5	☑	126265	12626.4747	10.0000

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

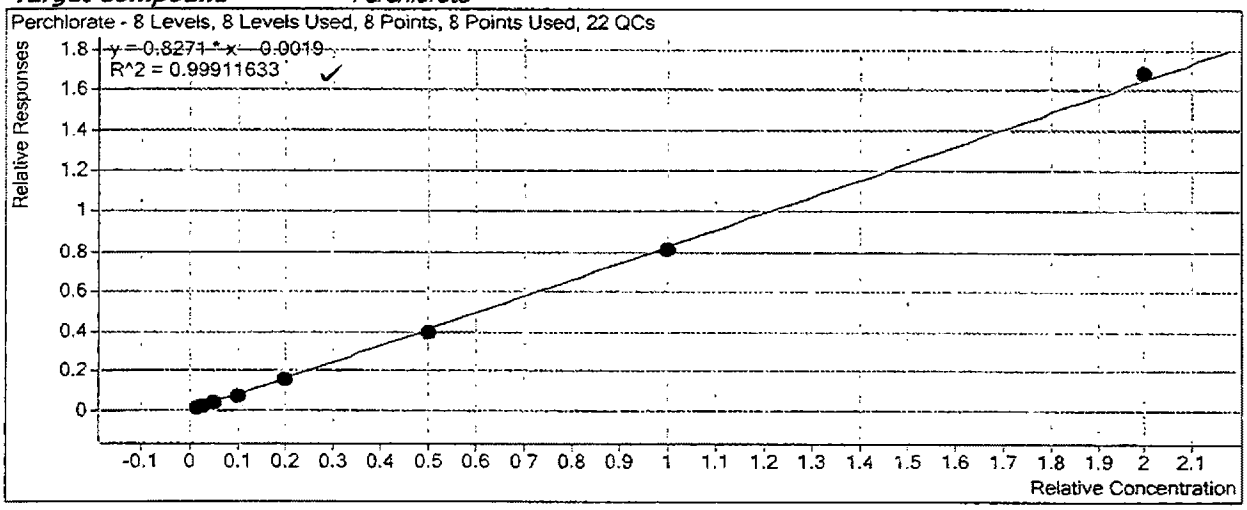
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\14MAY2012\QuantResults\14May2012-Perchlorate.batch.xml		
Analysis Time	5/15/2012 12:43 PM	**Analyst Name**	lores
Report Time	5/22/2012 11:15 AM	**Reporter Name**	lores
Last Calib Update	5/15/2012 12:43 PM	**Batch State**	Processed

Calibration Info **Linear fit, Origin ignored, 1/x weighting**

mr 5/22/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\14MAY2012\QuantResults\14May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/14/2012 18:39
Analyst	lores
Data File	14MAY12-perc-014 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850IC_00001 12LCMS0073, 5 0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5.00
Injection Volume	50

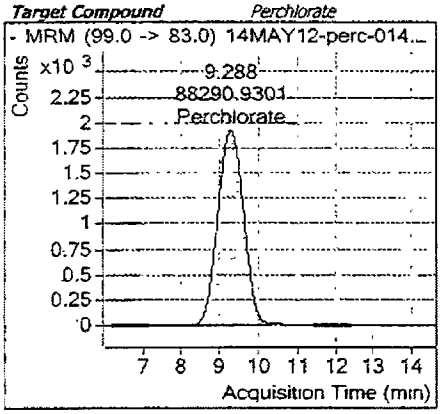
Quantitation Results

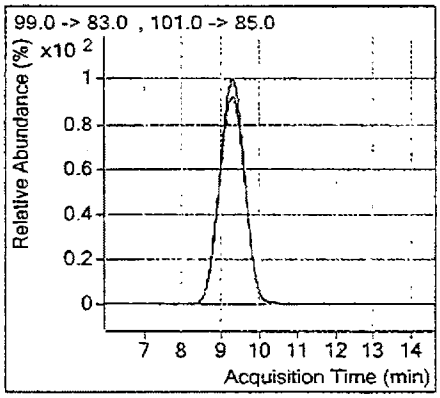
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.288	88291	99	83	5.02691	5.02691	1
Perchlorate-(35Cl18O4)	ISTD	9.282	213300	107	89			1
							0.5 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	28456	101	85	3.10	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	66294	109	91	3.22	2.30	3.80	In Control

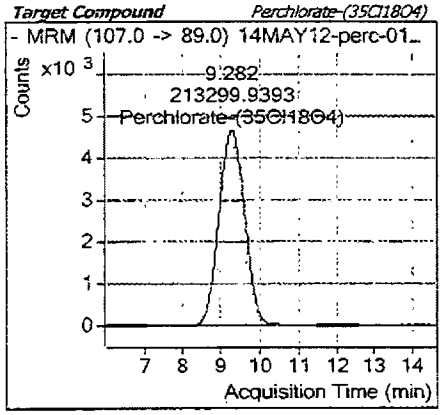
Compound Graphics

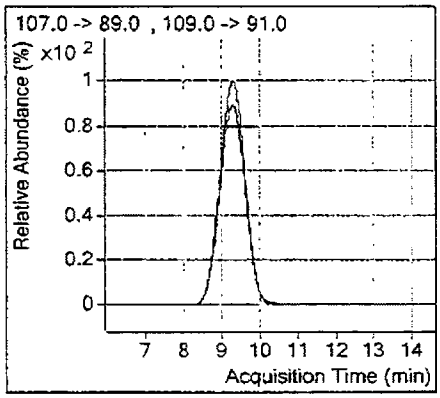
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

14MAY12-perc-029.d	G2E070438-1, 2130084, 2.00mL/2.00mL	P1-B2		Sample	5/14/2012 22:42
14MAY12-perc-030.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/14/2012 22:59
14MAY12-perc-031.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/14/2012 23:15
14MAY12-perc-032.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/14/2012 23:31
14MAY12-perc-033.d	G2E070000-MB, 2128058, 2.00mL/2.00mL, 6850-L	P1-B3		Sample	5/14/2012 23:47
14MAY12-perc-034.d	G2E070000-LCS, 2128058, 2.00mL/2.00mL	P1-B4	LCS_5	QC	5/15/2012 00:04
14MAY12-perc-035.d	G2E070000-SMCS, 2128058, 2.00mL/2.00mL	P1-B5	LCS_5	QC	5/15/2012 00:20
14MAY12-perc-036.d	G2E010420-1, 2128058, 2.00mL/2.00mL	P1-B6		Sample	5/15/2012 00:36
14MAY12-perc-037.d	G2E010420-2, 2128058, 2.00mL/2.00mL	P1-B7		Sample	5/15/2012 00:52
14MAY12-perc-038.d	G2E010420-3, 2128058, 2.00mL/2.00mL	P1-B8		Sample	5/15/2012 01:08
14MAY12-perc-039.d	G2E010422-1, 2128058, 2.00mL/2.00mL	P1-B9		Sample	5/15/2012 01:25
14MAY12-perc-040.d	G2E010422-2, 2128058, 2.00mL/2.00mL, IS Low. RI.	P1-C1		Sample	5/15/2012 01:41
14MAY12-perc-041.d	G2E010422-3, 2128058, 2.00mL/2.00mL, IS Low. RI.	P1-C2		Sample	5/15/2012 01:57
14MAY12-perc-042.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/15/2012 02:13
14MAY12-perc-043.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/15/2012 02:30
14MAY12-perc-044.d	G2E010442-1, 2128058, 2.00mL/2.00mL	P1-C3		Sample	5/15/2012 02:46
14MAY12-perc-045.d	G2E010442-2, 2128058, 2.00mL/2.00mL, IS Low. RI.	P1-C4		Sample	5/15/2012 03:02
14MAY12-perc-046.d	G2E010442-3, 2128058, 2.00mL/2.00mL	P1-C5		Sample	5/15/2012 03:18
14MAY12-perc-047.d	G2E030413-1, 2128058, 2.00mL/2.00mL, IS Low. RI.	P1-C6		Sample	5/15/2012 03:34
14MAY12-perc-048.d	G2E030413-2, 2128058, 2.00mL/2.00mL, IS Low. RI.	P1-C7		Sample	5/15/2012 03:51
14MAY12-perc-049.d	G2E030413-3, 2128058, 2.00mL/2.00mL, IS Low. RI.	P1-C8		Sample	5/15/2012 04:07
14MAY12-perc-050.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/15/2012 04:23
14MAY12-perc-051.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/15/2012 04:39
14MAY12-perc-052.d	G2E030450-1, 2128058, 2.00mL/2.00mL, CCV IS Low, RI.	P1-C9		Sample	5/15/2012 04:56
14MAY12-perc-053.d	G2E030450-2, 2128058, 2.00mL/2.00mL, CCV IS Low, RI.	P1-D1		Sample	5/15/2012 05:12
14MAY12-perc-054.d	G2E030450-3, 2128058, 2.00mL/2.00mL, CCV IS Low, RI.	P1-D2		Sample	5/15/2012 05:28
14MAY12-perc-055.d	G2E030450-4, 2128058, 2.00mL/2.00mL, CCV IS Low, RI.	P1-D3		Sample	5/15/2012 05:44
14MAY12-perc-056.d	G2E030450-4MS, 2128058, 2.00mL/2.00mL, CCV IS Low, RI.	P1-D4		Sample	5/15/2012 06:00
14MAY12-perc-057.d	G2E030450-4SD, 2128058, 2.00mL/2.00mL, CCV IS Low, RI.	P1-D5		Sample	5/15/2012 06:17

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

14MAY12-perc-029.d	Perchlorate	Sample		49256	
14MAY12-perc-030.d	Perchlorate	QC	5.0000	67483	95.8
14MAY12-perc-031.d	Perchlorate	QC	0.5000	6623	99.2
14MAY12-perc-032.d	Perchlorate	Sample			
14MAY12-perc-033.d	Perchlorate	Sample			
14MAY12-perc-034.d	Perchlorate	QC	5.0000	48910	92.5
14MAY12-perc-035.d	Perchlorate	QC	5.0000	50205	97.2
14MAY12-perc-036.d	Perchlorate	Sample			
14MAY12-perc-037.d	Perchlorate	Sample			
14MAY12-perc-038.d	Perchlorate	Sample			
14MAY12-perc-039.d	Perchlorate	Sample		317	
14MAY12-perc-040.d	Perchlorate	Sample		4147	
14MAY12-perc-041.d	Perchlorate	Sample			
14MAY12-perc-042.d	Perchlorate	QC	2.0000	18445	96.9
14MAY12-perc-043.d	Perchlorate	Sample			
14MAY12-perc-044.d	Perchlorate	Sample		219	
14MAY12-perc-045.d	Perchlorate	Sample			
14MAY12-perc-046.d	Perchlorate	Sample			
14MAY12-perc-047.d	Perchlorate	Sample		972	
14MAY12-perc-048.d	Perchlorate	Sample			
14MAY12-perc-049.d	Perchlorate	Sample			
14MAY12-perc-050.d	Perchlorate	QC	5.0000	47377	96.8
14MAY12-perc-051.d	Perchlorate	Sample			
14MAY12-perc-052.d	Perchlorate	Sample			
14MAY12-perc-053.d	Perchlorate	Sample		184	
14MAY12-perc-054.d	Perchlorate	Sample			
14MAY12-perc-055.d	Perchlorate	Sample			
14MAY12-perc-056.d	Perchlorate	Sample		36015	
14MAY12-perc-057.d	Perchlorate	Sample		18213	

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373-5600 Page 969 of 996

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\14MAY2012\QuantResults\14May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/15/2012 02:13
Analyst	lores
Data File	14MAY12-perc-042.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2.0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2.00
Injection Volume	50

Quantitation Results

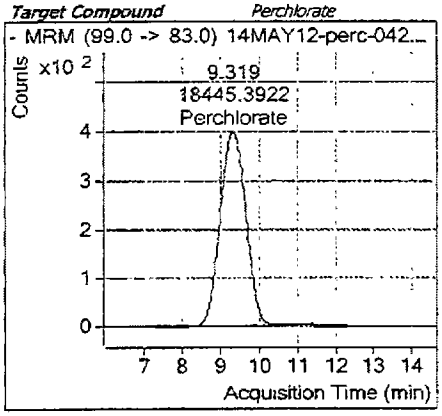
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.319	18445	99	83	1.93775	1.93775	1
Perchlorate-(35Cl18O4)	ISTD	9.310	116434	107	89			1

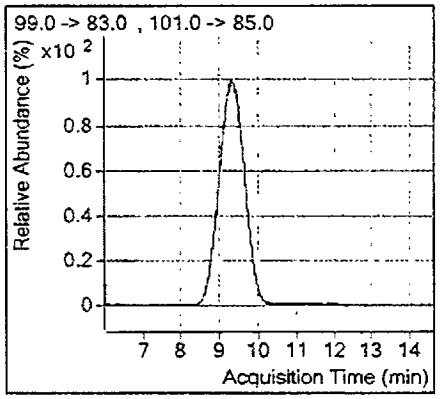
-3.1 % Deviation

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	6327	101	85	2.92	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	37366	109	91	3.12	2.30	3.80	In Control

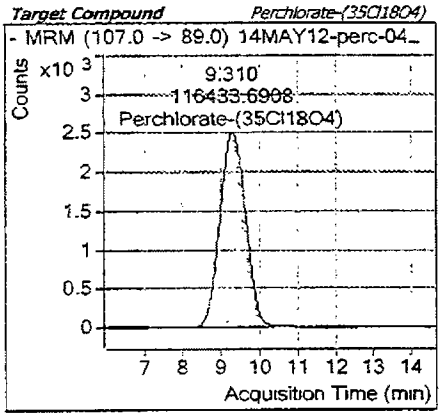
Compound Graphics

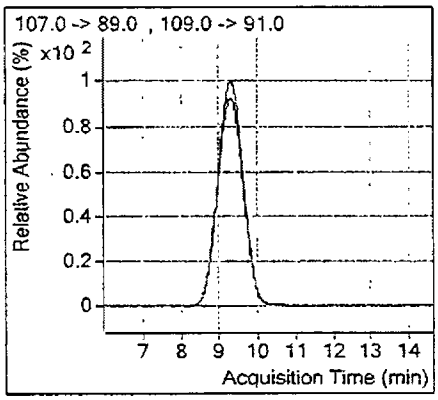
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





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TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\14MAY2012\QuantResults\14May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/15/2012 04:23
Analyst	lores
Data File	14MAY12-perc-050 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5.00
Injection Volume	50

Quantitation Results

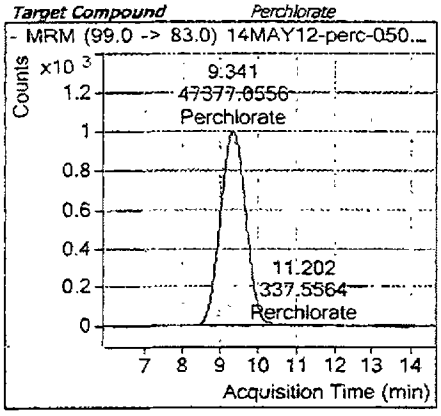
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.341	47377	99	83	4.84249	4.84249	1
Perchlorate-(35Cl18O4)	ISTD	9.334	118836	107	89			1

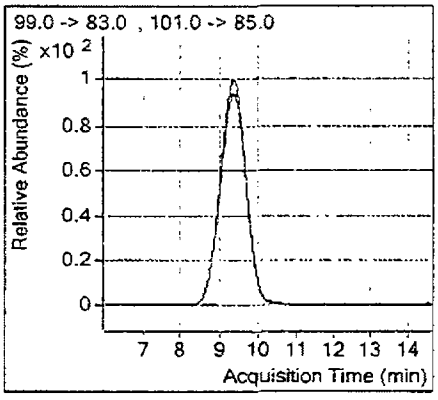
-3.2 % Deviation

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	15525	101	85	3 05	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	38145	109	91	3 12	2.30	3.80	In Control

Compound Graphics

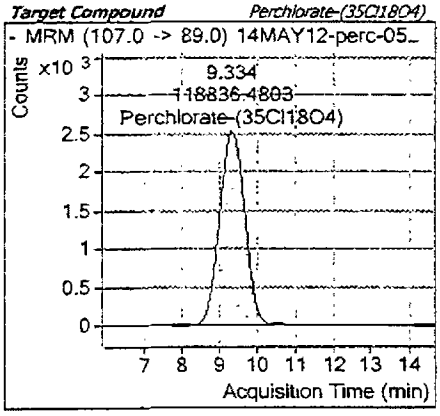
Target Compound *Perchlorate*

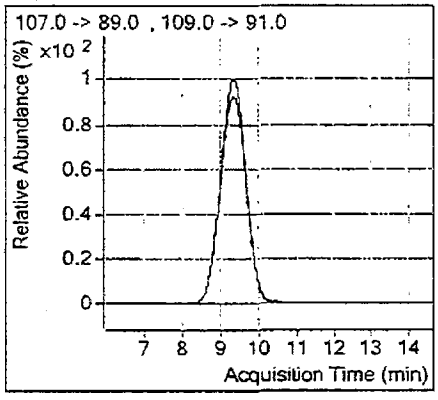




5/22/12

Target Compound *Perchlorate-(35Cl18O4)*





G2E010442

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-15 15:27		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.10	0.00	Pass	0.68	0.70	0.10	-0.02	Pass	80670	0	Pass
301.98	302.00	0.10	-0.02	Pass	0.71	0.70	0.10	0.01	Pass	379669	0	Pass
601.93	601.98	0.10	-0.05	Pass	0.68	0.70	0.10	-0.02	Pass	1030310	0	Pass
1033.93	1033.99	0.10	-0.06	Pass	0.70	0.70	0.10	0.00	Pass	503215	0	Pass
1333.91	1333.97	0.10	-0.06	Pass	0.69	0.70	0.10	-0.01	Pass	769842	0	Pass
1633.90	1633.95	0.10	-0.05	Pass	0.72	0.70	0.10	0.02	Pass	640518	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.10	0.00	Pass	0.71	0.70	0.10	0.01	Pass	286201	0	Pass
301.99	302.00	0.10	-0.01	Pass	0.71	0.70	0.10	0.01	Pass	308726	0	Pass
601.98	601.98	0.10	0.00	Pass	0.70	0.70	0.10	0.00	Pass	514401	0	Pass
1033.99	1033.99	0.10	0.00	Pass	0.71	0.70	0.10	0.01	Pass	256872	0	Pass
1333.97	1333.97	0.10	0.00	Pass	0.69	0.70	0.10	-0.01	Pass	649974	0	Pass
1633.91	1633.95	0.10	-0.04	Pass	0.69	0.70	0.10	-0.01	Pass	445154	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.30	0.00	Pass	1.18	1.20	0.60	-0.02	Pass	96143	0	Pass
301.93	302.00	0.30	-0.07	Pass	1.27	1.20	0.60	0.07	Pass	542698	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.32	1.20	0.60	0.12	Pass	1562602	0	Pass
1033.87	1033.99	0.30	-0.12	Pass	1.35	1.20	0.60	0.15	Pass	912832	0	Pass
1333.89	1333.97	0.30	-0.08	Pass	1.28	1.20	0.60	0.08	Pass	1760381	0	Pass
1633.87	1633.95	0.30	-0.08	Pass	1.25	1.20	0.60	0.05	Pass	1603686	0	Pass

TestAmerica West Sacramento (916) 373-5600

Page 947 of 996

05/30/2012

976 of 141

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.02	112.99	0.30	0.03	Pass	1.19	1.20	0.60	-0.01	Pass	361322	0	Pass
301.96	302.00	0.30	-0.04	Pass	1.23	1.20	0.60	0.03	Pass	461092	0	Pass
601.92	601.98	0.30	-0.06	Pass	1.24	1.20	0.60	0.04	Pass	831487	0	Pass
1033.92	1033.99	0.30	-0.07	Pass	1.25	1.20	0.60	0.05	Pass	481824	0	Pass
1333.90	1333.97	0.30	-0.07	Pass	1.26	1.20	0.60	0.06	Pass	1201446	0	Pass
1633.91	1633.95	0.30	-0.04	Pass	1.26	1.20	0.60	0.06	Pass	928748	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.77	2.50	1.25	0.27	Pass	120814	0	Pass
301.88	302.00	0.50	-0.12	Pass	2.76	2.50	1.25	0.26	Pass	768792	0	Pass
601.85	601.98	0.50	-0.13	Pass	2.91	2.50	1.25	0.41	Pass	2002258	0	Pass
1033.88	1033.99	0.50	-0.11	Pass	2.85	2.50	1.25	0.35	Pass	1330670	0	Pass
1333.92	1333.97	0.50	-0.05	Pass	2.72	2.50	1.25	0.22	Pass	2650337	0	Pass
1633.94	1633.95	0.50	-0.01	Pass	2.62	2.50	1.25	0.12	Pass	2716476	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.88	112.99	0.50	-0.11	Pass	2.53	2.50	1.25	0.03	Pass	474968	0	Pass
301.91	302.00	0.50	-0.09	Pass	2.55	2.50	1.25	0.05	Pass	663030	0	Pass
601.89	601.98	0.50	-0.09	Pass	2.58	2.50	1.25	0.08	Pass	1377011	0	Pass
1033.98	1033.99	0.50	-0.01	Pass	2.45	2.50	1.25	-0.05	Pass	977385	0	Pass
1333.93	1333.97	0.50	-0.04	Pass	2.51	2.50	1.25	0.01	Pass	2412062	0	Pass
1634.00	1633.95	0.50	0.05	Pass	2.42	2.50	1.25	-0.08	Pass	2230974	0	Pass

[1] *NOTE: 1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\15MAY2012\QuantResults\15May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
15MAY12-perc-003.d	Blank No IS	P2-A5		Sample	5/15/2012 16:06
15MAY12-perc-004.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/15/2012 16:22
15MAY12-perc-005.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-B2	1	Calibration	5/15/2012 16:38
15MAY12-perc-006.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/15/2012 16:55
15MAY12-perc-007.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/15/2012 17:11
15MAY12-perc-008.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/15/2012 17:27
15MAY12-perc-009.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/15/2012 17:43
15MAY12-perc-010.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/15/2012 18:00
15MAY12-perc-011.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/15/2012 18:16
15MAY12-perc-012.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/15/2012 18:32
15MAY12-perc-013.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/15/2012 18:48
15MAY12-perc-014.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/15/2012 19:04
15MAY12-perc-015.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/15/2012 19:21
15MAY12-perc-016.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/15/2012 19:37
15MAY12-perc-017.d	G2E070437-1MS, 2130084, 2.00mL/2.00mL	P1-A9	MS_5	QC	5/15/2012 19:53
15MAY12-perc-018.d	G2E070437-1SD, 2130084, 2.00mL/2.00mL	P1-B1	MS_5	QC	5/15/2012 20:09
15MAY12-perc-019.d	G2E010422-2, 2128058, 2.00mL/2.00mL	P1-C1		Sample	5/15/2012 20:25
15MAY12-perc-020.d	G2E010422-3, 2128058, 2.00mL/2.00mL	P1-C2		Sample	5/15/2012 20:42
15MAY12-perc-021.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/15/2012 20:58
15MAY12-perc-022.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/15/2012 21:14
15MAY12-perc-023.d	G2E010442-2, 2128058, 2.00mL/2.00mL	P1-C4		Sample	5/15/2012 21:30
15MAY12-perc-024.d	G2E030413-1, 2128058, 2.00mL/2.00mL	P1-C6		Sample	5/15/2012 21:47
15MAY12-perc-025.d	G2E030413-2, 2128058, 2.00mL/2.00mL	P1-C7		Sample	5/15/2012 22:03
15MAY12-perc-026.d	G2E030413-3, 2128058, 2.00mL/2.00mL	P1-C8		Sample	5/15/2012 22:19
15MAY12-perc-027.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL,vial empty,no data	P2-C7	CCV6	QC	5/15/2012 22:35
15MAY12-perc-028.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/15/2012 22:51

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373-5600 Page 974 of 986
05/30/2012 124 of 141

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Quantitation Results

Compound *Perchlorate*

Data File	Compound	Sample Type	Exp Conc	Response	Accuracy	Final Conc.
15MAY12-perc-003.d	Perchlorate	Sample				
15MAY12-perc-004.d	Perchlorate	Sample				
15MAY12-perc-005.d	Perchlorate	Calibration	0.1500	2933	118.0	
15MAY12-perc-006.d	Perchlorate	Calibration	0.3000	3832	99.2	
15MAY12-perc-007.d	Perchlorate	Calibration	0.5000	6244	95.2	
15MAY12-perc-008.d	Perchlorate	Calibration	1.0000	12696	96.4	
15MAY12-perc-009.d	Perchlorate	Calibration	2.0000	24808	92.8	
15MAY12-perc-010.d	Perchlorate	Calibration	5.0000	60459	96.0	
15MAY12-perc-011.d	Perchlorate	Calibration	10.0000	115391	101.0	
15MAY12-perc-012.d	Perchlorate	Calibration	20.0000	206571	101.4	
15MAY12-perc-013.d	Perchlorate	Sample				
15MAY12-perc-014.d	Perchlorate	QC	5.0000	75884	99.2	
15MAY12-perc-015.d	Perchlorate	QC	5.0000	64708	94.5	
15MAY12-perc-016.d	Perchlorate	QC	0.5000	6716	101.6	
15MAY12-perc-017.d	Perchlorate	QC	5.0000	89007	148.6	
15MAY12-perc-018.d	Perchlorate	QC	5.0000	83140	168.5	
15MAY12-perc-019.d	Perchlorate	Sample		4997		
15MAY12-perc-020.d	Perchlorate	Sample				
15MAY12-perc-021.d	Perchlorate	QC	2.0000	22114	100.1	
15MAY12-perc-022.d	Perchlorate	Sample				
15MAY12-perc-023.d	Perchlorate	Sample				
15MAY12-perc-024.d	Perchlorate	Sample		1473		
15MAY12-perc-025.d	Perchlorate	Sample		145		
15MAY12-perc-026.d	Perchlorate	Sample				
15MAY12-perc-027.d	Perchlorate	QC	5.0000			
15MAY12-perc-028.d	Perchlorate	Sample				

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

15MAY12-perc-029.d	Perchlorate	Sample			
15MAY12-perc-030.d	Perchlorate	Sample		287	
15MAY12-perc-031.d	Perchlorate	Sample			
15MAY12-perc-032.d	Perchlorate	Sample			
15MAY12-perc-033.d	Perchlorate	Sample		38986	
15MAY12-perc-034.d	Perchlorate	Sample		40293	
15MAY12-perc-035.d	Perchlorate	Sample		279	
15MAY12-perc-036.d	Perchlorate	Sample			
15MAY12-perc-037.d	Perchlorate	QC	2.0000	17210	100.1
15MAY12-perc-038.d	Perchlorate	QC	0.5000	7784	97.1
15MAY12-perc-039.d	Perchlorate	QC	0.1500	2540	110.4
15MAY12-perc-040.d	Perchlorate	Sample			
15MAY12-perc-041.d	Perchlorate	Sample			
15MAY12-perc-042.d	Perchlorate	QC	0.5000	6122	88.1
15MAY12-perc-043.d	Perchlorate	QC	0.5000	6433	94.9
15MAY12-perc-044.d	Perchlorate	Sample			
15MAY12-perc-045.d	Perchlorate	QC	0.5000	5933	96.6
15MAY12-perc-046.d	Perchlorate	QC	0.5000	6477	97.9
15MAY12-perc-047.d	Perchlorate	Sample			
15MAY12-perc-048.d	Perchlorate	Sample			
15MAY12-perc-049.d	Perchlorate	Sample			
15MAY12-perc-050.d	Perchlorate	QC	5.0000		
15MAY12-perc-051.d	Perchlorate	QC	0.1500	2768	112.2
15MAY12-perc-052.d	Perchlorate	Sample			

TestAmerica West Sacramento (916) 373-5600

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
15MAY12-perc-005.d	1	☑	2933	0.8645	0.1500
15MAY12-perc-006.d	2	☑	3832	0.7689	0.3000
15MAY12-perc-007.d	3	☑	6244	0.7592	0.5000
15MAY12-perc-008.d	4	☑	12696	0.7882	1.0000
15MAY12-perc-009.d	5	☑	24808	0.7672	2.0000
15MAY12-perc-010.d	6	☑	60459	0.7994	5.0000
15MAY12-perc-011.d	7	☑	115391	0.8428	10.0000
15MAY12-perc-012.d	8	☑	206571	0.8474	20.0000
15MAY12-perc-016.d	CCV3	☑	6716	0.8127	0.5000
15MAY12-perc-038.d	CCV3	☑	7784	0.7758	0.5000
15MAY12-perc-021.d	CCV5	☑	22114	0.8283	2.0000
15MAY12-perc-037.d	CCV5	☑	17210	0.8284	2.0000
15MAY12-perc-015.d	CCV6	☑	64708	0.7870	5.0000
14MAY12-perc-015.d	CCV6	☑	74706	0.7810	5.0000
14MAY12-perc-015.d	CCV6	☑	74706	0.7810	5.0000
15MAY12-perc-014.d	ICV	☑	75884	0.8263	5.0000
15MAY12-perc-042.d	LCS_0.5	☑	6122	0.7004	0.5000
15MAY12-perc-043.d	LCS_0.5	☑	6433	0.7575	0.5000
15MAY12-perc-039.d	LODV	☑	2540	0.8008	0.1500
15MAY12-perc-051.d	LODV	☑	2768	0.8164	0.1500
15MAY12-perc-045.d	MS_0.5	☑	5933	0.7717	0.5000
15MAY12-perc-046.d	MS_0.5	☑	6477	0.7824	0.5000
15MAY12-perc-017.d	MS_5	☑	89007	1.2396	5.0000
15MAY12-perc-018.d	MS_5	☑	83140	1.4060	5.0000

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate-(35Cl18O4)*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
15MAY12-perc-005.d	1	☑	226215	22621.5115	10.0000
15MAY12-perc-006.d	2	☑	166114	16611.4350	10.0000
15MAY12-perc-007.d	3	☑	164486	16448.6314	10.0000
15MAY12-perc-008.d	4	☑	161070	16106.9999	10.0000
15MAY12-perc-009.d	5	☑	161679	16167.8588	10.0000
15MAY12-perc-010.d	6	☑	151266	15126.6341	10.0000
15MAY12-perc-011.d	7	☑	136920	13691.9938	10.0000
15MAY12-perc-012.d	8	☑	121886	12188.6009	10.0000
15MAY12-perc-016.d	CCV3	☑	165268	16526.7978	10.0000
15MAY12-perc-038.d	CCV3	☑	200658	20065.7991	10.0000
15MAY12-perc-021.d	CCV5	☑	133486	13348.6311	10.0000
15MAY12-perc-037.d	CCV5	☑	103876	10387.5742	10.0000
15MAY12-perc-015.d	CCV6	☑	164451	16445.1109	10.0000
14MAY12-perc-015.d	CCV6	☑	74706	0.7810	10.0000
14MAY12-perc-015.d	CCV6	☑	74706	0.7810	10.0000
15MAY12-perc-014.d	ICV	☑	183664	18366.4324	10.0000
15MAY12-perc-042.d	LCS_0.5	☑	174803	17480.3348	10.0000
15MAY12-perc-043.d	LCS_0.5	☑	169858	16985.8457	10.0000
15MAY12-perc-039.d	LODV	☑	211440	21144.0377	10.0000
15MAY12-perc-051.d	LODV	☑	226082	22608.1803	10.0000
15MAY12-perc-045.d	MS_0.5	☑	153767	15376.6819	10.0000
15MAY12-perc-046.d	MS_0.5	☑	165550	16555.0365	10.0000
15MAY12-perc-017.d	MS_5	☑	143601	14360.1280	10.0000
15MAY12-perc-018.d	MS_5	☑	118261	11826.1460	10.0000

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Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

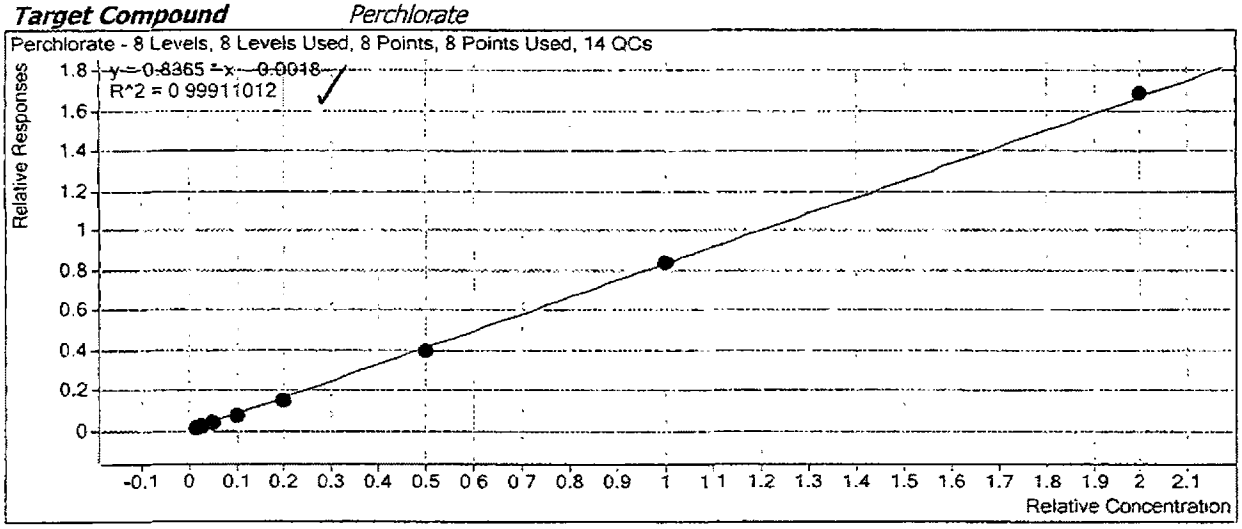
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\15MAY2012\QuantResults\15May2012-Perchlorate.batch.xml		
Analysis Time	5/16/2012 7:40 AM	**Analyst Name**	lores
Report Time	5/16/2012 8:07 AM	**Reporter Name**	lores
Last Calib Update	5/16/2012 7:40 AM	**Batch State**	Processed

Calibration Info Linear fit, Origin ignored, 1/x weighting

m 5/22/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\15MAY2012\QuantResults\15May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/15/2012 19:04
Analyst	lores
Data File	15MAY12-perc-014 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850IC_00001 12LCMS0073, 5.0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5.00
Injection Volume	50

ICV

Quantitation Results

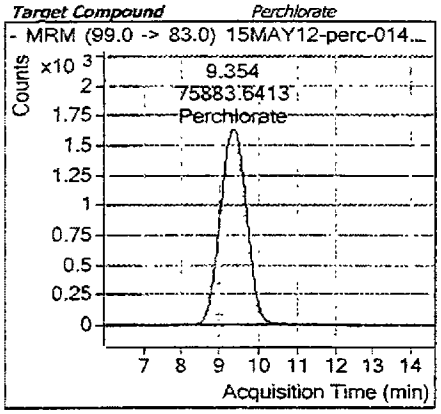
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.354	75884	99	83	4.96114	4.96114	1
Perchlorate-(35Cl18O4)	ISTD	9.347	183664	107	89			1

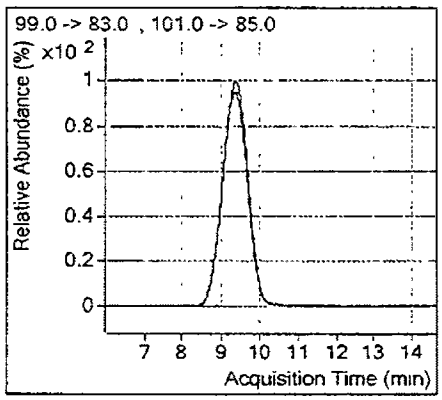
-0.8 % Deviation

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	24860	101	85	3.05	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	58372	109	91	3.15	2.30	3.80	In Control

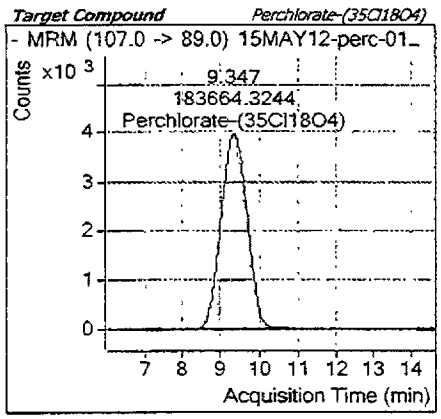
Compound Graphics

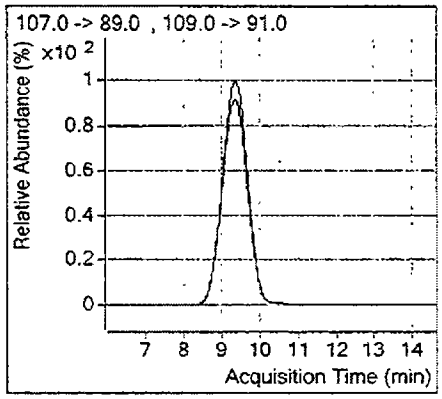
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/22/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\15MAY2012\QuantResults\15May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/15/2012 20:58
Analyst	lores
Data File	15MAY12-perc-021.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2.0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2.00
Injection Volume	50

Quantitation Results

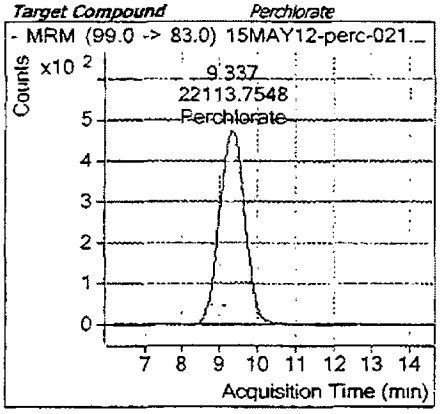
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.337	22114	99	83	2.00239	2.00239	1
Perchlorate-(35Cl18O4)	ISTD	9.336	133486	107	89			1

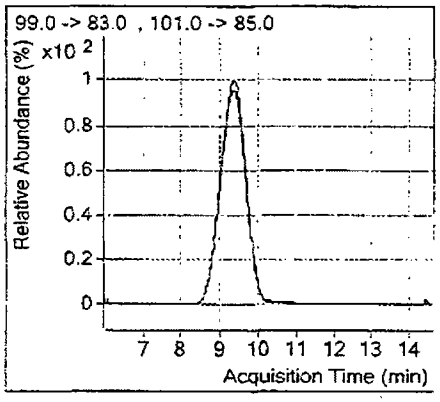
0.1 % Deviation

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	7292	101	85	3.03	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	43155	109	91	3.09	2.30	3.80	In Control

Compound Graphics

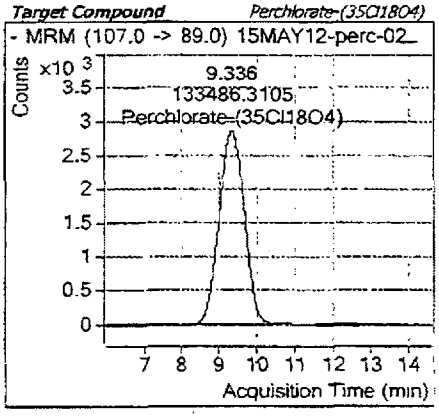
Target Compound *Perchlorate*

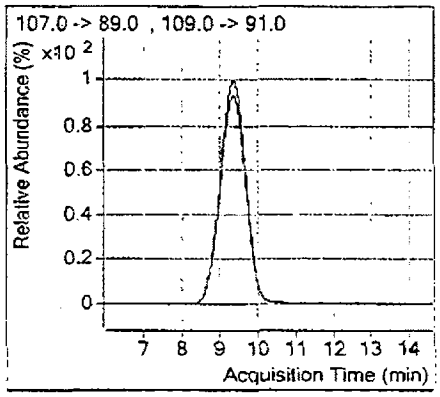




5/22/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\15MAY2012\QuantResults\15May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/16/2012 01:17
Analyst	lores
Data File	15MAY12-perc-037.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2.00
Injection Volume	50

Quantitation Results

Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.383	17210	99	83	2.00252	2.00252	1
Perchlorate-(35Cl18O4)	ISTD	9.375	103876	107	89			1

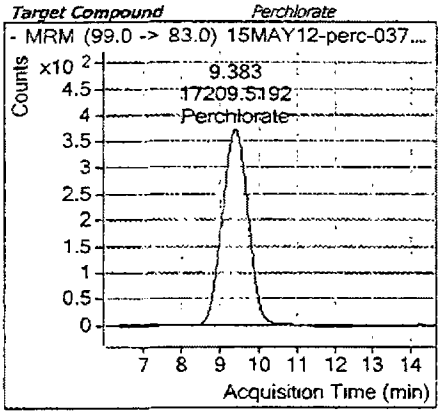
0.1 % Deviation

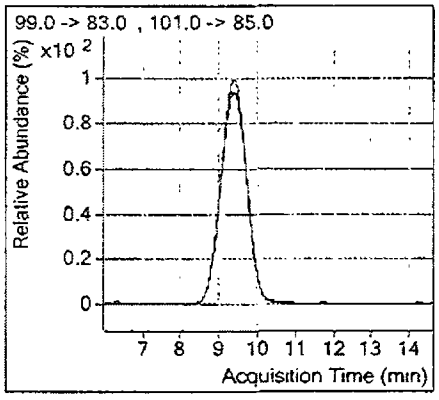
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	5642	101	85	3 05	2.30	3 80	In Control
Perchlorate-(35Cl18O4)	33188	109	91	3.13	2 30	3 80	In Control

Compound Graphics

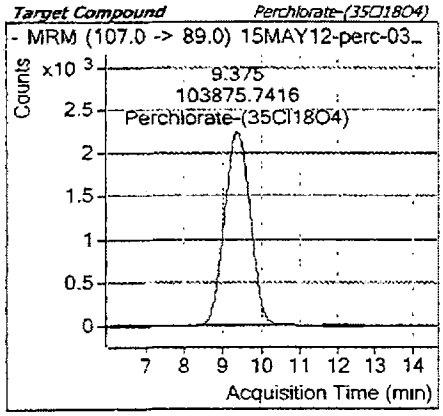
5/22/12

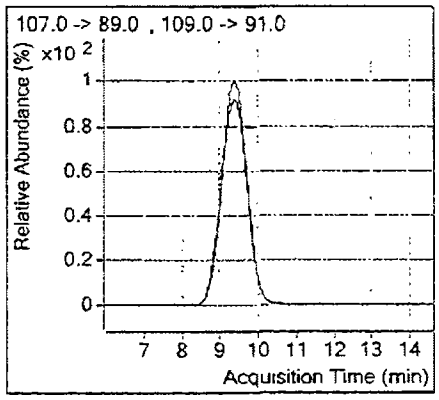
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010442 Work Order #...: MTELA1AA Matrix.....: WATER
MB Lot-Sample #: G2E070000-058
Prep Date.....: 05/07/12
Analysis Date..: 05/14/12 Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010442 Work Order #...: MTELA1AC Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.62	ug/L	92	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010442 Work Order #...: MTELA1AD Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.86	ug/L	97	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010442 **Work Order #...:** MTDHX1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G2E030450-004 MTDHX1AD-MSD
Date Sampled...: 05/01/12 **Date Received..:** 05/03/12
Prep Date.....: 05/07/12 **Analysis Date..:** 05/16/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	99	(80 - 120)			SW846 6850
	97	(80 - 120)	1.8	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010442 Work Order #...: MTDHX1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E030450-004 MTDHX1AD-MSD
Date Sampled...: 05/01/12 Date Received..: 05/03/12
Prep Date.....: 05/07/12 Analysis Date..: 05/16/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.95	ug/L	99		SW846 6850
	ND	5.00	4.86	ug/L	97	1.8	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

QC Sample Results

Client: TestAmerica North Canton
Project/Site: 240-10670

TestAmerica Job ID: G2E010442

Method: 6850 - 6850, Perchlorate by LC/MS/MS

Lab Sample ID: G2E070000058B
Matrix: Water
Analysis Batch: 2128058

Client Sample ID: Method Blank
Prep Type: Dissolved
Prep Batch: 2128058_P

Analyte	MB Result	MB Qualifier	RL	MDL	Unit	D	Prepared	Analyzed	Dil Fac
Perchlorate	ND		1.0	0.082	ug/L		05/07/12 08:50	05/14/12 23:47	1

Lab Sample ID: G2E070000058C
Matrix: Water
Analysis Batch: 2128058

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 2128058_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	4.62		ug/L		92	80 - 120

Lab Sample ID: G2E070000058C
Matrix: Water
Analysis Batch: 2128058

Client Sample ID: Lab Control Sample
Prep Type: Dissolved
Prep Batch: 2128058_P

Analyte	Spike Added	LCS Result	LCS Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	5.00	4.86		ug/L		97	80 - 120

Lab Sample ID: G2E030450004D
Matrix: Water
Analysis Batch: 2128058

Client Sample ID: Matrix Spike Duplicate
Prep Type: Dissolved
Prep Batch: 2128058_P

Analyte	Sample Result	Sample Qualifier	Spike Added	SD1 Result	SD1 Qualifier	Unit	D	%Rec	%Rec. Limits	RPD	RPD Limit
Perchlorate	ND		5.00	4.86		ug/L		97	80 - 120	1.8	15

Lab Sample ID: G2E030450004S
Matrix: Water
Analysis Batch: 2128058

Client Sample ID: Matrix Spike
Prep Type: Dissolved
Prep Batch: 2128058_P

Analyte	Sample Result	Sample Qualifier	Spike Added	MS1 Result	MS1 Qualifier	Unit	D	%Rec	%Rec. Limits
Perchlorate	ND		5.00	4.95		ug/L		99	80 - 120

Method Summary

Client: TestAmerica North Canton
Project/Site: 240-10670

TestAmerica Job ID: G2E010442

Method	Method Description	Protocol	Laboratory
6850	6850, Perchlorate by LC/MS/MS	SW846	TAL WSC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

Sample Summary

Client: TestAmerica North Canton
Project/Site: 240-10670

TestAmerica Job ID: G2E010442

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
G2E010442001	MT-MW05S-042512	Water	04/25/12 10:51	04/28/12 09:00
G2E010442002	MT-MW01S-042512	Water	04/25/12 13:35	04/28/12 09:00
G2E010442003	MT-MW03S-042512	Water	04/25/12 14:50	04/28/12 09:00

VOC CALCULATION	SAMPLE MT-MW05S-042512		
TARGET ANALYTE	trichloroethene		
ANALYTE RESPONSE	16272		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1739898		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.2698		
DILUTION FACTOR (DF)	1		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF / (I.S. RESPONSE) X (CAL. R.F.)	=	0.35	µg/L

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120430-9532.b\UXM5281.D		
Lims ID:	240-10670-A-2	Client ID:	MT-MW05S-042512
Inject. Date:	30-Apr-2012 16:17:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009532-013		
Misc. Info.:	M20430A,8260LLUX16,,1904		
Operator:	1904	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	12
Lims Batch ID:	42171	Lims Sample ID:	13
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120430-9532.b\8260_16.m		
Last Update:	01-May-2012 09:03:45	Calib Date:	29-Apr-2012 19:50:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120429-9509.b\UXM5250.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-15		
First Level Reviewer: williamsla		Date:	01-May-2012 17:10:27

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1739898	10.0	
* 2 Chlorobenzene-d5	117	8.394	8.394	0.0	91	1159226	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	98	556455	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.121	5.121	0.0	57	339573	8.17	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	556567	8.27	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1584274	8.81	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	81	581554	9.06	
134 Chlorodifluoromethane TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50	1.824	1.836	-0.012	95	27765	0.3460	
14 Vinyl chloride	62		1.954					
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.405					
18 Trichlorofluoromethane	101		2.666					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
26 Carbon disulfide	76		3.365					
30 Methylene Chloride	84		3.591					
31 2-Methyl-2-propanol	59		3.674					
34 Methyl tert-butyl ether	73		3.840					
33 trans-1,2-Dichloroethene	96		3.840					
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87	4.279	4.279	0.0	87	6622	0.1372	
40 Tert-butyl ethyl ether	59		4.587					
42 cis-1,2-Dichloroethene	96		4.705					
41 2-Butanone (MEK)	43		4.705					
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.919					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
49 Chloroform	83	4.978	4.978	0.0	66	10562	0.1146	
50 1,1,1-Trichloroethane	97		5.156					
52 1,1-Dichloropropene	75		5.298					
53 Carbon tetrachloride	117		5.310					
56 1,2-Dichloroethane	62		5.476					
55 Benzene	78		5.476					
57 Tert-amyl methyl ether	73		5.559					
60 Trichloroethene	130	6.022	6.022	0.0	74	16272	0.3467	
62 1,2-Dichloropropane	63		6.212					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91		7.136					
73 trans-1,3-Dichloropropene	75		7.314					
76 1,3-Dichloropropane	76		7.635					
77 Tetrachloroethene	164		7.646					
78 2-Hexanone	43		7.694					
79 Chlorodibromomethane	129		7.848					
123 Ethylene Dibromide	107		7.967					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
85 o-Xylene	106		9.010					
86 Styrene	104		9.010					
87 Bromoform	173		9.200					
88 Isopropylbenzene	105		9.354					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.840					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.243					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.575					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.658					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
109 1,2,4-Trichlorobenzene	180		12.639					
110 Hexachlorobutadiene	225		12.805					
111 Naphthalene	128		12.888					
112 1,2,3-Trichlorobenzene	180		13.149					
S 114 Xylenes, Total	106		16.530					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: CCVIS 240-42171/2 Calibration Date: 04/30/2012 11:50

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5270.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2885	0.1000	10.2	10.0	2.0	20.0
Chloromethane	Ave	0.4613	0.4195	0.1000	9.10	10.0	-9.0	20.0
Vinyl chloride	Ave	0.4246	0.4029	0.1000	9.49	10.0	-5.1	20.0
Bromomethane	Ave	0.1684	0.1518	0.0500	9.02	10.0	-9.8	20.0
Chloroethane	Ave	0.2371	0.2197	0.0500	9.27	10.0	-7.3	20.0
Trichlorofluoromethane	Ave	0.3035	0.3119	0.1000	10.3	10.0	2.8	20.0
Acrolein	Ave	0.0489	0.0440		89.9	100	-10.1	20.0
1,1-Dichloroethene	Ave	0.2446	0.2428	0.1000	9.93	10.0	-0.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1669	0.0500	10.8	10.0	8.0	20.0
Acetone	Lin1		0.0864	0.0500	16.6	20.0	-17.0	20.0
Iodomethane	Ave	0.3433	0.3500		10.2	10.0	1.9	20.0
Carbon disulfide	Ave	0.7261	0.7265	0.1000	10.0	10.0	0.0	20.0
Acetonitrile	Ave	0.0346	0.0292		84.2	100	-15.8	20.0
Methyl acetate	Ave	0.2327	0.1967	0.1000	16.9	20.0	-15.5	20.0
Methylene Chloride	Lin1		0.3004	0.1000	9.58	10.0	-4.2	20.0
tert-Butyl alcohol	Ave	0.0189	0.0158		167	200	-16.6	20.0
Acrylonitrile	Ave	0.1114	0.0998		17.9	20.0	-10.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7869	0.1000	9.36	10.0	-6.4	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2775	0.1000	9.66	10.0	-3.4	20.0
Hexane	Ave	0.0529	0.0551		10.4	10.0	4.1	20.0
1,1-Dichloroethane	Ave	0.5691	0.5381	0.1000	9.45	10.0	-5.5	20.0
Vinyl acetate	Ave	0.0505	0.0473		9.37	10.0	-6.3	20.0
2-Butanone	Ave	0.1356	0.1228	0.0500	18.1	20.0	-9.5	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2944	0.1000	9.54	10.0	-4.6	20.0
2,2-Dichloropropane	Ave	0.2932	0.3012		10.3	10.0	2.7	20.0
Bromochloromethane	Ave	0.1283	0.1246		9.71	10.0	-2.9	20.0
Tetrahydrofuran	Ave	0.0828	0.0713		8.61	10.0	-13.9	20.0
Chloroform	Ave	0.5296	0.5127	0.2000	9.68	10.0	-3.2	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3764	0.1000	10.2	10.0	2.3	20.0
Cyclohexane	Ave	0.4605	0.4777	0.1000	10.4	10.0	3.7	20.0
1,1-Dichloropropene	Ave	0.4264	0.4061		9.53	10.0	-4.7	20.0
Carbon tetrachloride	Ave	0.2770	0.2871	0.1000	10.4	10.0	3.7	20.0
1,2-Dichloroethane	Ave	0.4694	0.4390	0.1000	9.35	10.0	-6.5	20.0
Benzene	Ave	1.251	1.173	0.5000	9.38	10.0	-6.2	20.0
Trichloroethene	Ave	0.2698	0.2578	0.2000	9.56	10.0	-4.4	20.0
1,2-Dichloropropane	Ave	0.3083	0.2961	0.1000	9.61	10.0	-3.9	20.0
Methylcyclohexane	Ave	0.3477	0.3809	0.1000	11.0	10.0	9.5	20.0
Dibromomethane	Ave	0.1606	0.1478		9.20	10.0	-8.0	20.0
1,4-Dioxane	Ave	0.0024	0.0019		403	500	-19.5	20.0
Bromodichloromethane	Ave	0.3092	0.3153	0.1000	10.2	10.0	2.0	20.0

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **June 26, 2012**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- SELECT TOTAL AND DISSOLVED METALS**
LOCKHEED-MSA
SDG 240-10670-1

SAMPLES: 3/Waters/
MT-MW01S-042512 MT-MW03S-042512
MT-MW05S-042512

Overview

The sample set for Lockheed MSA, SDG 240-10670-1, consists of three (3) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

All samples were analyzed for total and dissolved metals. The samples were collected by Tetra Tech on April 25th, 2012 and analyzed by TestAmerica. Metals analyses were conducted using method 6020A. Mercury analyses were conducted using method 7470A.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, laboratory control sample recoveries, matrix spike recoveries, laboratory duplicate results, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Mercury (1)	0.18 ug/L	0.9 ug/L
Barium (2)	1.21 ug/L	6.05 ug/L
Copper (2)	0.90 ug/L	4.5 ug/L
Lead (2)	0.35 ug/L	1.75 ug/L
Silver (2)	0.33 ug/L	1.65 ug/L
Zinc (2)	18.0 ug/L	90 ug/L
Molybdenum (3)	0.45 ug/L	2.25 ug/L
Thallium (3)	0.58 ug/L	2.9 ug/L
Tungsten (3)	0.68 ug/L	3.4 ug/L

(1) Maximum concentration found in a preparation blank affecting sample in 41887.
(2) Maximum concentration found in a preparation blank affecting sample in 41956.
(3) Maximum concentration found in a calibration blank affecting samples analyzed on 4/28/12.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The CRDL standard analyzed on 4/29/12 had a percent recovery > 110% for arsenic, copper, nickel, silver, and thallium. All samples were affected. Positive arsenic and nickel results < 2X CRDL were qualified as either biased high (K) or estimated (J) due to conflicting directional bias. No other validation action was warranted as sample results were either > 2X CRDL or qualified for blank contamination.

Notes

Positive results greater than method detection limit (MDL) but less than the reporting limit (RL) were qualified as estimated (J).

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted on the qualification of sample results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993).

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's r < 0.995
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient r < 0.995
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2		
FRACTION: M	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.21	J	P	0.13	U	
ARSENIC		4.7	J	CP	1.9	J	CP	1	J	CP
BARIUM		110			26			20		
BERYLLIUM		0.59	J	P	0.41	J	P	36		
CADMIUM		0.13	U		0.13	U		0.85	J	P
CHROMIUM		0.71	U		5.3			0.71	U	
COBALT		140			2.3			430		
COPPER		0.6	B	A	7.3			32		
LEAD		0.26	B	A	2.6			1.3	B	A
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.57	B	A	1.7	B	A	0.093	U	
NICKEL		67			5.9			870		
SELENIUM		0.57	U		0.57	U		0.74	J	P
SILVER		0.08	U		0.13	B	A	0.08	U	
THALLIUM		0.14	U		0.14	U		0.34	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U	
VANADIUM		0.94	J	P	6	J	P	0.44	U	
ZINC		12	B	A	640			2500		

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512		
SDG: 240-10670-1	LAB_ID	240-10670-3			240-10670-4			240-10670-2		
FRACTION: MF	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.13	U	
ARSENIC		5	K	C	0.86	J	CP	1.2	J	CP
BARIUM		120			20			20		
BERYLLIUM		0.36	J	P	0.2	U		36		
CADMIUM		0.13	U		0.13	U		0.9	J	P
CHROMIUM		0.71	U		0.71	U		0.71	U	
COBALT		120			1.1			430		
COPPER		0.4	B	A	0.29	U		35		
LEAD		0.18	U		0.18	U		1.3	B	A
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.71	B	A	0.99	B	A	0.093	U	
NICKEL		55			1.7	J	CP	870		
SELENIUM		0.57	U		0.57	U		0.57	U	
SILVER		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.14	U		0.32	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U	
VANADIUM		0.65	J	P	0.44	U		0.44	U	
ZINC		8.3	B	A	860			2500		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MT-MW01S-042512 Lab Sample ID: 240-10670-3

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 13:35

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	4.7	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	110	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.59	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	140	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.60	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.26	1.0	0.18	ug/L	J	B	1	6020
7439-98-7	Molybdenum	0.57	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	67	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	0.94	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	12	20	2.3	ug/L	J	B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MT-MW03S-042512 Lab Sample ID: 240-10670-4

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.: .

Matrix: Water Date Sampled: 04/25/2012 14:50

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.21	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	1.9	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	26	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.41	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	5.3	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	2.3	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	7.3	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.6	1.0	0.18	ug/L		B	1	6020
7439-98-7	Molybdenum	1.7	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	5.9	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	0.13	1.0	0.080	ug/L	J	B	1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	6.0	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	640	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MT-MW05S-042512 Lab Sample ID: 240-10670-2

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 10:51

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.0	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	20	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	36	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.85	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	430	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	32	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.3	1.0	0.18	ug/L		B	1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	870	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.74	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.34	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	2500	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MT-MW01S-042512 Lab Sample ID: 240-10670-3

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 13:35

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	5.0	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	120	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.36	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	120	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.40	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.71	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	55	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	0.65	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	8.3	20	2.3	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MT-MW03S-042512 Lab Sample ID: 240-10670-4

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 14:50

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.86	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	20	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	1.1	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	2.0	2.0	0.29	ug/L	U		1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.99	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	1.7	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	860	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MT-MW05S-042512 Lab Sample ID: 240-10670-2

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 10:51

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.2	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	20	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	36	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.90	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	430	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	35	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.3	1.0	0.18	ug/L		B	1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	870	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.32	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	2500	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MT-MW01S-042512 Lab Sample ID: 240-10670-3

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 13:35

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MT-MW03S-042512 Lab Sample ID: 240-10670-4

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 14:50

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MT-MW05S-042512 Lab Sample ID: 240-10670-2

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG ID.:

Matrix: Water Date Sampled: 04/25/2012 10:51

Reporting Basis: WET Date Received: 04/26/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech INC.	Client Project Manager: Tony Aparavasse	Site Contact: Walt Payne	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 301 528-3021		TAT if different from below: ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client: ☐ Lab pickup: ☐ Lab sampling: ☐ Job/SDG No.:
Project Name: MSA-Ground Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112TC04021-02	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs	Total PPM	Diss PPM	1,4 Dioxane	DRO	GRO	Perchlorate	Sample Specific Notes / Special Instructions:
TB-042512	4-25-12	—		X						2					N	G	X							
MT-MW05s-042512		1051		X					2	5			5				X	X	X	X	X	X	X	
MT-MW01s-042512		1335		X					2	5			5				X	X	X	X	X	X	X	
MT-MW03s-042512	↓	1450		X					2	5			5		↓	↓	X	X	X	X	X	X	X	

Loc: 240
10670
US

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

	Company	Date/Time		Company	Date/Time
Relinquished by: Walt Payne	TT INC.	4-25-12 / 1520	Received by: Paul Hayford	TestAmerica	4/25/12 / 1520
Relinquished by: Paul Hayford	TestAmerica	4/25/12 / 1725	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAWC	Date/Time: 4/26/12 9:15

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TAL-0018 (1008)

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10670-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/26/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.4 and 0.5 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042512 (240-10670-1), MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 04/30/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42171/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10350-5 in batch 240-42171. tert-Butyl alcohol exceeded the rpd limit.

Refer to the QC report for details.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/01/2012 and analyzed on 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr), 2-Fluorophenol (Surr) and Phenol-d5 (Surr) failed the surrogate recovery criteria low for MT-MW05S-042512 (240-10670-2). Refer to the QC report for details.

Acid surrogates were out of control limits in sample MT-MW05S-042512 (240-10670-2). Since only Base Neutral compounds were requested no corrective action was necessary.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/28/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42055/7 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 04/27/2012 and analyzed on 04/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Total Petroleum Hydrocarbons (C10-C32) was detected in method blank MB 240-41890/15-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

Several analytes were detected in method blank MB 240-41956/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MT-MW05S-042512 (240-10670-2), MT-MW01S-042512 (240-10670-3) and MT-MW03S-042512 (240-10670-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 04/27/2012 and analyzed on 04/28/2012.

Mercury was detected in method blank MB 240-41887/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

240-10670-h-2-b, 4/28/2012 17:44:35 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		73.789%	36.460	30.850
%RSD		4.570	2.497	1.207
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		T 60270.000	12510.000	M 1341.000
%RSD		T 1.318	0.876	M 0.534
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		T 0.000	T 6654.000	9271.000
%RSD		T 0.000	T 0.526	0.231
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		T 72.082%	74.364%	0.358
%RSD		T 0.996	1.101	40.800
Run	Time	51V	52Cr	53Cr
		ppb	ppb	ppb
x		-0.043	-0.189	0.575
%RSD		332.400	5.402	58.540
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		TM 5930.000	394.100	M 429.900
%RSD		TM 0.833	0.746	M 0.703
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		M 871.400	32.210	M 2470.000
%RSD		M 0.782	1.084	M 0.860
Run	Time	72Ge	75As	77Ar/Cl
		ppb	ppb	ppb
x		73.139%	1.038	0.346
%RSD		0.675	6.202	11.450
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		0.739	68.850	-0.096
%RSD		31.840	1.203	23.110
Run	Time	105Pd	107Ag	108Mo/O
		ppb	ppb	ppb
x		0.000	0.002	-3.729
%RSD		0.000	53.560	137.700
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.849	73.875%	0.070
%RSD		8.657	0.540	18.800
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		-0.002	20.390	0.000
%RSD		847.200	1.664	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		78.565%	-0.226	0.339
%RSD		0.912	0.871	0.991
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		1.317	0.000	
%RSD		0.426	0.000	

2470ug/L reported as 2500ug/L

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10640

Client Tetra Tech Site Name _____ By: _____ (Signature)

Cooler Received on 4/26/12 Opened on 4/26/12

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other _____

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 4G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
(IR GUN# ~~5G~~	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C

~~Multiple~~ on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
MW05S	<2<2	4/26/12	[illegible]
MW01S	<2<2		
MW03S	<2<2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client Cooler	1.4	0.4	SG	ICE
	1.5	0.5		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10670-1

Login Number: 10670

List Source: TestAmerica Canton

List Number: 1

Creator: Sutek, Nick

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-10670-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HG	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HG	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
M	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
M	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
M	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HGF	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HGF	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
HGF	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
MF	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
MF	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
MF	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/28/2012	2	1	3
PCL	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	5/7/2012	5/15/2012	12	8	20
PCL	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	5/7/2012	5/15/2012	12	8	20
PCL	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	5/7/2012	5/15/2012	12	8	20

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	5/1/2012	5/4/2012	6	3	9
OS	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	5/1/2012	5/4/2012	6	3	9
OS	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	5/1/2012	5/4/2012	6	3	9
OV	UG/L	TB-042512	240-10670-1	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/30/2012	4/30/2012	5	0	5
OV	UG/L	TB-042512	240-10670-1	TB	4/25/2012	4/30/2012	4/30/2012	5	0	5
DRO	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/27/2012	4/30/2012	2	3	5
DRO	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/27/2012	4/30/2012	2	3	5
DRO	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/27/2012	4/30/2012	2	3	5
GRO	UG/L	MT-MW05S-042512	240-10670-2	NM	4/25/2012	4/28/2012	4/28/2012	3	0	3
GRO	UG/L	MT-MW03S-042512	240-10670-4	NM	4/25/2012	4/28/2012	4/28/2012	3	0	3
GRO	UG/L	MT-MW01S-042512	240-10670-3	NM	4/25/2012	4/28/2012	4/28/2012	3	0	3

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10670-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10670-1

SDG No.:

Instrument ID: I8 Date: 07/05/2011 09:44

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Antimony		1000	6020
Arsenic		10000	6020
Barium		10000	6020
Beryllium		10000	6020
Cadmium		10000	6020
Chromium		10000	6020
Cobalt		10000	6020
Copper		10000	6020
Lead		10000	6020
Molybdenum		2000	6020
Nickel		10000	6020
Selenium		10000	6020
Silver		1000	6020
Thallium		10000	6020
Vanadium		10000	6020
Tungsten		2000	6020
Zinc		10000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10670-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41887/1-A	04/27/2012 12:40	41887		100	100
LCS 240-41887/2-A	04/27/2012 12:40	41887		100	100
240-10552-L-17-B MS	04/27/2012 12:40	41887		100	100
240-10552-L-17-C MSD	04/27/2012 12:40	41887		100	100
240-10670-2	04/27/2012 12:40	41887		100	100
240-10670-2	04/27/2012 12:40	41887		100	100
240-10670-3	04/27/2012 12:40	41887		100	100
240-10670-3	04/27/2012 12:40	41887		100	100
240-10670-4	04/27/2012 12:40	41887		100	100
240-10670-4	04/27/2012 12:40	41887		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41887/1-A

Instrument Code: H4 Batch No.: 42155

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.179	J		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-10552-L-17-B MS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.938		0.20	U	1.00	94	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-10552-L-17-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.924	1.00	92	69-134	2	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-41887/2-A

Lab Name: TestAmerica Canton Job No.: 240-10670-1

Sample Matrix: Water LCS Source: MTHGICVW_00284

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.54		91	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-41956/1-A	04/27/2012 13:42	41956		50	50
LCS 240-41956/3-A	04/27/2012 13:42	41956		50	50
240-10623-K-4-E MS	04/27/2012 13:42	41956		50	50
240-10623-K-4-F MSD	04/27/2012 13:42	41956		50	50
240-10670-2	04/27/2012 13:42	41956		50	50
240-10670-2	04/27/2012 13:42	41956		50	50
240-10670-3	04/27/2012 13:42	41956		50	50
240-10670-3	04/27/2012 13:42	41956		50	50
240-10670-4	04/27/2012 13:42	41956		50	50
240-10670-4	04/27/2012 13:42	41956		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-41956/1-A

Instrument Code: I8 Batch No.: 42093

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	1.21	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.904	J		6020
7439-92-1	Lead	0.350	J		6020
7439-98-7	Molybdenum	10	U		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	0.336	J		6020
7440-28-0	Thallium	0.161	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	18.0	J		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10623-K-4-E MS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	104		0.18	J	100	104	44-153		6020
Arsenic	1130		1.9	J	1000	112	82-123		6020
Barium	1170		70		1000	110	45-144		6020
Beryllium	1040		1.0	U	1000	104	77-124		6020
Cadmium	1060		0.14	J	1000	106	78-117		6020
Chromium	1080		0.94	J	1000	108	72-110		6020
Cobalt	1080		0.49	J	1000	108	67-114		6020
Copper	1060		1.1	J	1000	106	60-123		6020
Lead	1130		0.23	J	1000	113	73-115		6020
Molybdenum	110		0.68	J	100	110	80-110		6020
Nickel	1070		0.92	J	1000	107	72-111		6020
Selenium	1130		5.0	U	1000	113	72-148		6020
Silver	104		1.0	U	100	104	10-139		6020
Thallium	290		0.86	J	250	115	69-117		6020
Vanadium	1080		2.9	J	1000	108	70-112		6020
Tungsten	105		0.66	J	100	104	43-133		6020
Zinc	1060		20	U	1000	106	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10623-K-4-F MSD

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	102	100	102	44-153	2	20		6020
Arsenic	1120	1000	112	82-123	1	20		6020
Barium	1150	1000	108	45-144	2	20		6020
Beryllium	1030	1000	103	77-124	1	20		6020
Cadmium	1050	1000	104	78-117	2	20		6020
Chromium	1070	1000	107	72-110	2	20		6020
Cobalt	1060	1000	106	67-114	1	20		6020
Copper	1040	1000	104	60-123	1	20		6020
Lead	1120	1000	112	73-115	1	20		6020
Molybdenum	110	100	110	80-110	0	20		6020
Nickel	1060	1000	105	72-111	2	20		6020
Selenium	1120	1000	112	72-148	1	20		6020
Silver	103	100	103	10-139	1	20		6020
Thallium	287	250	115	69-117	1	20		6020
Vanadium	1070	1000	107	70-112	1	20		6020
Tungsten	104	100	103	43-133	1	20		6020
Zinc	1040	1000	104	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-41956/3-A

Lab Name: TestAmerica Canton Job No.: 240-10670-1

Sample Matrix: Water LCS Source: MTICPMSB_00006

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	102		102	80	120		6020
Arsenic	1000	1050		105	80	120		6020
Barium	1000	1060		106	80	120		6020
Beryllium	1000	1140		114	80	120		6020
Cadmium	1000	1060		106	80	120		6020
Chromium	1000	1060		106	80	120		6020
Cobalt	1000	1060		106	80	120		6020
Copper	1000	1110		111	80	120		6020
Lead	1000	1170		117	80	120		6020
Molybdenum	100	102		102	80	120		6020
Nickel	1000	1080		108	80	120		6020
Selenium	1000	1090		109	80	120		6020
Silver	100	109		109	80	120		6020
Thallium	250	290		116	80	120		6020
Vanadium	1000	1030		103	80	120		6020
Tungsten	100	99.5		100	80	120		6020
Zinc	1000	1110		111	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-10623-K-4-B SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10670-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.18	J	10	U	NC		6020
Arsenic	1.9	J	2.77	J	NC		6020
Barium	— 70		70.4		NC	0.570K	6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	0.14	J	5.0	U	NC		6020
Chromium	0.94	J	10	U	NC		6020
Cobalt	0.49	J	0.485	J	NC		6020
Copper	1.1	J	10	U	NC		6020
Lead	0.23	J	5.0	U	NC		6020
Molybdenum	0.68	J	0.555	J	NC		6020
Nickel	0.92	J	10	U	NC		6020
Selenium	5.0	U	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.86	J	1.92	J	NC		6020
Vanadium	2.9	J	3.48	J	NC		6020
Tungsten	0.66	J	50	U	NC		6020
Zinc	20	U	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-41879/1-A			10:06	X																				
IC 240-41879/2-A			10:08	X																				
IC 240-41879/3-A			10:10	X																				
IC 240-41879/4-A			10:13	X																				
IC 240-41879/5-A			10:15	X																				
IC 240-41879/6-A			10:17	X																				
ICV 240-41879/7-A	1		10:19	X																				
ICB 240-41879/8-A	1		10:22	X																				
CRA 240-41879/9-A	1		10:24	X																				
CCVL 240-41879/10-A	1		10:26	X																				
CCB 240-41879/11-A			10:28																					
ZZZZZZ			10:30																					
ZZZZZZ			10:32																					
ZZZZZZ			10:34																					
ZZZZZZ			10:36																					
ZZZZZZ			10:38																					
ZZZZZZ			10:40																					
ZZZZZZ			10:42																					
ZZZZZZ			10:44																					
ZZZZZZ			10:46																					
ZZZZZZ			10:49																					
CCV 240-41879/12-A			10:52																					
CCB 240-41879/11-A			10:55																					
ZZZZZZ			10:57																					
ZZZZZZ			10:59																					
ZZZZZZ			11:01																					
ZZZZZZ			11:03																					
ZZZZZZ			11:05																					
ZZZZZZ			11:07																					
ZZZZZZ			11:08																					
ZZZZZZ			11:11																					
ZZZZZZ			11:13																					
ZZZZZZ			11:15																					
CCV 240-41879/12-A			11:17																					
CCB 240-41879/11-A			11:19																					
ZZZZZZ			11:22																					
ZZZZZZ			11:24																					
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
CCV 240-41879/12-A			11:31																					
CCB 240-41879/11-A			11:33																					
ZZZZZZ			11:35																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes																			
				Hg																			
ZZZZZZ			11:37																				
ZZZZZZ			11:38																				
ZZZZZZ			11:40																				
ZZZZZZ			11:44																				
ZZZZZZ			11:45																				
ZZZZZZ			11:48																				
ZZZZZZ			11:49																				
ZZZZZZ			11:51																				
ZZZZZZ			11:53																				
CCV 240-41879/12-A			11:55																				
CCB 240-41879/11-A			11:59																				
ZZZZZZ			12:01																				
ZZZZZZ			12:03																				
ZZZZZZ			12:05																				
ZZZZZZ			12:06																				
ZZZZZZ			12:08																				
ZZZZZZ			12:11																				
ZZZZZZ			12:13																				
ZZZZZZ			12:15																				
ZZZZZZ			12:16																				
ZZZZZZ			12:18																				
CCV 240-41879/12-A			12:20																				
CCB 240-41879/11-A			12:22																				
ZZZZZZ			12:24																				
ZZZZZZ			12:26																				
ZZZZZZ			12:28																				
ZZZZZZ			12:30																				
ZZZZZZ			12:32																				
ZZZZZZ			12:34																				
ZZZZZZ			12:36																				
ZZZZZZ			12:37																				
ZZZZZZ			12:39																				
ZZZZZZ			12:41																				
CCV 240-41879/12-A	1		12:43	X																			
CCB 240-41879/11-A	1		12:45	X																			
ZZZZZZ			12:47																				
ZZZZZZ			12:50																				
ZZZZZZ			12:52																				
ZZZZZZ			12:54																				
MB 240-41887/1-A	1	T	12:56	X																			
LCS 240-41887/2-A	1	T	12:58	X																			
ZZZZZZ			13:00																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			13:03																					
ZZZZZZ			13:05																					
ZZZZZZ			13:07																					
CCV 240-41879/12-A	1		13:09	X																				
CCB 240-41879/11-A	1		13:11	X																				
240-10552-L-17-B MS	1	T	13:13	X																				
240-10552-L-17-C MSD	1	T	13:15	X																				
ZZZZZZ			13:17																					
ZZZZZZ			13:19																					
ZZZZZZ			13:21																					
ZZZZZZ			13:23																					
ZZZZZZ			13:25																					
ZZZZZZ			13:27																					
ZZZZZZ			13:29																					
ZZZZZZ			13:31																					
CCV 240-41879/12-A	1		13:33	X																				
CCB 240-41879/11-A	1		13:35	X																				
ZZZZZZ			13:37																					
ZZZZZZ			13:39																					
ZZZZZZ			13:41																					
ZZZZZZ			13:42																					
240-10670-2	1	T	13:44	X																				
240-10670-2	1	D	13:47	X																				
240-10670-3	1	T	13:49	X																				
240-10670-3	1	D	13:51	X																				
240-10670-4	1	T	13:53	X																				
240-10670-4	1	D	13:55	X																				
CCV 240-41879/12-A	1		13:57	X																				
CCB 240-41879/11-A	1		13:59	X																				
ZZZZZZ			14:00																					
ZZZZZZ			14:03																					
ZZZZZZ			14:05																					
ZZZZZZ			14:07																					
ZZZZZZ			14:09																					
ZZZZZZ			14:11																					
ZZZZZZ			14:13																					
ZZZZZZ			14:15																					
ZZZZZZ			14:17																					
ZZZZZZ			14:19																					
CCV 240-41879/12-A			14:22																					
CCB 240-41879/11-A			14:24																					
ZZZZZZ			14:26																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 04/28/2012 10:06 End Date: 04/28/2012 15:00

Lab Sample ID	D / F	Type	Time	Analytes																			
				Hg																			
ZZZZZZ			14:28																				
ZZZZZZ			14:29																				
ZZZZZZ			14:32																				
ZZZZZZ			14:34																				
ZZZZZZ			14:36																				
ZZZZZZ			14:38																				
ZZZZZZ			14:40																				
ZZZZZZ			14:42																				
ZZZZZZ			14:44																				
CCV 240-41879/12-A			14:46																				
CCB 240-41879/11-A			14:48																				
ZZZZZZ			14:50																				
ZZZZZZ			14:52																				
ZZZZZZ			14:54																				
ZZZZZZ			14:56																				
CCV 240-41879/12-A			14:58																				
CCB 240-41879/11-A			15:00																				

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	ICV 240-41879/7-A 04/28/2012 10:19				CCVL 240-41879/10-A 04/28/2012 10:26				CCV 240-41879/12-A 04/28/2012 12:43			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.40		2.50	96	5.07		5.00	101	5.12		5.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

ICV Source: MTHGICVW_00284 Concentration Units: ug/L

CCV Source: MTHGCALW_00185

Analyte	CCV 240-41879/12-A 04/28/2012 13:09				CCV 240-41879/12-A 04/28/2012 13:33				CCV 240-41879/12-A 04/28/2012 13:57			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.15		5.00	103	5.15		5.00	103	5.14		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-41879/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00185

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.215		107	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-41879/8-A 04/28/2012 10:22		CCB 240-41879/11-A 04/28/2012 12:45		CCB 240-41879/11-A 04/28/2012 13:11		CCB 240-41879/11-A 04/28/2012 13:35	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-41879/11-A 04/28/2012 13:59							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-42093/1			08:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-42093/2 IC	1		08:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-42093/3 IC	1		08:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-42093/4 IC	1		08:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-42093/5	1		08:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-42093/6	1		08:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-42093/7	1		08:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-42093/8			08:48																				
ICSA 240-42093/9	1		08:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-42093/10	1		08:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42093/11			09:06																				
CCB 240-42093/12			09:13																				
ZZZZZZ			09:19																				
ZZZZZZ			09:24																				
ZZZZZZ			09:31																				
ZZZZZZ			09:37																				
ZZZZZZ			09:42																				
ZZZZZZ			09:49																				
ZZZZZZ			09:56																				
ZZZZZZ			10:02																				
ZZZZZZ			10:09																				
ZZZZZZ			10:16																				
CCV 240-42093/23			10:21																				
CCB 240-42093/24			10:28																				
ZZZZZZ			10:34																				
ZZZZZZ			10:39																				
ZZZZZZ			10:44																				
ZZZZZZ			10:50																				
ZZZZZZ			10:55																				
ZZZZZZ			11:00																				
ZZZZZZ			11:06																				
ZZZZZZ			11:11																				
CRI 240-42093/33			11:17																				
CCV 240-42093/34			11:22																				
CCB 240-42093/35			11:29																				
ZZZZZZ			11:35																				
ZZZZZZ			11:40																				
ZZZZZZ			11:46																				
ZZZZZZ			11:51																				
ZZZZZZ			11:56																				
ZZZZZZ			12:02																				
ZZZZZZ			12:07																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			12:13																				
ZZZZZZ			12:18																				
ZZZZZZ			12:23																				
CCV 240-42093/46			12:29																				
CCB 240-42093/47			12:36																				
ZZZZZZ			12:41																				
ZZZZZZ			12:47																				
ZZZZZZ			12:52																				
ZZZZZZ			12:58																				
ZZZZZZ			13:03																				
ZZZZZZ			13:10																				
ZZZZZZ			13:16																				
ZZZZZZ			13:21																				
ZZZZZZ			13:28																				
ZZZZZZ			13:35																				
CCV 240-42093/58			13:41																				
CCB 240-42093/59			13:48																				
ZZZZZZ			13:53																				
ZZZZZZ			14:00																				
ZZZZZZ			14:07																				
ZZZZZZ			14:13																				
ZZZZZZ			14:18																				
ZZZZZZ			14:24																				
ZZZZZZ			14:29																				
ZZZZZZ			14:35																				
ZZZZZZ			14:40																				
ZZZZZZ			14:46																				
CCV 240-42093/70			14:51																				
CCB 240-42093/71			14:58																				
ZZZZZZ			15:04																				
ZZZZZZ			15:09																				
ZZZZZZ			15:14																				
ZZZZZZ			15:20																				
ZZZZZZ			15:25																				
ZZZZZZ			15:31																				
ZZZZZZ			15:36																				
ZZZZZZ			15:41																				
ZZZZZZ			15:47																				
ZZZZZZ			15:52																				
CCV 240-42093/82	1		15:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-42093/83	1		16:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MB 240-41956/1-A	1	R	16:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
LCS 240-41956/3-A	1	R	16:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			16:23																				
240-10623-K-4-B SD ^5	5	R	16:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10623-K-4-E MS	1	R	16:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10623-K-4-F MSD	1	R	16:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			16:48																				
ZZZZZZ			16:54																				
ZZZZZZ			16:59																				
ZZZZZZ			17:04																				
CCV 240-42093/94	1		17:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/95	1		17:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			17:22																				
ZZZZZZ			17:28																				
ZZZZZZ			17:33																				
ZZZZZZ			17:39																				
240-10670-2	1	R	17:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10670-2	1	D	17:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10670-3	1	R	17:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10670-3	1	D	18:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10670-4	1	R	18:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10670-4	1	D	18:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42093/106	1		18:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42093/107	1		18:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			18:29																				
ZZZZZZ			18:35																				
ZZZZZZ			18:42																				
ZZZZZZ			18:47																				
ZZZZZZ			18:53																				
ZZZZZZ			18:58																				
ZZZZZZ			19:05																				
ZZZZZZ			19:12																				
ZZZZZZ			19:18																				
ZZZZZZ			19:23																				
CCV 240-42093/118			19:29																				
CCB 240-42093/119			19:36																				
ICSA 240-42093/120			19:41																				
ICSAB 240-42093/121			19:47																				
CCV 240-42093/122			19:54																				
CCB 240-42093/123			20:01																				
ZZZZZZ			20:07																				
ZZZZZZ			20:12																				
ZZZZZZ			20:18																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			20:23																				
ZZZZZZ			20:28																				
ZZZZZZ			20:34																				
ZZZZZZ			20:39																				
ZZZZZZ			20:45																				
ZZZZZZ			20:50																				
ZZZZZZ			20:56																				
CCV 240-42093/134			21:01																				
CCB 240-42093/135			21:08																				
ZZZZZZ			21:14																				
ZZZZZZ			21:19																				
ZZZZZZ			21:25																				
ZZZZZZ			21:30																				
ZZZZZZ			21:36																				
ZZZZZZ			21:41																				
ZZZZZZ			21:48																				
ZZZZZZ			21:54																				
ZZZZZZ			21:59																				
ZZZZZZ			22:06																				
CCV 240-42093/146			22:14																				
CCB 240-42093/147			22:21																				
ZZZZZZ			22:26																				
ZZZZZZ			22:32																				
ZZZZZZ			22:37																				
ZZZZZZ			22:43																				
ZZZZZZ			22:48																				
ZZZZZZ			22:53																				
ZZZZZZ			22:59																				
ZZZZZZ			23:04																				
ZZZZZZ			23:10																				
ZZZZZZ			23:15																				
CCV 240-42093/158			23:21																				
CCB 240-42093/159			23:28																				
ZZZZZZ			23:34																				
ZZZZZZ			23:39																				
ZZZZZZ			23:44																				
ZZZZZZ			23:50																				
ZZZZZZ			23:55																				
ZZZZZZ			00:01																				
ZZZZZZ			00:06																				
ZZZZZZ			00:12																				
ZZZZZZ			00:17																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 04/28/2012 08:05 End Date: 04/29/2012 03:22

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			00:23																					
CCV 240-42093/170			00:28																					
CCB 240-42093/171			00:35																					
ZZZZZZ			00:40																					
ZZZZZZ			00:48																					
ZZZZZZ			00:53																					
ZZZZZZ			01:00																					
ZZZZZZ			01:07																					
ZZZZZZ			01:13																					
ZZZZZZ			01:18																					
ZZZZZZ			01:24																					
ZZZZZZ			01:29																					
ZZZZZZ			01:35																					
CCV 240-42093/182			01:40																					
CCB 240-42093/183			01:47																					
ZZZZZZ			01:53																					
ZZZZZZ			01:58																					
ZZZZZZ			02:03																					
ZZZZZZ			02:09																					
ZZZZZZ			02:14																					
ZZZZZZ			02:20																					
ZZZZZZ			02:25																					
ZZZZZZ			02:31																					
ZZZZZZ			02:36																					
ZZZZZZ			02:42																					
CCV 240-42093/194			02:47																					
CCB 240-42093/195			02:54																					
ZZZZZZ			02:59																					
ZZZZZZ			03:04																					
ZZZZZZ			03:10																					
CCV 240-42093/199			03:15																					
CCB 240-42093/200			03:22																					

Prep Types
D = Dissolved
R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-42093/5 04/28/2012 08:30				CCV 240-42093/82 04/28/2012 15:58				CCV 240-42093/94 04/28/2012 17:10			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.3		80.0	103	98.9		100	99	99.6		100	100
Arsenic	81.8		80.0	102	103		100	103	104		100	104
Barium	81.1		80.0	101	100		100	100	101		100	101
Beryllium	79.4		80.0	99	105		100	105	102		100	102
Cadmium	82.4		80.0	103	102		100	102	103		100	103
Chromium	80.8		80.0	101	102		100	102	103		100	103
Cobalt	81.5		80.0	102	102		100	102	103		100	103
Copper	83.5		80.0	104	106		100	106	106		100	106
Lead	83.1		80.0	104	104		100	104	105		100	105
Molybdenum	82.6		80.0	103	104		100	104	105		100	105
Nickel	82.9		80.0	104	103		100	103	104		100	104
Selenium	82.2		80.0	103	105		100	105	105		100	105
Silver	83.9		80.0	105	104		100	104	104		100	104
Thallium	81.6		80.0	102	104		100	104	106		100	106
Tungsten	81.3		80.0	102	103		100	103	104		100	104
Vanadium	80.6		80.0	101	101		100	101	102		100	102
Zinc	83.5		80.0	104	105		100	105	105		100	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-42093/106 04/28/2012 18:17											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	99.6		100	100								
Arsenic	104		100	104								
Barium	101		100	101								
Beryllium	103		100	103								
Cadmium	102		100	102								
Chromium	103		100	103								
Cobalt	103		100	103								
Copper	105		100	105								
Lead	105		100	105								
Molybdenum	104		100	104								
Nickel	103		100	103								
Selenium	106		100	106								
Silver	103		100	103								
Thallium	105		100	105								
Tungsten	104		100	104								
Vanadium	103		100	103								
Zinc	105		100	105								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-42093/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.07		104	50-150
Arsenic	2.00	2.23	J	112	50-150
Barium	1.00	1.03	J	103	50-150
Beryllium	1.00	1.04		104	50-150
Cadmium	0.500	0.551	J	110	50-150
Chromium	2.00	1.85	J	93	50-150
Cobalt	1.00	1.04		104	50-150
Copper	2.00	2.47		124	50-150
Lead	1.00	1.10		110	50-150
Molybdenum	10.0	10.1		101	50-150
Nickel	2.00	2.85		143	50-150
Selenium	2.00	1.93	J	97	50-150
Silver	0.500	0.599	J	120	50-150
Thallium	1.00	1.25	J	125	50-150
Vanadium	5.00	5.04	J	101	50-150
Tungsten	10.0	9.61	J	96	50-150
Zinc	10.0	9.76	J	98	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42093/6 04/28/2012 08:37		CCB 240-42093/83 04/28/2012 16:05		CCB 240-42093/95 04/28/2012 17:17		CCB 240-42093/107 04/28/2012 18:24	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.453	J	0.289	J	0.295	J	0.321	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.475	J	0.454	J	0.585	J	0.441	J
Tungsten	10	0.681	J	0.391	J	0.425	J	10	U
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICSA 240-42093/9 Instrument ID: I8

Lab File ID: I8042812A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.170**	
Arsenic		**0.431**	
Barium		**0.184**	
Beryllium		**0.0370**	
Cadmium		**-0.527**	
Chromium		**0.373**	
Cobalt		**0.0960**	
Copper		**0.485**	
Lead		**0.0670**	
Molybdenum	**1000**	**1042**	**104**
Nickel		**0.710**	
Selenium		**-0.199**	
Silver		**0.0400**	
Thallium		**0.0950**	
Tungsten		**0.145**	
Vanadium		**0.0690**	
Zinc		**4.99**	
Aluminum	*50000*	*51080*	*102*
Boron		*0.169*	
Calcium	*50000*	*51270*	*103*
Iron	*50000*	*52480*	*105*
Magnesium	*50000*	*51630*	*103*
Manganese		*0.552*	
Potassium	*50000*	*51090*	*102*
Sodium	*50000*	*51920*	*104*
Strontium		*0.338*	
Tin		*0.0850*	
Titanium	*1000*	*1073*	*107*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

Lab Sample ID: ICSAB 240-42093/10 Instrument ID: I8

Lab File ID: I8042812A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**102**	**102**
Barium	**100**	**104**	**104**
Beryllium	**100**	**93.8**	**94**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**110**	**110**
Cobalt	**100**	**103**	**103**
Copper	**100**	**103**	**103**
Lead	**100**	**110**	**110**
Molybdenum	**1100**	**1163**	**106**
Nickel	**100**	**107**	**107**
Selenium	**100**	**105**	**105**
Silver	**100**	**104**	**104**
Thallium	**100**	**108**	**108**
Tungsten	**100**	**103**	**103**
Vanadium	**100**	**103**	**103**
Zinc	**100**	**106**	**106**
Aluminum	*50000*	*50810*	*102*
Boron	*100*	*90.9*	*91*
Calcium	*50000*	*51580*	*103*
Iron	*50000*	*52740*	*105*
Magnesium	*50000*	*51780*	*104*
Manganese	*100*	*105*	*105*
Potassium	*50000*	*50640*	*101*
Sodium	*50000*	*51680*	*103*
Strontium	*100*	*97.6*	*98*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1153*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/28/2012 End Date: 04/28/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-42093/2 IC	08:11	78		88		93		91		93	
STD3 240-42093/3 IC	08:18	72		82		86		83		87	
STD4 240-42093/4 IC	08:25	92		99		99		99		98	
ICV 240-42093/5	08:30	79		89		92		90		92	
ICB 240-42093/6	08:37	93		98		99		98		98	
CRI 240-42093/7	08:43	90		97		98		97		97	
ICSA 240-42093/9	08:53	66		78		79		80		84	
ICSAB 240-42093/10	08:59	57		69		74		76		81	
CCV 240-42093/82	15:58	70		69		74		70		73	
CCB 240-42093/83	16:05	92		80		81		80		80	
MB 240-41956/1-A	16:10	90		81		82		80		81	
LCS 240-41956/3-A	16:16	84		77		80		78		79	
240-10623-K-4-B SD	16:28	81		73		77		73		75	
240-10623-K-4-E MS	16:34	61		67		69		65		70	
240-10623-K-4-F MSD	16:41	62		67		69		65		70	
CCV 240-42093/94	17:10	69		70		73		70		72	
CCB 240-42093/95	17:17	89		79		81		79		79	
240-10670-2	17:44	74		72		74		73		74	
240-10670-2	17:49	72		70		73		72		73	
240-10670-3	17:55	71		71		74		73		74	
240-10670-3	18:00	69		69		73		72		74	
240-10670-4	18:06	74		71		75		75		76	
240-10670-4	18:11	73		70		74		73		75	
CCV 240-42093/106	18:17	65		66		70		68		70	
CCB 240-42093/107	18:24	88		76		78		77		78	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10670-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 04/28/2012 End Date: 04/28/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-42093/2 IC	08:11			96							
STD3 240-42093/3 IC	08:18			91							
STD4 240-42093/4 IC	08:25			99							
ICV 240-42093/5	08:30			95							
ICB 240-42093/6	08:37			98							
CRI 240-42093/7	08:43			97							
ICSA 240-42093/9	08:53			86							
ICSAB 240-42093/10	08:59			85							
CCV 240-42093/82	15:58			76							
CCB 240-42093/83	16:05			81							
MB 240-41956/1-A	16:10			81							
LCS 240-41956/3-A	16:16			81							
240-10623-K-4-B SD	16:28			78							
240-10623-K-4-E MS	16:34			75							
240-10623-K-4-F MSD	16:41			75							
CCV 240-42093/94	17:10			76							
CCB 240-42093/95	17:17			80							
240-10670-2	17:44			79							
240-10670-2	17:49			78							
240-10670-3	17:55			78							
240-10670-3	18:00			78							
240-10670-4	18:06			79							
240-10670-4	18:11			78							
CCV 240-42093/106	18:17			74							
CCB 240-42093/107	18:24			78							

Tetra Tech, Inc. **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 27, 2012**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC/1,4-DIOXANE/DRO/GRO**
LOCKHEED MARTIN CORPORATION (LMC) – MARTIN STATE AIRPORT (MSA)
SDG 240-10727-1

SAMPLES: 4/Aqueous/VOC

GSP-MW1-042612 GSP-MW2-042612 GSP-MW3-042612
TB-042612

3/Aqueous/SVOC/DRO/GRO

GSP-MW1-042612 GSP-MW2-042612 GSP-MW3-042612

Overview

The sample set for LMC-MSA, SDG 240-10727-1 consisted of three (3) aqueous environmental samples and one (1) trip blank. All four (4) aqueous samples were analyzed for volatile organic compounds (VOC). The three (3) aqueous environmental samples were analyzed for the semi-volatile organic compound (SVOC), 1,4-dioxane, diesel range organics (DRO) and gasoline range organics (GRO). No field duplicate sample pair was included in this SDG.

The samples were collected by Tetra Tech, Inc. on April 26, 2012 and analyzed by Test America, Inc. All analyses were conducted in accordance with SW-846 Methods 8260C, 8270C, and 8015B analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, trip blank results, surrogate spike recoveries, blank spike results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major

- The initial and continuing calibrations performed on instrument A3UX16 in the VOC fraction had Relative Response Factors (RRFs) for tert-butyl alcohol below the 0.050 minimum response criterion. In addition, the continuing calibration RRF for vinyl acetate was below 0.05. All samples were affected. The non-detected results reported for these compounds in the affected samples were qualified as rejected, (UR).

Minor

The following contaminants were detected in the laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration (µg/L)	Action Level (µg/L)
1,2,3-Trichlorobenzene [1]	0.280	1.4
GRO (C6-C10) [2]	26.3	131.5

[1] Maximum concentration detected in the laboratory method blank, MB 240-42324/5, affecting all samples.
[2] Maximum concentration detected in the laboratory method blank, MB 240-42085/7, affecting all samples.

An action level of 5X the maximum concentration was used to evaluate for blank contamination. Sample aliquot and dilution factor, if applicable, were taken into consideration when evaluating for blank contamination. Positive results for GRO reported below the established action level were qualified as non-detected, (B). No action was necessary for 1,2,3-trichlorobenzene because no positive results were reported for this compound in the affected samples.

- Positive results reported below the Reporting Limit (RL) limit but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Notes

The SVOC continuing calibration performed on instrument A4AG2 on 05/04/12 @ 08:17 had a Percent Difference (%D) for 1,4-dioxane which exceeded the 20% quality control limit but was less than 50%. All samples were affected. No action was taken because no positive results were reported for 1,4-dioxane in the affected samples.

The VOC compound, 2-chloroethyl vinyl ether was not recovered in the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses. No action was taken because the sample for the MS/MSD analyses was not from this SDG and the blank spike sample had an acceptable %R for this compound.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: Initial and/or continuing calibration RRFs for tert-butyl alcohol and vinyl acetate were below the quality control criterion resulting in the rejection of the non-detected results. Laboratory method blank contamination was noted in the VOC and GRO fractions.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994) and SW-846 Methods 8260C, 8270C, and 8015B analytical and reporting protocols. The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech, Inc.
Michelle L. Allen
Chemist/Data Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Quality Assurance Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612			TB-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4			240-10727-1		
FRACTION: OV	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U		1.1	U		1.1	U	
BENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		0.41	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612			TB-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4			240-10727-1		
FRACTION: OV	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.27	J	P	0.17	U		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
SILANOL, DIMETHYL(1,1,2-TRIMETHYLPROPYL)		2	R	Z2							2.4	R	Z2
STYRENE		0.11	U		0.11	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		0.19	U	
TRICHLOROETHENE		0.81	J	P	0.17	U		0.17	U		0.17	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612			TB-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4			240-10727-1		
FRACTION: OV	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		0.22	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4		
FRACTION: OS	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.47	U		0.48	U		0.49	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4		
FRACTION: PET	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		33	B	A	40	B	A	41	B	A
TPH (C10-C32)		240	J	P	230	U		240	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW1-042612 | Lab Sample ID: 240-10727-2

Matrix: Water | Lab File ID: UXM5314.D

Analysis Method: 8260C | Date Collected: 04/26/2012 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW1-042612 | Lab Sample ID: 240-10727-2

Matrix: Water | Lab File ID: UXM5314.D

Analysis Method: 8260C | Date Collected: 04/26/2012 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	0.27	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	0.81	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW1-042612 | Lab Sample ID: 240-10727-2

Matrix: Water | Lab File ID: UXM5314.D

Analysis Method: 8260C | Date Collected: 04/26/2012 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
2037-26-5	Toluene-d8 (Surr)	89		74-115
1868-53-7	Dibromofluoromethane (Surr)	84		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW1-042612 Lab Sample ID: 240-10727-2

Matrix: Water Lab File ID: UXM5314.D

Analysis Method: 8260C Date Collected: 04/26/2012 10:14

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
55644-10-5	Silanol, dimethyl(1,1,2-trimethylpropyl)	4.61	2.0	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW2-042612 | Lab Sample ID: 240-10727-3

Matrix: Water | Lab File ID: UXM5315.D

Analysis Method: 8260C | Date Collected: 04/26/2012 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW2-042612 | Lab Sample ID: 240-10727-3

Matrix: Water | Lab File ID: UXM5315.D

Analysis Method: 8260C | Date Collected: 04/26/2012 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW2-042612 | Lab Sample ID: 240-10727-3

Matrix: Water | Lab File ID: UXM5315.D

Analysis Method: 8260C | Date Collected: 04/26/2012 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	85		63-129
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
2037-26-5	Toluene-d8 (Surr)	88		74-115
1868-53-7	Dibromofluoromethane (Surr)	82		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW2-042612 | Lab Sample ID: 240-10727-3

Matrix: Water | Lab File ID: UXM5315.D

Analysis Method: 8260C | Date Collected: 04/26/2012 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW3-042612 | Lab Sample ID: 240-10727-4

Matrix: Water | Lab File ID: UXM5316.D

Analysis Method: 8260C | Date Collected: 04/26/2012 14:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 18:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW3-042612 Lab Sample ID: 240-10727-4

Matrix: Water Lab File ID: UXM5316.D

Analysis Method: 8260C Date Collected: 04/26/2012 14:40

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 18:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW3-042612 | Lab Sample ID: 240-10727-4

Matrix: Water | Lab File ID: UXM5316.D

Analysis Method: 8260C | Date Collected: 04/26/2012 14:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 18:06

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	94		66-117
2037-26-5	Toluene-d8 (Surr)	89		74-115
1868-53-7	Dibromofluoromethane (Surr)	89		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW3-042612 Lab Sample ID: 240-10727-4

Matrix: Water Lab File ID: UXM5316.D

Analysis Method: 8260C Date Collected: 04/26/2012 14:40

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 18:06

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: TB-042612 | Lab Sample ID: 240-10727-1

Matrix: Water | Lab File ID: UXM5313.D

Analysis Method: 8260C | Date Collected: 04/26/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 16:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: TB-042612 Lab Sample ID: 240-10727-1

Matrix: Water Lab File ID: UXM5313.D

Analysis Method: 8260C Date Collected: 04/26/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: TB-042612 Lab Sample ID: 240-10727-1

Matrix: Water Lab File ID: UXM5313.D

Analysis Method: 8260C Date Collected: 04/26/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
460-00-4	4-Bromofluorobenzene (Surr)	95		66-117
2037-26-5	Toluene-d8 (Surr)	90		74-115
1868-53-7	Dibromofluoromethane (Surr)	88		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: TB-042612 | Lab Sample ID: 240-10727-1

Matrix: Water | Lab File ID: UXM5313.D

Analysis Method: 8260C | Date Collected: 04/26/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 16:57

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 2.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
55644-10-5	Silanol, dimethyl(1,1,2-trimethylpropyl)	4.61	2.4	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: TB-042612 Lab Sample ID: 240-10727-1

Matrix: Water Lab File ID: UXM5313.D

Analysis Method: 8260C Date Collected: 04/26/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 1 TIC Result Total: 2.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
55644-10-5	Silanol, dimethyl(1,1,2-trimethylpropyl)	4.61	2.4	T J N

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW1-042612 | Lab Sample ID: 240-10727-2

Matrix: Water | Lab File ID: 0509019.D

Analysis Method: 8270C | Date Collected: 04/26/2012 10:14

Extract. Method: 3520C | Date Extracted: 05/03/2012 09:48

Sample wt/vol: 1050(mL) | Date Analyzed: 05/09/2012 12:12

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43267 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	53		28-110
367-12-4	2-Fluorophenol (Surr)	50		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	48		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	48		27-111
4165-62-2	Phenol-d5 (Surr)	55		10-110
1718-51-0	Terphenyl-d14 (Surr)	57		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW2-042612 | Lab Sample ID: 240-10727-3

Matrix: Water | Lab File ID: 0509020.D

Analysis Method: 8270C | Date Collected: 04/26/2012 12:25

Extract. Method: 3520C | Date Extracted: 05/03/2012 09:48

Sample wt/vol: 1030(mL) | Date Analyzed: 05/09/2012 12:30

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43267 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.97	U	0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	44		28-110
367-12-4	2-Fluorophenol (Surr)	41		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	31		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	43		27-111
4165-62-2	Phenol-d5 (Surr)	40		10-110
1718-51-0	Terphenyl-d14 (Surr)	65		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW3-042612 | Lab Sample ID: 240-10727-4

Matrix: Water | Lab File ID: 0509021.D

Analysis Method: 8270C | Date Collected: 04/26/2012 14:40

Extract. Method: 3520C | Date Extracted: 05/03/2012 09:48

Sample wt/vol: 1010(mL) | Date Analyzed: 05/09/2012 12:47

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43267 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	44		28-110
367-12-4	2-Fluorophenol (Surr)	43		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	25		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	42		27-111
4165-62-2	Phenol-d5 (Surr)	41		10-110
1718-51-0	Terphenyl-d14 (Surr)	58		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW1-042612 | Lab Sample ID: 240-10727-2

Matrix: Water | Lab File ID: YF042909.D

Analysis Method: 8015B | Date Collected: 04/26/2012 10:14

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2012 16:53

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42085 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	33	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	65		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW2-042612 | Lab Sample ID: 240-10727-3

Matrix: Water | Lab File ID: YF042912.D

Analysis Method: 8015B | Date Collected: 04/26/2012 12:25

Sample wt/vol: 5(mL) | Date Analyzed: 04/29/2012 18:48

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42085 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	40	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW3-042612 Lab Sample ID: 240-10727-4

Matrix: Water Lab File ID: YF042913.D

Analysis Method: 8015B Date Collected: 04/26/2012 14:40

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2012 19:26

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42085 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	41	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	62		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW1-042612 | Lab Sample ID: 240-10727-2

Matrix: Water | Lab File ID: P5B05045.D

Analysis Method: 8015B | Date Collected: 04/26/2012 10:14

Extraction Method: 3510C | Date Extracted: 05/03/2012 11:54

Sample wt/vol: 1050(mL) | Date Analyzed: 05/04/2012 10:04

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	240	J	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	54		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW2-042612 | Lab Sample ID: 240-10727-3

Matrix: Water | Lab File ID: P5B05046.D

Analysis Method: 8015B | Date Collected: 04/26/2012 12:25

Extraction Method: 3510C | Date Extracted: 05/03/2012 11:54

Sample wt/vol: 1050(mL) | Date Analyzed: 05/04/2012 10:35

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	480	U	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	50		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: GSP-MW3-042612 | Lab Sample ID: 240-10727-4

Matrix: Water | Lab File ID: P5B05047.D

Analysis Method: 8015B | Date Collected: 04/26/2012 14:40

Extraction Method: 3510C | Date Extracted: 05/03/2012 11:54

Sample wt/vol: 990(mL) | Date Analyzed: 05/04/2012 11:06

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	510	U	510	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	54		10-110

Appendix C

Support Documentation

MARTIN STATE AIRPORT - GROUNDWATER
SDG 240-10727-1

SAMPLE IDENTIFICATION	GSP-MW1-042612
COMPOUND	TRICHLOROETHENE
COMPOUND AREA	30420
INTERNAL STANDARD AMOUNT (ng)	50
VOLUME WATER PURGED (ml)	5
DILUTION FACTOR	1
INTERNAL STANDARD AREA	1394275
AVERAGE RRF	0.2698
ml to µl	1000
ng to µg	1000
=	0.81 µg/L

30420 x 50 ng x 1 x 1000ml x 1µg /1394275 x 0.2698 x 5ml x 1L x 1000ng

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120501-9570.b\UXM5314.D		
Lims ID:	240-10727-C-2	Client ID:	GSP-MW1-042612
Inject. Date:	01-May-2012 17:20:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009570-017		
Misc. Info.:	M20501A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	16
Lims Batch ID:	42324	Lims Sample ID:	17
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120501-9570.b\8260_16.m		
Last Update:	02-May-2012 10:55:43	Calib Date:	29-Apr-2012 19:50:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120429-9509.b\UXM5250.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-17		

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1394275	10.0	
* 2 Chlorobenzene-d5	117	8.394	8.394	0.0	86	949622	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	98	430449	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.121	5.109	0.012	57	286936	8.61	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	488278	9.06	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1332642	9.04	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	82	490170	9.32	
134 Chlorodifluoromethane TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.658					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62		1.954					
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.405					
18 Trichlorofluoromethane	101		2.666					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
26 Carbon disulfide	76		3.366					
30 Methylene Chloride	84		3.579					
31 2-Methyl-2-propanol	59		3.674					
33 trans-1,2-Dichloroethene	96		3.840					
34 Methyl tert-butyl ether	73		3.840					
36 1,1-Dichloroethane	63		4.208					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.279					
40 Tert-butyl ethyl ether	59		4.587					
42 cis-1,2-Dichloroethene	96	4.717	4.706	0.011	60	11476	0.2666	
41 2-Butanone (MEK)	43		4.706					
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.919					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97		5.156					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
52 1,1-Dichloropropene	75		5.299					
53 Carbon tetrachloride	117		5.310					
56 1,2-Dichloroethane	62		5.465					
55 Benzene	78		5.476					
57 Tert-amyl methyl ether	73		5.559					
60 Trichloroethene	130	6.022	6.022	0.0	82	30420	0.8087	
62 1,2-Dichloropropane	63		6.212					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91		7.137					
73 trans-1,3-Dichloropropene	75		7.314					
76 1,3-Dichloropropane	76		7.635					
77 Tetrachloroethene	164		7.646					
78 2-Hexanone	43		7.694					
79 Chlorodibromomethane	129		7.848					
123 Ethylene Dibromide	107		7.967					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
85 o-Xylene	106		9.010					
86 Styrene	104		9.010					
87 Bromoform	173		9.188					
88 Isopropylbenzene	105		9.354					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.840					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.244					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.576					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.659					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
109 1,2,4-Trichlorobenzene	180		12.639					
110 Hexachlorobutadiene	225		12.817					
111 Naphthalene	128		12.888					
112 1,2,3-Trichlorobenzene	180		13.149					
S 114 Xylenes, Total	106		16.530					

$\overline{RRF} = .2698$

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A2HP5R\20120504-9661.b\P5B05045.D		
Lims ID:	240-10727-I-2-A	Client ID:	GSP-MW1-042612
Inject. Date:	04-May-2012 10:04:42	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009661-005		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP5R
Vol. Injected:	1.0000	ALS Bottle#:	55
Lims Batch ID:	42755	Lims Sample ID:	5
Detector:	GC FID2B		
Method:	\\Ncchrom\ChromData\A2HP5R\20120504-9661.b\TPH5R.m		
Last Update:	07-May-2012 11:41:19	Calib Date:	30-Apr-2012 15:32:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP5R\20120430-9518.b\P5B04314.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
4.028	4.028	0.000	11067277	53.7	
A 15 Diesel					
9.356	5.058 - 13.654		5652350	33.0	
A 17 C10-C32					
10.045	5.058 - 15.033		8509689	49.7	

extraction 1050ml / 5ml

$\overline{CF}$ = 171122

$$\frac{8509689\ \mu g/L}{171122} \times \frac{0.005L}{1.05L} \times 1$$

= 236.8 µg/L

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10727-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/27/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.3 and 2.3 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042612 (240-10727-1), GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/01/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42324/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10770-2 in batch 240-42324.

Refer to the QC report for details.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/03/2012 and analyzed on 05/09/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/29/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42085/7 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42628.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/03/2012 and analyzed on 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42661.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/01/2012 and analyzed on 05/02/2012.

The continuing calibration verification (CCV) for Molybdenum associated with batch 42586 recovered above the upper control limit. The samples and method blank associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/01/2012 and analyzed on 05/02/2012.

Barium, Copper and Zinc were detected in method blank MB 240-42315/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-42347/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The continuing calibration verification (CCV) for Molybdenum associated with batch 42586 recovered above the upper control limit. The samples and method blank associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY
Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10727-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10727-1	TB-042612	Water	04/26/2012 0000	04/27/2012 0915
240-10727-2	GSP-MW1-042612	Water	04/26/2012 1014	04/27/2012 0915
240-10727-3	GSP-MW2-042612	Water	04/26/2012 1225	04/27/2012 0915
240-10727-4	GSP-MW3-042612	Water	04/26/2012 1440	04/27/2012 0915

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Aparavage	Site Contact: Walt Pryor	Lab Contact: Pat O'Meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown, MD 20874	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab picking ☐ Lab sampling ☐ Job/SDG No.:
Project Name: MSA Ground Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112TC04021-02	Shipping/Tracking No:			

PO#			Matrix					Containers & Preservatives							Filtered Sample (Y/N)	Composite/C / Grab/G	VOCs	Total ppm	Diss ppm	1,4 Dioxane	DRO	GRO	Perchlorate	Sample Specific Notes / Special Instructions:
Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:										
TB-042612	4-26-12	—		X						2					N	G	X							
GSP-MW1-042612	↓	1014		X					2	5			5		↓	↓	X	X	X	X	X	X	X	
GSP-MW2-042612		1225		X					2	5			5				X	X	X	X	X	X	X	
GSP-MW3-042612	↓	1440		X					2	5			5		↓	↓	X	X	X	X	X	X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	4-26-12 / 1700			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: Greg Burns	Company: TA	Date/Time: 4/27/12 0915

Page 957 of 960

05/30/2012

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TAL-0018 (1008)

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10727

Client Tetra Tech Site Name MSA By: Jerry Bruno (Signature)

Cooler Received on 4/27/12 Opened on 4/27/12

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other Multiple

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

(IR GUN# 1)	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	☒ Multiple on Back
IR GUN# 5G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity_____ Yes (No)
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
MW 1	<2, <2	4/27/12	JB
↓ 2	<2, <2	↓	↓
↓ 3	<2, <2	↓	↓

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client cooler	3.3	1.3	1	ICE
↓	4.3	2.3	↓	↓

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042612	240-10727-1	88	89	90	95
GSP-MW1-042612	240-10727-2	84	89	89	91
GSP-MW2-042612	240-10727-3	82	85	88	90
GSP-MW3-042612	240-10727-4	89	87	89	94
	MB 240-42324/5	87	88	90	94
	LCS 240-42324/4	87	82	87	95
	240-10770-B-2 MS	89	85	91	95
	240-10770-B-2 MSD	86	84	91	95

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: STD8260 240-42092/4 Date Analyzed: 04/29/2012 16:26

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5241.D Heated Purge: (Y/N) N

Calibration ID: 8426

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1530000	5.70	1036987	8.39	499405	10.64
UPPER LIMIT		3060000	6.20	2073974	8.89	998810	11.14
LOWER LIMIT		765000	5.20	518494	7.89	249703	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42092/14		1382789	5.70	929711	8.39	462842	10.64
CCVIS 240-42324/2		1685652	5.70	1127991	8.39	551448	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: CCVIS 240-42324/2 Date Analyzed: 05/01/2012 10:57

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5299.D Heated Purge: (Y/N) N

Calibration ID: 8428

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1685652	5.70	1127991	8.39	551448	10.64
UPPER LIMIT		3371304	6.20	2255982	8.89	1102896	11.14
LOWER LIMIT		842826	5.20	563996	7.89	275724	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42324/3		1584858	5.70	1039768	8.39	509719	10.64
LCS 240-42324/4		1635403	5.70	1080601	8.39	561237	10.64
MB 240-42324/5		1511836	5.70	1024126	8.39	489807	10.64
240-10727-1	TB-042612	1377305	5.70	930099	8.39	438724	10.64
240-10727-2	GSP-MW1-042612	1394275	5.70	949622	8.39	430449	10.64
240-10727-3	GSP-MW2-042612	1403235	5.70	951553	8.39	444302	10.64
240-10727-4	GSP-MW3-042612	1348914	5.70	908451	8.39	439145	10.64
240-10770-B-2 MS		1398521	5.70	928051	8.39	457817	10.64
240-10770-B-2 MSD		1446927	5.70	965602	8.39	481690	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42092/2	UXM5239.D	04/29/2012	15:41
	STD8260 240-42092/3	UXM5240.D	04/29/2012	16:03
	STD8260 240-42092/4	UXM5241.D	04/29/2012	16:26
	STD8260 240-42092/5	UXM5242.D	04/29/2012	16:49
	STD8260 240-42092/6	UXM5243.D	04/29/2012	17:12
	STD8260 240-42092/7	UXM5244.D	04/29/2012	17:34
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50
	ICV 240-42092/14	UXM5251.D	04/29/2012	20:13

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.3038	0.2649	0.2905	0.2889	0.3016	Ave		0.2829			0.1000	7.8		15.0			
Chloromethane	0.4695 0.4320	0.4893	0.4830	0.4487	0.4452	Ave		0.4613			0.1000	4.9		15.0			
Vinyl chloride	0.4202 0.4041	0.4409	0.4365	0.4256	0.4202	Ave		0.4246			0.1000	3.1		15.0			
Bromomethane	0.1730 0.1493	0.1760	0.1733	0.1676	0.1710	Ave		0.1684			0.0500	5.8		15.0			
Chloroethane	0.2470 0.2229	0.2473	0.2344	0.2374	0.2336	Ave		0.2371				3.9		15.0			
Trichlorofluoromethane	0.2704 0.3132	0.3068	0.3031	0.3070	0.3204	Ave		0.3035			0.1000	5.7		15.0			
Acrolein	0.0469 0.0473	0.0483	0.0502	0.0508	0.0498	Ave		0.0489				3.3		15.0			
1,1-Dichloroethene	0.2340 0.2501	0.2402	0.2424	0.2499	0.2511	Ave		0.2446			0.1000	2.8		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1512 0.1622	0.1553	0.1500	0.1479	0.1608	Ave		0.1546			0.0500	3.8		15.0			
Acetone	0.2162 0.0864	0.1595	0.1181	0.1099	0.0970	Lin1	0.2842	0.0868			0.0500				0.9960		0.9950
Iodomethane	0.3345 0.3288	0.3415	0.3505	0.3469	0.3574	Ave		0.3433				3.1		15.0			
Carbon disulfide	0.6238 0.8183	0.6509	0.6976	0.7556	0.8104	Ave		0.7261			0.1000	11.0		15.0			
Acetonitrile	0.0391 0.0299	0.0368	0.0353	0.0335	0.0333	Ave		0.0346				9.2		15.0			
Methyl acetate	0.2451 0.2094	0.2377	0.2404	0.2374	0.2264	Ave		0.2327			0.1000	5.6		15.0			
Methylene Chloride	0.4532 0.2926	0.3791	0.3449	0.3188	0.3120	Lin1	0.1763	0.2950			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0187 0.0171	0.0206	0.0189	0.0189	0.0192	Ave		0.0189				6.0		15.0			
Acrylonitrile	0.1145 0.1022	0.1105	0.1139	0.1170	0.1105	Ave		0.1114				4.6		15.0			
trans-1,2-Dichloroethene	0.2839 0.2770	0.2945	0.2944	0.2851	0.2889	Ave		0.2873			0.1000	2.4		15.0			
Methyl tert-butyl ether	0.8507 0.8216	0.8205	0.8460	0.8461	0.8566	Ave		0.8402			0.1000	1.8		15.0			
Hexane	0.0529 0.0560	0.0521	0.0488	0.0501	0.0574	Ave		0.0529				6.3		15.0			
1,1-Dichloroethane	0.5478 0.5504	0.5906	0.5789	0.5698	0.5773	Ave		0.5691			0.1000	3.0		15.0			
Vinyl acetate	0.0438 0.0547	0.0420	0.0492	0.0562	0.0568	Ave		0.0505				13.0		15.0			
2-Butanone	0.1431 0.1214	0.1392	0.1413	0.1375	0.1314	Ave		0.1356			0.0500	5.9		15.0			
cis-1,2-Dichloroethene	0.3153 0.3006	0.3006	0.3107	0.3096	0.3157	Ave		0.3087			0.1000	2.2		15.0			
2,2-Dichloropropane	0.2459 0.3076	0.2799	0.2938	0.3057	0.3261	Ave		0.2932				9.5		15.0			
Bromochloromethane	0.1255 0.1262	0.1225	0.1298	0.1329	0.1330	Ave		0.1283				3.3		15.0			
Tetrahydrofuran	0.0875 0.0744	0.0826	0.0830	0.0854	0.0842	Ave		0.0828				5.4		15.0			
Chloroform	0.5169 0.5153	0.5299	0.5388	0.5290	0.5477	Ave		0.5296				2.4		15.0			
1,1,1-Trichloroethane	0.3234 0.3831	0.3500	0.3674	0.3840	0.3986	Ave		0.3678			0.1000	7.4		15.0			
Cyclohexane	0.4217 0.4832	0.4863	0.4431	0.4476	0.4809	Ave		0.4605			0.1000	5.8		15.0			
1,1-Dichloropropene	0.4359 0.4194	0.4199	0.4223	0.4252	0.4356	Ave		0.4264				1.8		15.0			
Carbon tetrachloride	0.2456 0.3072	0.2543	0.2617	0.2867	0.3066	Ave		0.2770			0.1000	9.7		15.0			
1,2-Dichloroethane	0.4838 0.4518	0.4761	0.4673	0.4667	0.4711	Ave		0.4694			0.1000	2.3		15.0			
Benzene	1.2256 1.2453	1.2535	1.2750	1.2420	1.2666	Ave		1.2513			0.5000	1.4		15.0			
Trichloroethene	0.2714 0.2655	0.2671	0.2733	0.2695	0.2719	Ave		0.2698			0.2000	1.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3056 0.3781	0.3553	0.3486	0.3331	0.3656	Ave		0.3477			0.1000	7.4		15.0			
1,2-Dichloropropane	0.2994 0.3048	0.3058	0.3148	0.3132	0.3116	Ave		0.3083			0.1000	1.9		15.0			
Dibromomethane	0.1675 0.1555	0.1521	0.1644	0.1597	0.1644	Ave		0.1606				3.7		15.0			
1,4-Dioxane	0.0023 0.0020	0.0024	0.0025	0.0025	0.0025	Ave		0.0024				8.2		15.0			
Bromodichloromethane	0.2586 0.3533	0.2732	0.3036	0.3210	0.3455	Ave		0.3092			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1532 0.1582	0.1459	0.1670	0.1699	0.1653	Ave		0.1599				5.8		15.0			
cis-1,3-Dichloropropene	0.3061 0.4576	0.3249	0.3845	0.4238	0.4469	Lin1	-0.212	0.4568			0.1500				0.9990		0.9950
4-Methyl-2-pentanone	0.2451 0.2575	0.2540	0.2759	0.2780	0.2752	Ave		0.2643			0.0500	5.3		15.0			
Toluene	1.7728 1.9294	1.8880	1.8619	1.8474	1.9604	Ave		1.8766			0.4000	3.5		15.0			
trans-1,3-Dichloropropene	0.3835 0.6056	0.4211	0.4964	0.5287	0.6010	Lin1	-0.314	0.6041			0.1000				0.9980		0.9950
Ethyl methacrylate	0.4455 0.5778	0.5229	0.5765	0.5788	0.6242	Ave		0.5543				11.0		15.0			
1,1,2-Trichloroethane	0.3279 0.3212	0.3141	0.3421	0.3341	0.3447	Ave		0.3307			0.1000	3.6		15.0			
1,3-Dichloropropane	0.6891 0.6635	0.6944	0.7152	0.6928	0.7223	Ave		0.6962				3.0		15.0			
Tetrachloroethene	0.2452 0.2600	0.2630	0.2668	0.2612	0.2738	Ave		0.2617			0.2000	3.6		15.0			
2-Hexanone	0.2323 0.2576	0.2818	0.2796	0.2822	0.2852	Ave		0.2698			0.0500	7.8		15.0			
Dibromochloromethane	0.1872 0.3114	0.2160	0.2464	0.2709	0.3057	Lin1	-0.171	0.3097							0.9980		0.9950
1,2-Dibromoethane	0.2962 0.3220	0.3089	0.3344	0.3261	0.3462	Ave		0.3223				5.5		15.0			
Chlorobenzene	1.0759 1.0855	1.1279	1.1114	1.0941	1.1299	Ave		1.1041			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	0.2665 0.3469	0.2706	0.3066	0.3249	0.3538	Ave		0.3116				12.0		15.0			
Ethylbenzene	0.5227 0.5869	0.5825	0.6026	0.5858	0.6163	Ave		0.5828				5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6757 0.7551	0.7220	0.7191	0.7176	0.7638	Ave		0.7256				4.3		15.0			
o-Xylene	0.6806 0.7276	0.7176	0.7304	0.7130	0.7551	Ave		0.7207				3.4		15.0			
Styrene	1.0565 1.2902	1.1310	1.1966	1.1904	1.2870	Ave		1.1920			0.3000	7.6		15.0			
Bromoform	0.0815 0.1487	0.0938	0.1133	0.1171	0.1413	Lin1	-0.094	0.1455			0.1000				0.9950		0.9950
Isopropylbenzene	1.5492 1.8304	1.6861	1.6648	1.6944	1.8507	Ave		1.7126			0.1000	6.6		15.0			
1,1,2,2-Tetrachloroethane	0.8553 0.8338	0.9184	0.9469	0.9293	0.9310	Ave		0.9025			0.3000	5.1		15.0			
Bromobenzene	0.8074 0.7779	0.8287	0.8325	0.8084	0.8409	Ave		0.8159				2.8		15.0			
1,2,3-Trichloropropane	0.2880 0.2558	0.2803	0.2925	0.2919	0.2938	Ave		0.2837				5.1		15.0			
trans-1,4-Dichloro-2-butene	0.2181 0.2689	0.2471	0.2346	0.2535	0.2845	Ave		0.2511				9.5		15.0			
n-Propylbenzene	0.7292 0.8665	0.8823	0.8741	0.8947	0.9118	Ave		0.8598				7.7		15.0			
2-Chlorotoluene	0.8583 0.7918	0.8579	0.8258	0.8361	0.8474	Ave		0.8362				3.0		15.0			
1,3,5-Trimethylbenzene	2.5787 2.8481	2.7830	2.7962	2.7951	2.9477	Ave		2.7914				4.3		15.0			
4-Chlorotoluene	0.8421 0.8602	0.8907	0.8940	0.8564	0.9136	Ave		0.8762				3.1		15.0			
tert-Butylbenzene	2.2870 2.5025	2.5077	2.4568	2.4969	2.5752	Ave		2.4710				4.0		15.0			
1,2,4-Trimethylbenzene	2.7586 2.9544	2.8331	2.8754	2.9504	3.0668	Ave		2.9065				3.7		15.0			
sec-Butylbenzene	2.8024 3.1977	3.0238	2.9596	3.0216	3.2137	Ave		3.0365				5.1		15.0			
1,3-Dichlorobenzene	1.5037 1.4698	1.4901	1.5135	1.5069	1.5495	Ave		1.5056			0.6000	1.8		15.0			
p-Isopropyltoluene	2.2069 2.6255	2.4647	2.4703	2.4761	2.6715	Ave		2.4858				6.6		15.0			
1,4-Dichlorobenzene	1.6073 1.5308	1.6512	1.5577	1.5557	1.6211	Ave		1.5873			0.5000	2.9		15.0			
n-Butylbenzene	2.0896 2.4436	2.2004	2.2368	2.2659	2.4792	Ave		2.2859				6.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4966 1.3945	1.5126	1.5119	1.4682	1.5239	Ave		1.4846			0.4000	3.2		15.0			
1,2-Dibromo-3-Chloropropane	0.0886 0.0950	0.0916	0.0904	0.0972	0.1086	Ave		0.0952			0.0500	7.6		15.0			
1,3,5-Trichlorobenzene	0.7904 0.7093	0.7633	0.7631	0.7837	0.8038	Ave		0.7690				4.3		15.0			
1,2,4-Trichlorobenzene	0.6476 0.5852	0.7228	0.7185	0.6951	0.7215	Ave		0.6818			0.2000	8.1		15.0			
Hexachlorobutadiene	0.2814 0.2092	0.2884	0.2495	0.2645	0.2531	Ave		0.2577				11.0		15.0			
Naphthalene	1.9527 1.6802	2.0647	2.2163	2.2497	2.2115	Ave		2.0625				11.0		15.0			
1,2,3-Trichlorobenzene	0.6221 0.4278	0.6296	0.6285	0.6505	0.5938	Ave		0.5920				14.0		15.0			
Dibromofluoromethane (Surr)	0.2331 0.2366	0.2278	0.2460	0.2403	0.2499	Ave		0.2389				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4238 0.3659	0.3675	0.3946	0.3884	0.3801	Ave		0.3867				5.5		15.0			
Toluene-d8 (Surr)	1.5539 1.5702	1.4814	1.5599	1.5466	1.5977	Ave		1.5516				2.5		15.0			
4-Bromofluorobenzene (Surr)	0.5499 0.5492	0.5504	0.5556	0.5412	0.5764	Ave		0.5538				2.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2340	0.1000	8.27	10.0	-17.3	20.0
Chloromethane	Ave	0.4613	0.4720	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.4246	0.4443	0.1000	10.5	10.0	4.6	20.0
Bromomethane	Ave	0.1684	0.1539	0.0500	9.14	10.0	-8.6	20.0
Chloroethane	Ave	0.2371	0.2329	0.0500	9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.3035	0.3240	0.1000	10.7	10.0	6.8	20.0
Acrolein	Ave	0.0489	0.0264		16.2	30.0	-46.0*	20.0
1,1-Dichloroethene	Ave	0.2446	0.2652	0.1000	10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1709	0.0500	11.1	10.0	10.6	20.0
Acetone	Lin1		0.1057	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.3433	0.3416		9.95	10.0	-0.5	20.0
Carbon disulfide	Ave	0.7261	0.7042	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0346	0.0393		34.0	30.0	13.4	20.0
Methyl acetate	Ave	0.2327	0.2751	0.1000	11.8	10.0	18.2	20.0
Methylene Chloride	Lin1		0.3299	0.1000	10.6	10.0	6.0	20.0
tert-Butyl alcohol	Ave	0.0189	0.0195		207	200	3.2	20.0
Acrylonitrile	Ave	0.1114	0.1186		31.9	30.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.8405	0.1000	10.0	10.0	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2952	0.1000	10.3	10.0	2.7	20.0
Hexane	Ave	0.0529	0.0579		10.9	10.0	9.4	20.0
1,1-Dichloroethane	Ave	0.5691	0.6028	0.1000	10.6	10.0	5.9	20.0
Vinyl acetate	Ave	0.0505	0.0387		7.67	10.0	-23.3*	20.0
2-Butanone	Ave	0.1356	0.1389	0.0500	20.5	20.0	2.4	20.0
2,2-Dichloropropane	Ave	0.2932	0.2855		9.74	10.0	-2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.3186	0.1000	10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1283	0.1312		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0828	0.0852		10.3	10.0	2.9	20.0
Chloroform	Ave	0.5296	0.5462	0.2000	10.3	10.0	3.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3794	0.1000	10.3	10.0	3.2	20.0
Cyclohexane	Ave	0.4605	0.4767	0.1000	10.4	10.0	3.5	20.0
1,1-Dichloropropene	Ave	0.4264	0.4383		10.3	10.0	2.8	20.0
Carbon tetrachloride	Ave	0.2770	0.2912	0.1000	10.5	10.0	5.1	20.0
1,2-Dichloroethane	Ave	0.4694	0.4938	0.1000	10.5	10.0	5.2	20.0
Benzene	Ave	1.251	1.319	0.5000	10.5	10.0	5.4	20.0
Trichloroethene	Ave	0.2698	0.2968	0.2000	11.0	10.0	10.0	20.0
1,2-Dichloropropane	Ave	0.3083	0.3319	0.1000	10.8	10.0	7.7	20.0
Methylcyclohexane	Ave	0.3477	0.3665	0.1000	10.5	10.0	5.4	20.0
Dibromomethane	Ave	0.1606	0.1738		10.8	10.0	8.2	20.0
Bromodichloromethane	Ave	0.3092	0.3331	0.1000	10.8	10.0	7.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1599	0.1722		10.8	10.0	7.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.4089	0.1500	9.41	10.0	-5.9	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2914	0.0500	22.1	20.0	10.3	20.0
Toluene	Ave	1.877	1.918	0.4000	10.2	10.0	2.2	20.0
trans-1,3-Dichloropropene	Lin1		0.5291	0.1000	9.28	10.0	-7.2	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3442	0.1000	10.4	10.0	4.1	20.0
1,3-Dichloropropane	Ave	0.6962	0.7105		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	0.2617	0.2644	0.2000	10.1	10.0	1.0	20.0
2-Hexanone	Ave	0.2698	0.2927	0.0500	21.7	20.0	8.5	20.0
Dibromochloromethane	Lin1		0.2623		9.02	10.0	-9.8	20.0
1,2-Dibromoethane	Ave	0.3223	0.3341		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	1.104	1.136	0.3000	10.3	10.0	2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3283		10.5	10.0	5.4	20.0
Ethylbenzene	Ave	0.5828	0.6250		10.7	10.0	7.2	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7452		20.5	20.0	2.7	20.0
o-Xylene	Ave	0.7207	0.7518		10.4	10.0	4.3	20.0
Styrene	Ave	1.192	1.255	0.3000	10.5	10.0	5.3	20.0
Bromoform	Lin1		0.1220	0.1000	9.03	10.0	-9.7	20.0
Isopropylbenzene	Ave	1.713	1.779	0.1000	10.4	10.0	3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.9195	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8159	0.8010		9.82	10.0	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2982		10.5	10.0	5.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2617		20.8	20.0	4.2	20.0
n-Propylbenzene	Ave	0.8598	0.9010		10.5	10.0	4.8	20.0
2-Chlorotoluene	Ave	0.8362	0.8214		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.836		10.2	10.0	1.6	20.0
4-Chlorotoluene	Ave	0.8762	0.8813		10.1	10.0	0.6	20.0
tert-Butylbenzene	Ave	2.471	2.497		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.988		10.3	10.0	2.8	20.0
sec-Butylbenzene	Ave	3.036	3.064		10.1	10.0	0.9	20.0
1,3-Dichlorobenzene	Ave	1.506	1.484	0.6000	9.85	10.0	-1.5	20.0
p-Isopropyltoluene	Ave	2.486	2.579		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.584	0.5000	9.98	10.0	-0.2	20.0
n-Butylbenzene	Ave	2.286	2.295		10.0	10.0	0.4	20.0
1,2-Dichlorobenzene	Ave	1.485	1.504	0.4000	10.1	10.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.1049	0.0500	11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6660	0.2000	9.77	10.0	-2.3	20.0
Hexachlorobutadiene	Ave	0.2577	0.2217		8.60	10.0	-14.0	20.0
Naphthalene	Ave	2.063	2.211		10.7	10.0	7.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5920	0.6250		10.6	10.0	5.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2274		9.72	10.2	-4.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3583		9.46	10.2	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.552	1.491		9.81	10.2	-3.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5469		10.1	10.2	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

1 CV

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3065		9.63	10.0	-3.7	20.0
Diisopropyl ether	Ave	0.2775	0.2745		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		527	500	5.4	20.0
Cyclohexanone	Lin1		0.0256		52.9	200	-73.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	3.178		10.7	10.0	6.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab File ID: BFB2918.D BFB Injection Date: 05/01/2012

Instrument ID: A3UX16 BFB Injection Time: 10:27

Analysis Batch No.: 42324

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.3	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.1	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	65.4	
175	5.0 - 9.0 % of mass 174	4.4	(6.7)1
176	95.0 - 101.0 % of mass 174	62.9	(96.2)1
177	5.0 - 9.0 % of mass 176	4.0	(6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-42324/2	UXM5299.D	05/01/2012	10:57
	CCV 240-42324/3	UXM5300.D	05/01/2012	11:20
	LCS 240-42324/4	UXM5301.D	05/01/2012	11:42
	MB 240-42324/5	UXM5302.D	05/01/2012	12:05
TB-042612	240-10727-1	UXM5313.D	05/01/2012	16:57
GSP-MW1-042612	240-10727-2	UXM5314.D	05/01/2012	17:20
GSP-MW2-042612	240-10727-3	UXM5315.D	05/01/2012	17:43
GSP-MW3-042612	240-10727-4	UXM5316.D	05/01/2012	18:06
	240-10770-B-2 MS	UXM5319.D	05/01/2012	19:14
	240-10770-B-2 MSD	UXM5320.D	05/01/2012	19:37

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCVIS 240-42324/2 Calibration Date: 05/01/2012 10:57

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5299.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2970	0.1000	10.5	10.0	5.0	20.0
Chloromethane	Ave	0.4613	0.4543	0.1000	9.85	10.0	-1.5	20.0
Vinyl chloride	Ave	0.4246	0.4174	0.1000	9.83	10.0	-1.7	20.0
Bromomethane	Ave	0.1684	0.1468	0.0500	8.72	10.0	-12.8	20.0
Chloroethane	Ave	0.2371	0.2172	0.0500	9.16	10.0	-8.4	20.0
Trichlorofluoromethane	Ave	0.3035	0.3345	0.1000	11.0	10.0	10.2	20.0
Acrolein	Ave	0.0489	0.0408		83.3	100	-16.7	20.0
1,1-Dichloroethene	Ave	0.2446	0.2333	0.1000	9.54	10.0	-4.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1599	0.0500	10.3	10.0	3.5	20.0
Acetone	Lin1		0.0858	0.0500	16.5	20.0	-17.5	20.0
Iodomethane	Ave	0.3433	0.3386		9.86	10.0	-1.4	20.0
Carbon disulfide	Ave	0.7261	0.7276	0.1000	10.0	10.0	0.2	20.0
Acetonitrile	Ave	0.0346	0.0275		79.3	100	-20.7*	20.0
Methyl acetate	Ave	0.2327	0.1924	0.1000	16.5	20.0	-17.3	20.0
Methylene Chloride	Lin1		0.3022	0.1000	9.65	10.0	-3.5	20.0
tert-Butyl alcohol	Ave	0.0189	0.0167		176	200	-11.8	20.0
Acrylonitrile	Ave	0.1114	0.0928		16.7	20.0	-16.7	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7564	0.1000	9.00	10.0	-10.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2720	0.1000	9.47	10.0	-5.3	20.0
Hexane	Ave	0.0529	0.0545		10.3	10.0	3.0	20.0
1,1-Dichloroethane	Ave	0.5691	0.5175	0.1000	9.09	10.0	-9.1	20.0
Vinyl acetate	Ave	0.0505	0.0467		9.26	10.0	-7.4	20.0
2-Butanone	Ave	0.1356	0.1103	0.0500	16.3	20.0	-18.7	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2874	0.1000	9.31	10.0	-6.9	20.0
2,2-Dichloropropane	Ave	0.2932	0.2845		9.70	10.0	-3.0	20.0
Bromochloromethane	Ave	0.1283	0.1235		9.62	10.0	-3.8	20.0
Tetrahydrofuran	Ave	0.0828	0.0679		8.20	10.0	-18.0	20.0
Chloroform	Ave	0.5296	0.4972	0.2000	9.39	10.0	-6.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3668	0.1000	9.97	10.0	-0.3	20.0
Cyclohexane	Ave	0.4605	0.4548	0.1000	9.88	10.0	-1.2	20.0
1,1-Dichloropropene	Ave	0.4264	0.3992		9.36	10.0	-6.4	20.0
Carbon tetrachloride	Ave	0.2770	0.2807	0.1000	10.1	10.0	1.3	20.0
1,2-Dichloroethane	Ave	0.4694	0.4211	0.1000	8.97	10.0	-10.3	20.0
Benzene	Ave	1.251	1.160	0.5000	9.27	10.0	-7.3	20.0
Trichloroethene	Ave	0.2698	0.2566	0.2000	9.51	10.0	-4.9	20.0
Methylcyclohexane	Ave	0.3477	0.3573	0.1000	10.3	10.0	2.7	20.0
1,2-Dichloropropane	Ave	0.3083	0.2800	0.1000	9.08	10.0	-9.2	20.0
Dibromomethane	Ave	0.1606	0.1466		9.13	10.0	-8.7	20.0
1,4-Dioxane	Ave	0.0024	0.0019		407	500	-18.6	20.0
Bromodichloromethane	Ave	0.3092	0.3093	0.1000	10.0	10.0	0.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCVIS 240-42324/2 Calibration Date: 05/01/2012 10:57

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5299.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1599	0.1407		17.6	20.0	-12.0	20.0
cis-1,3-Dichloropropene	Lin1		0.3920	0.1500	9.05	10.0	-9.5	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2298	0.0500	17.4	20.0	-13.0	20.0
Toluene	Ave	1.877	1.757	0.4000	9.36	10.0	-6.4	20.0
trans-1,3-Dichloropropene	Lin1		0.4892	0.1000	8.62	10.0	-13.8	20.0
Ethyl methacrylate	Ave	0.5543	0.5192		9.37	10.0	-6.3	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3008	0.1000	9.10	10.0	-9.0	20.0
1,3-Dichloropropane	Ave	0.6962	0.6149		8.83	10.0	-11.7	20.0
Tetrachloroethene	Ave	0.2617	0.2658	0.2000	10.2	10.0	1.6	20.0
2-Hexanone	Ave	0.2698	0.2311	0.0500	17.1	20.0	-14.3	20.0
Dibromochloromethane	Lin1		0.2569		8.85	10.0	-11.5	20.0
1,2-Dibromoethane	Ave	0.3223	0.2904		9.01	10.0	-9.9	20.0
Chlorobenzene	Ave	1.104	1.009	0.3000	9.14	10.0	-8.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3090		9.92	10.0	-0.8	20.0
Ethylbenzene	Ave	0.5828	0.5479		9.40	10.0	-6.0	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.6861		18.9	20.0	-5.4	20.0
o-Xylene	Ave	0.7207	0.6592		9.15	10.0	-8.5	20.0
Styrene	Ave	1.192	1.127	0.3000	9.45	10.0	-5.5	20.0
Bromoform	Lin1		0.1151	0.1000	8.56	10.0	-14.4	20.0
Isopropylbenzene	Ave	1.713	1.644	0.1000	9.60	10.0	-4.0	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.7806	0.3000	8.65	10.0	-13.5	20.0
Bromobenzene	Ave	0.8159	0.7710		9.45	10.0	-5.5	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2458		8.66	10.0	-13.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2026		8.07	10.0	-19.3	20.0
n-Propylbenzene	Ave	0.8598	0.8329		9.69	10.0	-3.1	20.0
2-Chlorotoluene	Ave	0.8362	0.7811		9.34	10.0	-6.6	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.681		9.60	10.0	-4.0	20.0
4-Chlorotoluene	Ave	0.8762	0.8220		9.38	10.0	-6.2	20.0
tert-Butylbenzene	Ave	2.471	2.351		9.51	10.0	-4.9	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.770		9.53	10.0	-4.7	20.0
sec-Butylbenzene	Ave	3.036	2.925		9.63	10.0	-3.7	20.0
1,3-Dichlorobenzene	Ave	1.506	1.424	0.6000	9.46	10.0	-5.4	20.0
p-Isopropyltoluene	Ave	2.486	2.368		9.52	10.0	-4.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.488	0.5000	9.38	10.0	-6.2	20.0
n-Butylbenzene	Ave	2.286	2.212		9.68	10.0	-3.2	20.0
1,2-Dichlorobenzene	Ave	1.485	1.376	0.4000	9.27	10.0	-7.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.0868	0.0500	9.12	10.0	-8.8	20.0
1,3,5-Trichlorobenzene	Ave	0.7690	0.7679		9.99	10.0	-0.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6628	0.2000	9.72	10.0	-2.8	20.0
Hexachlorobutadiene	Ave	0.2577	0.2465		9.56	10.0	-4.4	20.0
Naphthalene	Ave	2.063	1.789		8.67	10.0	-13.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCVIS 240-42324/2 Calibration Date: 05/01/2012 10:57

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5299.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5920	0.5701		9.63	10.0	-3.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2122		9.07	10.2	-11.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3050		8.05	10.2	-21.1*	20.0
Toluene-d8 (Surr)	Ave	1.552	1.334		8.78	10.2	-14.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.4954		9.13	10.2	-10.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCV 240-42324/3 Calibration Date: 05/01/2012 11:20

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5300.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.5354		10.1	10.0	1.2	20.0
Ethyl ether	Ave	0.3182	0.2987		9.39	10.0	-6.1	20.0
3-Chloro-1-propene	Ave	0.1408	0.1459		10.4	10.0	3.6	20.0
Diisopropyl ether	Ave	0.2775	0.2701		48.7	50.0	-2.7	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.5114		9.92	10.0	-0.8	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.8626		9.69	10.0	-3.1	20.0
Propionitrile	Ave	0.0386	0.0370		19.1	20.0	-4.3	20.0
Ethyl acetate	Ave	0.2719	0.2520		18.5	20.0	-7.3	20.0
Methacrylonitrile	Ave	0.1921	0.1757		9.15	10.0	-8.5	20.0
Isobutyl alcohol	Ave	0.0086	0.0077		178	200	-11.0	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.7080		9.89	10.0	-1.1	20.0
n-Heptane	Ave	0.0406	0.0444		10.9	10.0	9.3	20.0
n-Butanol	Lin1		0.0054		163	200	-18.7	20.0
2-Nitropropane	Qua		0.0417		20.2	20.0	1.0	20.0
Cyclohexanone	Lin1		0.0639		64.6	100	-35.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.860		9.59	10.0	-4.1	20.0
2-Methylnaphthalene	Qua		0.5682		11.8	20.0	-41.0*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCV 240-42324/3 Calibration Date: 05/01/2012 11:20

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5300.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2389	0.2164		9.25	10.2	-9.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3361		8.87	10.2	-13.1	20.0
Toluene-d8 (Surr)	Ave	1.552	1.436		9.45	10.2	-7.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5323		9.81	10.2	-3.9	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab File ID: UXM5302.D Lab Sample ID: MB 240-42324/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/01/2012 12:05

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42324/4	UXM5301.D	05/01/2012 11:42
TB-042612	240-10727-1	UXM5313.D	05/01/2012 16:57
GSP-MW1-042612	240-10727-2	UXM5314.D	05/01/2012 17:20
GSP-MW2-042612	240-10727-3	UXM5315.D	05/01/2012 17:43
GSP-MW3-042612	240-10727-4	UXM5316.D	05/01/2012 18:06
	240-10770-B-2 MS	UXM5319.D	05/01/2012 19:14
	240-10770-B-2 MSD	UXM5320.D	05/01/2012 19:37

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42324/5

Matrix: Water | Lab File ID: UXM5302.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.280	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42324/5

Matrix: Water | Lab File ID: UXM5302.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42324/5

Matrix: Water | Lab File ID: UXM5302.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42324 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		63-129
460-00-4	4-Bromofluorobenzene (Surr)	94		66-117
2037-26-5	Toluene-d8 (Surr)	90		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42324/5

Matrix: Water Lab File ID: UXM5302.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5301.D

Lab ID: LCS 240-42324/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.45	95	72-116	
1,1,1-Trichloroethane	10.0	9.44	94	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.83	88	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.91	99	74-151	
1,1-Dichloroethane	10.0	9.10	91	82-115	
1,1-Dichloroethene	10.0	9.77	98	78-131	
1,1-Dichloropropene	10.0	9.02	90	83-114	
1,2,3-Trichlorobenzene	10.0	9.28	93	54-126	
1,2,3-Trichloropropane	10.0	8.93	89	73-129	
1,2,3-Trimethylbenzene	10.0	9.10	91	70-130	
1,2,4-Trichlorobenzene	10.0	8.99	90	48-135	
1,2,4-Trimethylbenzene	10.0	8.94	89	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.30	93	42-136	
1,2-Dichlorobenzene	10.0	8.93	89	81-110	
1,2-Dichloroethane	10.0	9.17	92	71-127	
1,2-Dichloropropane	10.0	9.19	92	81-115	
1,3-Dichlorobenzene	10.0	8.91	89	80-110	
1,3-Dichloropropane	10.0	8.90	89	79-116	
1,4-Dichlorobenzene	10.0	8.70	87	82-110	
2,2-Dichloropropane	10.0	9.56	96	50-129	
2-Chloroethyl vinyl ether	10.0	9.03 J	90	52-131	
2-Chlorotoluene	10.0	8.56	86	76-116	
2-Hexanone	20.0	19.6	98	55-133	
Bromobenzene	10.0	8.72	87	76-115	
Bromochloromethane	10.0	9.54	95	77-120	
4-Chlorotoluene	10.0	8.66	87	77-115	
p-Isopropyltoluene	10.0	9.32	93	74-120	
Acetone	20.0	21.9	110	43-136	
Benzene	10.0	9.17	92	83-112	
Bromoform	10.0	8.47	85	40-131	
Bromomethane	10.0	7.98	80	11-185	
Carbon disulfide	10.0	8.80	88	62-142	
Carbon tetrachloride	10.0	9.85	99	66-128	
Chlorobenzene	10.0	9.08	91	85-110	
Chloroethane	10.0	8.25	83	25-153	
Chloroform	10.0	8.99	90	79-117	
Chloromethane	10.0	8.26	83	44-126	
cis-1,2-Dichloroethene	10.0	9.25	93	80-113	
cis-1,3-Dichloropropene	10.0	8.18	82	61-115	
Hexachlorobutadiene	10.0	8.21	82	36-134	
Dibromomethane	10.0	9.38	94	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5301.D

Lab ID: LCS 240-42324/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	9.82	98	72-121	
Dichlorodifluoromethane	10.0	6.28	63	19-129	
Ethylbenzene	10.0	9.32	93	83-112	
1,2-Dibromoethane	10.0	9.45	95	79-113	
Diisopropyl ether	10.0	8.96 J	90	77-118	
Naphthalene	10.0	9.17	92	32-141	
m-Xylene & p-Xylene	20.0	18.5	93	83-113	
n-Butylbenzene	10.0	8.95	90	66-125	
Isopropylbenzene	10.0	9.38	94	75-114	
n-Propylbenzene	10.0	9.12	91	74-121	
2-Butanone	20.0	18.6	93	60-126	
4-Methyl-2-pentanone	20.0	18.8	94	63-128	
sec-Butylbenzene	10.0	8.81	88	70-117	
Methyl tert-butyl ether	10.0	8.97	90	52-144	
Methylene Chloride	10.0	9.15	92	66-131	
o-Xylene	10.0	9.45	95	83-113	
Styrene	10.0	9.49	95	79-114	
tert-Butylbenzene	10.0	8.75	88	71-115	
Tetrachloroethene	10.0	9.38	94	79-114	
Toluene	10.0	9.07	91	84-111	
trans-1,2-Dichloroethene	10.0	8.96	90	83-117	
trans-1,3-Dichloropropene	10.0	8.21	82	58-117	
Trichloroethene	10.0	9.28	93	76-117	
Trichlorofluoromethane	10.0	10.5	105	49-157	
Vinyl acetate	10.0	8.54	85	46-161	
Vinyl chloride	10.0	8.63	86	53-127	
tert-Butyl alcohol	200	195	98	70-130	
Xylenes, Total	30.0	28.0	93	83-112	
Dibromochloromethane	10.0	8.17	82	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5319.D

Lab ID: 240-10770-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	40.0	4.0 U	40.8	102	64-118	
1,1,1-Trichloroethane	40.0	4.0 U	38.3	96	68-121	
1,1,2,2-Tetrachloroethane	40.0	4.0 U	39.7	99	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	40.0	4.0 U	42.8	107	70-152	
1,1-Dichloroethane	40.0	4.0 U	39.4	98	79-116	
1,1-Dichloroethene	40.0	4.0 U	40.4	101	74-135	
1,1-Dichloropropene	40.0	4.0 U	38.5	96	80-114	
1,2,3-Trichlorobenzene	40.0	4.0 U	42.0	105	45-129	
1,2,3-Trichloropropane	40.0	4.0 U	39.8	100	67-132	
1,2,3-Trimethylbenzene	40.0	20 U	40.4	101	70-130	
1,2,4-Trichlorobenzene	40.0	4.0 U	38.7	97	38-138	
1,2,4-Trimethylbenzene	40.0	4.0 U	39.2	98	67-124	
1,2-Dibromo-3-Chloropropane	40.0	8.0 U	39.8	100	32-139	
1,2-Dichlorobenzene	40.0	4.0 U	39.6	99	75-111	
1,2-Dichloroethane	40.0	4.0 U	40.0	100	68-129	
1,2-Dichloropropane	40.0	4.0 U	39.6	99	78-115	
1,3-Dichlorobenzene	40.0	4.0 U	38.8	97	73-110	
1,3-Dichloropropane	40.0	4.0 U	39.4	99	74-118	
1,4-Dichlorobenzene	40.0	4.0 U	38.8	97	75-110	
2,2-Dichloropropane	40.0	4.0 U	36.1	90	38-127	
2-Chloroethyl vinyl ether	40.0	40 U	40 U	0	10-150	F
2-Chlorotoluene	40.0	4.0 U	37.7	94	69-117	
2-Hexanone	80.0	40 U	83.2	104	47-139	
Bromobenzene	40.0	4.0 U	38.6	97	71-116	
Bromochloromethane	40.0	4.0 U	39.0	98	73-121	
4-Chlorotoluene	40.0	4.0 U	37.9	95	71-116	
p-Isopropyltoluene	40.0	4.0 U	41.2	103	64-122	
Acetone	80.0	40 U	82.4	103	33-145	
Benzene	40.0	4.0 U	39.5	99	72-121	
Bromoform	40.0	4.0 U	32.5	81	32-128	
Bromomethane	40.0	4.0 U	30.2	76	10-186	
Carbon disulfide	40.0	4.0 U	34.8	87	57-147	
Carbon tetrachloride	40.0	4.0 U	38.9	97	59-129	
Chlorobenzene	40.0	4.0 U	39.2	98	80-110	
Chloroethane	40.0	4.0 U	35.6	89	21-165	
Chloroform	40.0	4.0 U	37.7	94	76-118	
Chloromethane	40.0	4.0 U	40.8	102	33-132	
cis-1,2-Dichloroethene	40.0	1.4 J	40.4	97	70-120	
cis-1,3-Dichloropropene	40.0	4.0 U	32.8	82	51-110	
Hexachlorobutadiene	40.0	4.0 U	34.7	87	27-132	
Dibromomethane	40.0	4.0 U	40.0	100	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5319.D

Lab ID: 240-10770-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	40.0	4.0 U	39.3	98	67-120	
Dichlorodifluoromethane	40.0	4.0 U	26.6	66	17-128	
Ethylbenzene	40.0	4.0 U	38.8	97	75-116	
1,2-Dibromoethane	40.0	4.0 U	39.3	98	74-113	
Diisopropyl ether	40.0	40 U	35.6 J	89	73-118	
Naphthalene	40.0	4.0 U	40.8	102	15-158	
m-Xylene & p-Xylene	80.0	8.0 U	78.0	98	75-117	
n-Butylbenzene	40.0	4.0 U	39.2	98	56-127	
Isopropylbenzene	40.0	4.0 U	39.7	99	68-116	
n-Propylbenzene	40.0	4.0 U	40.4	101	64-124	
2-Butanone	80.0	40 U	80.0	100	54-129	
4-Methyl-2-pentanone	80.0	40 U	83.6	105	56-131	
sec-Butylbenzene	40.0	4.0 U	39.0	97	60-119	
Methyl tert-butyl ether	40.0	20 U	35.9	90	46-144	
Methylene Chloride	40.0	4.0 U	39.9	100	63-128	
o-Xylene	40.0	4.0 U	39.4	98	76-116	
Styrene	40.0	4.0 U	39.8	100	71-117	
tert-Butylbenzene	40.0	4.0 U	38.7	97	61-119	
Tetrachloroethene	40.0	4.0 U	40.4	101	70-117	
Toluene	40.0	4.0 U	39.0	98	78-114	
trans-1,2-Dichloroethene	40.0	4.0 U	39.0	98	80-119	
trans-1,3-Dichloropropene	40.0	4.0 U	32.7	82	46-116	
Trichloroethene	40.0	110	145	93	66-120	
Trichlorofluoromethane	40.0	4.0 U	41.2	103	46-157	
Vinyl acetate	40.0	8.0 U	37.0	93	43-157	
Vinyl chloride	40.0	4.0 U	38.8	97	49-130	
tert-Butyl alcohol	800	200 U	821	103	70-130	
Xylenes, Total	120	8.0 U	117	98	76-116	
Dibromochloromethane	40.0	4.0 U	34.9	87	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5320.D

Lab ID: 240-10770-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	40.0	40.0	100	2	30	64-118	
1,1,1-Trichloroethane	40.0	38.7	97	1	30	68-121	
1,1,2,2-Tetrachloroethane	40.0	39.9	100	1	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	40.0	42.0	105	2	30	70-152	
1,1-Dichloroethane	40.0	39.1	98	1	30	79-116	
1,1-Dichloroethene	40.0	40.8	102	1	30	74-135	
1,1-Dichloropropene	40.0	38.3	96	1	30	80-114	
1,2,3-Trichlorobenzene	40.0	40.4	101	4	30	45-129	
1,2,3-Trichloropropane	40.0	38.3	96	4	30	67-132	
1,2,3-Trimethylbenzene	40.0	39.6	99	2	30	70-130	
1,2,4-Trichlorobenzene	40.0	37.4	94	3	30	38-138	
1,2,4-Trimethylbenzene	40.0	38.4	96	2	30	67-124	
1,2-Dibromo-3-Chloropropane	40.0	42.0	105	5	30	32-139	
1,2-Dichlorobenzene	40.0	38.4	96	3	30	75-111	
1,2-Dichloroethane	40.0	39.8	99	1	30	68-129	
1,2-Dichloropropane	40.0	39.4	99	1	30	78-115	
1,3-Dichlorobenzene	40.0	39.2	98	1	30	73-110	
1,3-Dichloropropane	40.0	39.8	99	1	30	74-118	
1,4-Dichlorobenzene	40.0	37.8	95	3	30	75-110	
2,2-Dichloropropane	40.0	35.1	88	3	30	38-127	
2-Chloroethyl vinyl ether	40.0	40 U	0	NC	30	10-150	F
2-Chlorotoluene	40.0	37.6	94	0	30	69-117	
2-Hexanone	80.0	84.4	106	1	30	47-139	
Bromobenzene	40.0	38.5	96	0	30	71-116	
Bromochloromethane	40.0	39.0	98	0	30	73-121	
4-Chlorotoluene	40.0	37.2	93	2	30	71-116	
p-Isopropyltoluene	40.0	39.0	98	5	30	64-122	
Acetone	80.0	73.2	92	12	30	33-145	
Benzene	40.0	39.5	99	0	30	72-121	
Bromoform	40.0	33.7	84	4	30	32-128	
Bromomethane	40.0	30.3	76	0	30	10-186	
Carbon disulfide	40.0	35.0	88	1	30	57-147	
Carbon tetrachloride	40.0	38.7	97	1	30	59-129	
Chlorobenzene	40.0	39.0	97	1	30	80-110	
Chloroethane	40.0	34.5	86	3	30	21-165	
Chloroform	40.0	37.6	94	0	30	76-118	
Chloromethane	40.0	38.2	96	6	30	33-132	
cis-1,2-Dichloroethene	40.0	39.8	96	1	30	70-120	
cis-1,3-Dichloropropene	40.0	33.3	83	1	30	51-110	
Hexachlorobutadiene	40.0	35.1	88	1	30	27-132	
Dibromomethane	40.0	40.4	101	1	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5320.D

Lab ID: 240-10770-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	40.0	40.4	101	3	30	67-120	
Dichlorodifluoromethane	40.0	26.5	66	0	30	17-128	
Ethylbenzene	40.0	39.1	98	1	30	75-116	
1,2-Dibromoethane	40.0	40.0	100	2	30	74-113	
Diisopropyl ether	40.0	36.8 J	92	3	30	73-118	
Naphthalene	40.0	39.7	99	3	30	15-158	
m-Xylene & p-Xylene	80.0	78.0	98	0	30	75-117	
n-Butylbenzene	40.0	37.6	94	4	30	56-127	
Isopropylbenzene	40.0	39.0	97	2	30	68-116	
n-Propylbenzene	40.0	38.5	96	5	30	64-124	
2-Butanone	80.0	79.2	99	1	30	54-129	
4-Methyl-2-pentanone	80.0	84.8	106	1	30	56-131	
sec-Butylbenzene	40.0	37.6	94	3	30	60-119	
Methyl tert-butyl ether	40.0	36.4	91	2	30	46-144	
Methylene Chloride	40.0	38.1	95	5	30	63-128	
o-Xylene	40.0	39.0	97	1	30	76-116	
Styrene	40.0	39.7	99	0	30	71-117	
tert-Butylbenzene	40.0	37.7	94	3	30	61-119	
Tetrachloroethene	40.0	40.4	101	0	30	70-117	
Toluene	40.0	39.0	98	0	30	78-114	
trans-1,2-Dichloroethene	40.0	37.5	94	4	30	80-119	
trans-1,3-Dichloropropene	40.0	33.8	85	3	30	46-116	
Trichloroethene	40.0	142	87	2	30	66-120	
Trichlorofluoromethane	40.0	41.2	103	0	30	46-157	
Vinyl acetate	40.0	36.6	92	1	30	43-157	
Vinyl chloride	40.0	38.9	97	0	30	49-130	
tert-Butyl alcohol	800	808	101	2	30	70-130	
Xylenes, Total	120	117	98	0	30	76-116	
Dibromochloromethane	40.0	35.1	88	1	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
GSP-MW1-042612	240-10727-2	50	55	48	53	48	57
GSP-MW2-042612	240-10727-3	41	40	43	44	31	65
GSP-MW3-042612	240-10727-4	43	41	42	44	25	58
	MB 240-42628/21-A	51	51	49	51	42	64
	LCS 240-42628/22-A	47	52	51	62	71	70

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: STD6 240-42742/5 Date Analyzed: 05/04/2012 09:10

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0504005.D Heated Purge: (Y/N) N

Calibration ID: 8512

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		219186	3.54	906004	4.43	506851	5.70
UPPER LIMIT		438372	4.04	1812008	4.93	1013702	6.20
LOWER LIMIT		109593	3.04	453002	3.93	253426	5.20
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42742/11		200662	3.54	858756	4.43	480521	5.69
CCV 240-43097/2 CCVIS		253535	3.56	1030792	4.46	576453	5.72
CCV 240-43267/2 CCVIS		212907	3.57	882854	4.47	489077	5.73

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: STD6 240-42742/5 Date Analyzed: 05/04/2012 09:10

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0504005.D Heated Purge: (Y/N) N

Calibration ID: 8512

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		779335	6.78	692712	8.73	613581	10.16
UPPER LIMIT		1558670	7.28	1385424	9.23	1227162	10.66
LOWER LIMIT		389668	6.28	346356	8.23	306791	9.66
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42742/11		752799	6.78	667848	8.74	587916	10.17
CCV 240-43097/2 CCVIS		918418	6.82	826938	8.78	733433	10.24
CCV 240-43267/2 CCVIS		780208	6.82	693635	8.80	627638	10.27

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: CCV 240-43097/2 Date Analyzed: 05/08/2012 09:17

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0508002.D Heated Purge: (Y/N) N

Calibration ID: 8516

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		253535	3.56	1030792	4.46	576453	5.72
UPPER LIMIT		507070	4.06	2061584	4.96	1152906	6.22
LOWER LIMIT		126768	3.06	515396	3.96	288227	5.22
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-43097/3		244354	3.56	1012101	4.45	564483	5.72
MB 240-42628/21-A		236967	3.56	974867	4.45	541017	5.72
LCS 240-42628/22-A		201100	3.56	834673	4.46	498867	5.72

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: CCV 240-43097/2 Date Analyzed: 05/08/2012 09:17

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0508002.D Heated Purge: (Y/N) N

Calibration ID: 8516

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		918418	6.82	826938	8.78	733433	10.24
UPPER LIMIT		1836836	7.32	1653876	9.28	1466866	10.74
LOWER LIMIT		459209	6.32	413469	8.28	366717	9.74
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-43097/3		900656	6.82	776844	8.78	696102	10.24
MB 240-42628/21-A		860008	6.81	735356	8.78	655863	10.24
LCS 240-42628/22-A		852722	6.83	791515	8.81	796956	10.37

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: CCV 240-43267/2 Date Analyzed: 05/09/2012 07:11

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0509002.D Heated Purge: (Y/N) N

Calibration ID: 8516

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		212907	3.57	882854	4.47	489077	5.73
UPPER LIMIT		425814	4.07	1765708	4.97	978154	6.23
LOWER LIMIT		106454	3.07	441427	3.97	244539	5.23
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-10727-2	GSP-MW1-042612	171132	3.57	777494	4.47	486493	5.73
240-10727-3	GSP-MW2-042612	181537	3.57	767785	4.47	467061	5.74
240-10727-4	GSP-MW3-042612	199438	3.57	844790	4.47	498714	5.74

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: CCV 240-43267/2 Date Analyzed: 05/09/2012 07:11

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0509002.D Heated Purge: (Y/N) N

Calibration ID: 8516

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		780208	6.82	693635	8.80	627638	10.27
UPPER LIMIT		1560416	7.32	1387270	9.30	1255276	10.77
LOWER LIMIT		390104	6.32	346818	8.30	313819	9.77
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-10727-2	GSP-MW1-042612	822145	6.83	766324	8.81	730206	10.29
240-10727-3	GSP-MW2-042612	807444	6.83	749640	8.80	721092	10.29
240-10727-4	GSP-MW3-042612	848434	6.83	762465	8.80	724464	10.29

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab File ID: 0508006.D Lab Sample ID: MB 240-42628/21-A

Matrix: Water Date Extracted: 05/03/2012 09:48

Instrument ID: A4AG2 Date Analyzed: 05/08/2012 10:28

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42628/22-A	0508007.D	05/08/2012 10:45
GSP-MW1-042612	240-10727-2	0509019.D	05/09/2012 12:12
GSP-MW2-042612	240-10727-3	0509020.D	05/09/2012 12:30
GSP-MW3-042612	240-10727-4	0509021.D	05/09/2012 12:47

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42628/21-A

Matrix: Water | Lab File ID: 0508006.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/03/2012 09:48

Sample wt/vol: 1000(mL) | Date Analyzed: 05/08/2012 10:28

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43097 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	51		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	42		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	49		27-111
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	64		37-119

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0508007.D

Lab ID: LCS 240-42628/22-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	7.06	35	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab File ID: 0504001.D DFTPP Injection Date: 05/04/2012

Instrument ID: A4AG2 DFTPP Injection Time: 07:58

Analysis Batch No.: 42742

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	40.5	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	43.2	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	54.5	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	25.5	
365	Greater than 0.75% of mass 198	3.3	
441	Present, but less than mass 443	12.0	
442	40.0 - 110.0% of mass 198	82.7	
443	15.0 - 24.0% of mass 442	15.8	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-42742/2	0504002.D	05/04/2012	08:17
	STD8 240-42742/3	0504003.D	05/04/2012	08:34
	STD7 240-42742/4	0504004.D	05/04/2012	08:52
	STD6 240-42742/5	0504005.D	05/04/2012	09:10
	STD5 240-42742/6	0504006.D	05/04/2012	09:28
	STD4 240-42742/7	0504007.D	05/04/2012	09:46
	STD3 240-42742/8	0504008.D	05/04/2012	10:08
	STD2 240-42742/9	0504009.D	05/04/2012	10:26
	STD1 240-42742/10	0504010.D	05/04/2012	10:44
	ICV 240-42742/11	0504011.D	05/04/2012	11:02

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42742

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/04/2012 08:17 Calibration End Date: 05/04/2012 10:44 Calibration ID: 8512

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42742/10	0504010.D
Level 2	STD2 240-42742/9	0504009.D
Level 3	STD3 240-42742/8	0504008.D
Level 4	STD4 240-42742/7	0504007.D
Level 5	STD5 240-42742/6	0504006.D
Level 6	STD6 240-42742/5	0504005.D
Level 7	STD7 240-42742/4	0504004.D
Level 8	STD8 240-42742/3	0504003.D
Level 9	STD9 240-42742/2	0504002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5558	0.6362 0.5493	0.5710 0.5631	0.5503 0.5213	0.5909	Ave		0.5672				6.0		15.0			
N-Nitrosodimethylamine	0.9249	0.9642 0.9010	0.9706 0.9516	0.9726 0.8914	0.9324	Ave		0.9386				3.3		15.0			
Pyridine	1.5666	1.6849 1.5398	1.5511 1.6018	1.5931 1.5159	1.6078	Ave		1.5826				3.3		15.0			
Ethyl methacrylate	1.2704	1.4493 1.1994	1.3455 1.2699	1.3354 1.1877	1.3248	Ave		1.2978				6.6		15.0			
Benzaldehyde	1.5139 0.8830	1.4618 +++++	1.4344 +++++	1.3720 +++++	1.2634	Ave		1.3214				18.0	*	15.0			
3-Chloropropionitrile	0.8683	0.9086 0.8278	0.9314 0.8677	0.9058 0.8136	0.8471	Ave		0.8713				4.8		15.0			
Malononitrile	1.6929	1.9092 1.4434	1.9549 1.3061	1.9459 1.0936	1.8152	Qua	-0.072	2.0480	-0.038						0.9990		0.9900
Phenol	1.9238	2.1208 1.9170	2.0917 1.9755	2.0229 1.8616	1.9456	Ave		1.9824				4.5		15.0			
Aniline	2.4182	2.5026 2.3690	2.4881 2.5291	2.4704 2.3968	2.3256	Ave		2.4375				2.9		15.0			
Bis(2-chloroethyl)ether	1.5307	1.6964 1.5586	1.6061 1.5486	1.6388 1.4605	1.5302	Ave		1.5712				4.7		15.0			
2-Chlorophenol	1.5629	1.6121 1.5522	1.6132 1.6131	1.6251 1.5053	1.5368	Ave		1.5776				2.8		15.0			
1,3-Dichlorobenzene	1.5726	1.6606 1.5589	1.6328 1.6184	1.6164 1.5057	1.5233	Ave		1.5861				3.5		15.0			
1,4-Dichlorobenzene	1.6253	1.7078 1.6008	1.6472 1.6577	1.6677 1.5632	1.5875	Ave		1.6322				2.9		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICV 240-42742/11 Calibration Date: 05/04/2012 11:02

Instrument ID: A4AG2 Calib Start Date: 05/04/2012 08:17

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/04/2012 10:44

Lab File ID: 0504011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5672	0.5376		9.48	10.0	-5.2	50.0
N-Nitrosodimethylamine	Ave	0.9386	0.9760		10.4	10.0	4.0	50.0
Pyridine	Ave	1.583	1.582		10.0	10.0	-0.0	50.0
Ethyl methacrylate	Ave	1.298	1.209		9.32	10.0	-6.8	50.0
3-Chloropropionitrile	Ave	0.8713	0.8771		10.1	10.0	0.7	50.0
Malononitrile	Qua		1.742		10.6	10.0	6.0	50.0
Benzaldehyde	Ave	1.321	0.9162		6.93	10.0	-30.7	50.0
Phenol	Ave	1.982	1.990		10.0	10.0	0.4	20.0
Aniline	Ave	2.437	2.527		10.4	10.0	3.7	50.0
Bis(2-chloroethyl)ether	Ave	1.571	1.616		10.3	10.0	2.8	50.0
2-Chlorophenol	Ave	1.578	1.600		10.1	10.0	1.4	50.0
1,3-Dichlorobenzene	Ave	1.586	1.579		9.95	10.0	-0.5	50.0
1,4-Dichlorobenzene	Ave	1.632	1.633		10.0	10.0	0.0	20.0
Benzyl alcohol	Ave	1.012	1.045		10.3	10.0	3.3	50.0
1,2-Dichlorobenzene	Ave	1.516	1.523		10.1	10.0	0.5	50.0
2-Methylphenol	Ave	1.458	1.504		10.3	10.0	3.2	50.0
bis (2-chloroisopropyl) ether	Ave	2.135	2.217		10.4	10.0	3.8	50.0
3 & 4 Methylphenol	Ave	1.536	1.581		10.3	10.0	2.9	50.0
N-Nitrosodi-n-propylamine	Ave	1.153	1.211	0.0500	10.5	10.0	5.0	50.0
Acetophenone	Ave	2.107	2.170		10.3	10.0	3.0	50.0
Hexachloroethane	Ave	0.6130	0.6188		10.1	10.0	0.9	50.0
Nitrobenzene	Ave	0.3974	0.3956		9.96	10.0	-0.4	50.0
Isophorone	Ave	0.7337	0.7388		10.1	10.0	0.7	50.0
2,4-Dimethylphenol	Ave	0.3753	0.3822		10.2	10.0	1.8	50.0
2-Nitrophenol	Ave	0.1984	0.2017		10.2	10.0	1.7	20.0
1,3,5-Trichlorobenzene	Ave	0.2951	0.2882		9.76	10.0	-2.4	50.0
Benzoic acid	Qua		0.2348		19.2	20.0	-4.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4330	0.4329		10.0	10.0	-0.0	50.0
2,4-Dichlorophenol	Ave	0.2740	0.2757		10.1	10.0	0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.2908	0.2877		9.89	10.0	-1.1	50.0
Naphthalene	Ave	1.116	1.097		9.83	10.0	-1.7	50.0
4-Chloroaniline	Ave	0.4629	0.4768		10.3	10.0	3.0	50.0
Hexachlorobutadiene	Ave	0.1378	0.1363		9.89	10.0	-1.1	20.0
1,2,3-Trichlorobenzene	Ave	0.2729	0.2667		9.77	10.0	-2.3	50.0
Caprolactam	Ave	0.1296	0.1376		10.6	10.0	6.1	50.0
4-Chloro-3-methylphenol	Ave	0.3309	0.3352		10.1	10.0	1.3	20.0
2-Methylnaphthalene	Ave	0.7167	0.7189		10.0	10.0	0.3	50.0
1-Methylnaphthalene	Ave	0.6856	0.6842		9.98	10.0	-0.2	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4621	0.4537		9.82	10.0	-1.8	50.0
Hexachlorocyclopentadiene	Ave	0.2720	0.2659	0.0500	9.78	10.0	-2.2	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab File ID: 0508001.D DFTPP Injection Date: 05/08/2012

Instrument ID: A4AG2 DFTPP Injection Time: 08:59

Analysis Batch No.: 43097

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	36.3	
68	Less than 2.0% of mass 69	0.1	(0.3)1
69	Mass 69 relative abundance	39.4	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	25.0 - 75.0% of mass 198	51.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	26.5	
365	Greater than 0.75% of mass 198	3.4	
441	Present, but less than mass 443	13.9	
442	40.0 - 110.0% of mass 198	94.7	
443	15.0 - 24.0% of mass 442	18.1	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43097/2	0508002.D	05/08/2012	09:17
	CCV 240-43097/3	0508003.D	05/08/2012	09:34
	MB 240-42628/21-A	0508006.D	05/08/2012	10:28
	LCS 240-42628/22-A	0508007.D	05/08/2012	10:45

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCV 240-43097/2 Calibration Date: 05/08/2012 09:17

Instrument ID: A4AG2 Calib Start Date: 05/04/2012 08:17

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/04/2012 10:44

Lab File ID: 0508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5672	0.6092		10.7	10.0	7.4	50.0
N-Nitrosodimethylamine	Ave	0.9386	0.9128		9.72	10.0	-2.8	50.0
Pyridine	Ave	1.583	1.528		9.66	10.0	-3.4	50.0
Ethyl methacrylate	Ave	1.298	1.233		9.50	10.0	-5.0	50.0
3-Chloropropionitrile	Ave	0.8713	0.8023		9.21	10.0	-7.9	50.0
Malononitrile	Qua		1.589		9.45	10.0	-5.5	50.0
Benzaldehyde	Ave	1.321	0.5584		4.23	10.0	-57.7*	50.0
Phenol	Ave	1.982	1.879		9.48	10.0	-5.2	20.0
Aniline	Ave	2.437	2.433		9.98	10.0	-0.2	50.0
Bis(2-chloroethyl)ether	Ave	1.571	1.550		9.86	10.0	-1.4	50.0
2-Chlorophenol	Ave	1.578	1.554		9.85	10.0	-1.5	50.0
1,3-Dichlorobenzene	Ave	1.586	1.562		9.85	10.0	-1.5	50.0
1,4-Dichlorobenzene	Ave	1.632	1.617		9.91	10.0	-0.9	50.0
Benzyl alcohol	Ave	1.012	0.9465		9.35	10.0	-6.5	50.0
1,2-Dichlorobenzene	Ave	1.516	1.513		9.98	10.0	-0.2	50.0
2-Methylphenol	Ave	1.458	1.441		9.89	10.0	-1.1	50.0
bis (2-chloroisopropyl) ether	Ave	2.135	1.912		8.95	10.0	-10.5	50.0
3 & 4 Methylphenol	Ave	1.536	1.461		9.51	10.0	-4.9	50.0
N-Nitrosodi-n-propylamine	Ave	1.153	1.079	0.0500	9.36	10.0	-6.4	50.0
Acetophenone	Ave	2.107	1.998		9.48	10.0	-5.2	50.0
Hexachloroethane	Ave	0.6130	0.5855		9.55	10.0	-4.5	50.0
Nitrobenzene	Ave	0.3974	0.3722		9.37	10.0	-6.3	50.0
Isophorone	Ave	0.7337	0.7041		9.60	10.0	-4.0	50.0
2,4-Dimethylphenol	Ave	0.3753	0.3692		9.84	10.0	-1.6	50.0
2-Nitrophenol	Ave	0.1984	0.2045		10.3	10.0	3.1	20.0
1,3,5-Trichlorobenzene	Ave	0.2951	0.3008		10.2	10.0	1.9	50.0
Bis(2-chloroethoxy)methane	Ave	0.4330	0.4172		9.63	10.0	-3.7	50.0
Benzoic acid	Qua		0.2347		19.2	20.0	-4.0	50.0
2,4-Dichlorophenol	Ave	0.2740	0.2790		10.2	10.0	1.8	20.0
1,2,4-Trichlorobenzene	Ave	0.2908	0.2924		10.1	10.0	0.6	50.0
Naphthalene	Ave	1.116	1.094		9.81	10.0	-1.9	50.0
4-Chloroaniline	Ave	0.4629	0.4757		10.3	10.0	2.8	50.0
Hexachlorobutadiene	Ave	0.1378	0.1387		10.1	10.0	0.7	20.0
1,2,3-Trichlorobenzene	Ave	0.2729	0.2744		10.1	10.0	0.6	50.0
Caprolactam	Ave	0.1296	0.1302		10.0	10.0	0.4	50.0
4-Chloro-3-methylphenol	Ave	0.3309	0.3286		9.93	10.0	-0.7	20.0
2-Methylnaphthalene	Ave	0.7167	0.7146		9.97	10.0	-0.3	50.0
1-Methylnaphthalene	Ave	0.6856	0.6786		9.90	10.0	-1.0	50.0
Hexachlorocyclopentadiene	Ave	0.2720	0.2731	0.0500	10.0	10.0	0.4	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4621	0.4707		10.2	10.0	1.9	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab File ID: 0509001.D DFTPP Injection Date: 05/09/2012

Instrument ID: A4AG2 DFTPP Injection Time: 06:53

Analysis Batch No.: 43267

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	37.9	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	40.0	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	53.7	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	7.0	
275	10.0- 30.0% of mass 198	26.2	
365	Greater than 0.75% of mass 198	3.4	
441	Present, but less than mass 443	12.9	
442	40.0 - 110.0% of mass 198	86.9	
443	15.0 - 24.0% of mass 442	16.8	(19.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43267/2	0509002.D	05/09/2012	07:11
GSP-MW1-042612	240-10727-2	0509019.D	05/09/2012	12:12
GSP-MW2-042612	240-10727-3	0509020.D	05/09/2012	12:30
GSP-MW3-042612	240-10727-4	0509021.D	05/09/2012	12:47

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCV 240-43267/2 Calibration Date: 05/09/2012 07:11

Instrument ID: A4AG2 Calib Start Date: 05/04/2012 08:17

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/04/2012 10:44

Lab File ID: 0509002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5672	0.8073		14.2	10.0	42.3	50.0
N-Nitrosodimethylamine	Ave	0.9386	0.9124		9.72	10.0	-2.8	50.0
Pyridine	Ave	1.583	1.472		9.30	10.0	-7.0	50.0
Ethyl methacrylate	Ave	1.298	1.207		9.30	10.0	-7.0	50.0
3-Chloropropionitrile	Ave	0.8713	0.7885		9.05	10.0	-9.5	50.0
Malononitrile	Qua		1.575		9.34	10.0	-6.6	50.0
Benzaldehyde	Ave	1.321	0.6307		4.77	10.0	-52.3*	50.0
Phenol	Ave	1.982	1.875		9.46	10.0	-5.4	20.0
Aniline	Ave	2.437	2.146		8.80	10.0	-12.0	50.0
Bis(2-chloroethyl)ether	Ave	1.571	1.743		11.1	10.0	10.9	50.0
2-Chlorophenol	Ave	1.578	1.581		10.0	10.0	0.2	50.0
1,3-Dichlorobenzene	Ave	1.586	1.578		9.95	10.0	-0.5	50.0
1,4-Dichlorobenzene	Ave	1.632	1.650		10.1	10.0	1.1	50.0
1,2-Dichlorobenzene	Ave	1.516	1.534		10.1	10.0	1.2	50.0
Benzyl alcohol	Ave	1.012	0.4921		4.86	10.0	-51.4*	50.0
2-Methylphenol	Ave	1.458	1.254		8.60	10.0	-14.0	50.0
bis (2-chloroisopropyl) ether	Ave	2.135	1.878		8.80	10.0	-12.0	50.0
3 & 4 Methylphenol	Ave	1.536	1.665		10.8	10.0	8.4	50.0
N-Nitrosodi-n-propylamine	Ave	1.153	1.063	0.0500	9.22	10.0	-7.8	50.0
Acetophenone	Ave	2.107	2.007		9.52	10.0	-4.8	50.0
Hexachloroethane	Ave	0.6130	0.5993		9.78	10.0	-2.2	50.0
Nitrobenzene	Ave	0.3974	0.3689		9.28	10.0	-7.2	50.0
Isophorone	Ave	0.7337	0.6730		9.17	10.0	-8.3	50.0
2-Nitrophenol	Ave	0.1984	0.1984		10.0	10.0	0.0	20.0
1,3,5-Trichlorobenzene	Ave	0.2951	0.3045		10.3	10.0	3.2	50.0
2,4-Dimethylphenol	Ave	0.3753	0.3673		9.79	10.0	-2.1	50.0
Bis(2-chloroethoxy)methane	Ave	0.4330	0.4111		9.49	10.0	-5.1	50.0
Benzoic acid	Qua		0.1763		15.0	20.0	-25.0	50.0
2,4-Dichlorophenol	Ave	0.2740	0.2820		10.3	10.0	2.9	20.0
1,2,4-Trichlorobenzene	Ave	0.2908	0.2944		10.1	10.0	1.2	50.0
Naphthalene	Ave	1.116	1.087		9.74	10.0	-2.6	50.0
4-Chloroaniline	Ave	0.4629	0.4557		9.84	10.0	-1.6	50.0
Hexachlorobutadiene	Ave	0.1378	0.1400		10.2	10.0	1.6	20.0
1,2,3-Trichlorobenzene	Ave	0.2729	0.2746		10.1	10.0	0.6	50.0
Caprolactam	Ave	0.1296	0.1083		8.36	10.0	-16.4	50.0
4-Chloro-3-methylphenol	Ave	0.3309	0.3271		9.88	10.0	-1.2	20.0
2-Methylnaphthalene	Ave	0.7167	0.7165		10.0	10.0	-0.0	50.0
1-Methylnaphthalene	Ave	0.6856	0.6783		9.89	10.0	-1.1	50.0
Hexachlorocyclopentadiene	Ave	0.2720	0.2381	0.0500	8.75	10.0	-12.5	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4621	0.4704		10.2	10.0	1.8	50.0

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
GSP-MW1-042612	240-10727-2	65
GSP-MW2-042612	240-10727-3	63
GSP-MW3-042612	240-10727-4	62
	MB 240-42085/7	63
	LCS 240-42085/8	75
GSP-MW1-042612 MS	240-10727-2 MS	72
GSP-MW1-042612 MSD	240-10727-2 MSD	72

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: MB 240-42085/7

Matrix: Water Date Extracted: 04/29/2012 15:36

Lab File ID:(1) YF042907.D Lab File ID:(2)

Date Analyzed:(1) 04/29/2012 15:36 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-42085/8	04/29/2012 16:14	
GSP-MW1-042612	240-10727-2	04/29/2012 16:53	
GSP-MW1-042612 MS	240-10727-2 MS	04/29/2012 17:31	
GSP-MW1-042612 MSD	240-10727-2 MSD	04/29/2012 18:10	
GSP-MW2-042612	240-10727-3	04/29/2012 18:48	
GSP-MW3-042612	240-10727-4	04/29/2012 19:26	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42085/7

Matrix: Water Lab File ID: YF042907.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/29/2012 15:36

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42085 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	26.3	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042908.D

Lab ID: LCS 240-42085/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	945	118	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042910.D

Lab ID: 240-10727-2 MS Client ID: GSP-MW1-042612 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	33 J	885	106	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF042911.D

Lab ID: 240-10727-2 MSD Client ID: GSP-MW1-042612 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	942	114	6	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: CCV 240-42085/6 Date Analyzed: 04/29/2012 14:57

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF042906.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.75		
UPPER LIMIT				9.85		
LOWER LIMIT				9.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-42085/6 CCVRT		04/29/2012 14:57	YF042906.D	9.75		
MB 240-42085/7		04/29/2012 15:36	YF042907.D	9.75		
LCS 240-42085/8		04/29/2012 16:14	YF042908.D	9.75		
240-10727-2	GSP-MW1-042612	04/29/2012 16:53	YF042909.D	9.75		
240-10727-2 MS	GSP-MW1-042612 MS	04/29/2012 17:31	YF042910.D	9.75		
240-10727-2 MSD	GSP-MW1-042612 MSD	04/29/2012 18:10	YF042911.D	9.75		
240-10727-3	GSP-MW2-042612	04/29/2012 18:48	YF042912.D	9.75		
240-10727-4	GSP-MW3-042612	04/29/2012 19:26	YF042913.D	9.75		
CCV 240-42085/14		04/29/2012 20:04	YF042914.D	9.75		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

ICV

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: YPID Start Date: 04/29/2012 13:38

Analysis Batch Number: 42085 End Date: 04/30/2012 03:37

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/29/2012 13:38	1		RTX-VRX 0.45(mm)
CCV 240-42085/6 CCVRT		04/29/2012 14:57 ✓	1	YF042906.D	RTX-VRX 0.45(mm)
MB 240-42085/7		04/29/2012 15:36	1	YF042907.D	RTX-VRX 0.45(mm)
LCS 240-42085/8		04/29/2012 16:14	1	YF042908.D	RTX-VRX 0.45(mm)
240-10727-2	GSP-MW1-042612	04/29/2012 16:53	1	YF042909.D	RTX-VRX 0.45(mm)
240-10727-2 MS	GSP-MW1-042612 MS	04/29/2012 17:31	1	YF042910.D	RTX-VRX 0.45(mm)
240-10727-2 MSD	GSP-MW1-042612 MSD	04/29/2012 18:10	1	YF042911.D	RTX-VRX 0.45(mm)
240-10727-3	GSP-MW2-042612	04/29/2012 18:48	1	YF042912.D	RTX-VRX 0.45(mm)
240-10727-4	GSP-MW3-042612	04/29/2012 19:26	1	YF042913.D	RTX-VRX 0.45(mm)
CCV 240-42085/14		04/29/2012 20:04 ✓	1	YF042914.D	RTX-VRX 0.45(mm)
ZZZZZ		04/29/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		04/29/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		04/29/2012 22:00	1		RTX-VRX 0.45(mm)
ZZZZZ		04/29/2012 22:38	1		RTX-VRX 0.45(mm)
ZZZZZ		04/29/2012 23:16	1		RTX-VRX 0.45(mm)
ZZZZZ		04/29/2012 23:53	1		RTX-VRX 0.45(mm)
ZZZZZ		04/30/2012 00:30	1		RTX-VRX 0.45(mm)
ZZZZZ		04/30/2012 01:08	1		RTX-VRX 0.45(mm)
CCV 240-42085/23		04/30/2012 01:45	1		RTX-VRX 0.45(mm)
ZZZZZ		04/30/2012 02:22	1		RTX-VRX 0.45(mm)
ZZZZZ		04/30/2012 03:00	1		RTX-VRX 0.45(mm)
ZZZZZ		04/30/2012 03:37	1		RTX-VRX 0.45(mm)

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCV 240-42085/6 Calibration Date: 04/29/2012 14:57

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042906.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	301585		805	800	0.6	15.0
C6-C12	Ave	336931	335637		797	800	-0.4	15.0
Trifluorotoluene (Surr)	Ave	420494	318697		7.58	10.0	-24.2*	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCV 240-42085/14 Calibration Date: 04/29/2012 20:04

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF042914.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	304718		813	800	1.6	15.0
C6-C12	Ave	336931	342034		812	800	1.5	15.0
Trifluorotoluene (Surr)	Ave	420494	330585		7.86	10.0	-21.4*	15.0

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C91 #
GSP-MW1-042612	240-10727-2	54
GSP-MW2-042612	240-10727-3	50
GSP-MW3-042612	240-10727-4	54
	MB 240-42661/8-A	60
	LCS 240-42661/9-A	80

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: MB 240-42661/8-A

Matrix: Water Date Extracted: 05/03/2012 11:54

Lab File ID:(1) P5B05052.D Lab File ID:(2)

Date Analyzed:(1) 05/04/2012 13:38 Date Analyzed:(2)

Instrument ID:(1) A2HP5R Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
GSP-MW1-042612	240-10727-2	05/04/2012 10:04	
GSP-MW2-042612	240-10727-3	05/04/2012 10:35	
GSP-MW3-042612	240-10727-4	05/04/2012 11:06	
	LCS 240-42661/9-A	05/04/2012 14:08	

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10727-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42661/8-A

Matrix: Water | Lab File ID: P5B05052.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3510C | Date Extracted: 05/03/2012 11:54

Sample wt/vol: 1000(mL) | Date Analyzed: 05/04/2012 13:38

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	60		10-110

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P5B05053.D

Lab ID: LCS 240-42661/9-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	2330	93	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Sample No.: CCVRT 240-42755/4 Date Analyzed: 05/04/2012 09:33

Instrument ID: A2HP5R GC Column: ID: ()

Lab File ID (Standard): P5B05044.D Heated Purge: (Y/N) N

Calibration ID: 8454

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				4.03		
UPPER LIMIT				4.13		
LOWER LIMIT				3.93		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-42755/4		05/04/2012 09:33	P5B05044.D	4.03		
240-10727-2	GSP-MW1-042612	05/04/2012 10:04	P5B05045.D	4.03		
240-10727-3	GSP-MW2-042612	05/04/2012 10:35	P5B05046.D	4.03		
240-10727-4	GSP-MW3-042612	05/04/2012 11:06	P5B05047.D	4.03		
MB 240-42661/8-A		05/04/2012 13:38	P5B05052.D	4.03		
LCS 240-42661/9-A		05/04/2012 14:08	P5B05053.D	4.03		
CCV 240-42755/14		05/04/2012 14:39	P5B05054.D	4.03		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: A2HP5R Start Date: 04/30/2012 10:28

Analysis Batch Number: 42117 End Date: 04/30/2012 17:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-42117/4 IC		04/30/2012 10:28	1	P5B04304.D	
STD2 240-42117/5 IC		04/30/2012 10:58	1	P5B04305.D	
ICRT 240-42117/6		04/30/2012 11:29	1	P5B04306.D	
STD4 240-42117/7 IC		04/30/2012 11:59	1	P5B04307.D	
STD5 240-42117/8 IC		04/30/2012 12:29	1	P5B04308.D	
ICV 240-42117/9		04/30/2012 12:59	1	P5B04309.D	
STD1 240-42117/10 IC		04/30/2012 13:30	1		
STD2 240-42117/11 IC		04/30/2012 14:00	1		
STD3 240-42117/12 IC		04/30/2012 14:31	1		
STD4 240-42117/13 IC		04/30/2012 15:01	1		
STD5 240-42117/14 IC		04/30/2012 15:32	1		
ICV 240-42117/15		04/30/2012 16:02	1		
ZZZZZ		04/30/2012 16:33	1		
CCV 240-42117/18		04/30/2012 17:33	1		

FORM VI

DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA

EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10727-1 Analy Batch No.: 42117

SDG No.:

Instrument ID: A2HP5R GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2012 10:28 Calibration End Date: 04/30/2012 12:29 Calibration ID: 8454

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42117/4	P5B04304.D
Level 2	STD2 240-42117/5	P5B04305.D
Level 3	ICRT 240-42117/6	P5B04306.D
Level 4	STD4 240-42117/7	P5B04307.D
Level 5	STD5 240-42117/8	P5B04308.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	202380 139479	154697	180905	178149	Ave		171121.938				14.0		20.0			
n-Nonane	238010 169073	182724	223067	217729	Ave		206120.531				14.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICV 240-42117/9 Calibration Date: 04/30/2012 12:59

Instrument ID: A2HP5R Calib Start Date: 04/30/2012 10:28

GC Column: ID: Calib End Date: 04/30/2012 12:29

Lab File ID: P5B04309.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	171122	171949		502	500	0.5	20.0

ICV

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: A2HP5R Start Date: 05/04/2012 09:33

Analysis Batch Number: 42755 End Date: 05/04/2012 14:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-42755/4		05/04/2012 09:33	✓ 1	P5B05044.D	
240-10727-2	GSP-MW1-042612	05/04/2012 10:04	1	P5B05045.D	
240-10727-3	GSP-MW2-042612	05/04/2012 10:35	1	P5B05046.D	
240-10727-4	GSP-MW3-042612	05/04/2012 11:06	1	P5B05047.D	
ZZZZZ		05/04/2012 11:36	1		
ZZZZZ		05/04/2012 12:07	1		
ZZZZZ		05/04/2012 12:37	1		
ZZZZZ		05/04/2012 13:08	1		
MB 240-42661/8-A		05/04/2012 13:38	1	P5B05052.D	
LCS 240-42661/9-A		05/04/2012 14:08	1	P5B05053.D	
CCV 240-42755/14		05/04/2012 14:39	✓ 1	P5B05054.D	

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCVRT 240-42755/4 Calibration Date: 05/04/2012 09:33

Instrument ID: A2HP5R Calib Start Date: 04/30/2012 10:28

GC Column: ID: Calib End Date: 04/30/2012 12:29

Lab File ID: P5B05044.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	171122	146148		427	500	-14.6	15.0
n-Nonane	Ave	206121	181559		44.0	50.0	-11.9	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: CCV 240-42755/14 Calibration Date: 05/04/2012 14:39

Instrument ID: A2HP5R Calib Start Date: 04/30/2012 10:28

GC Column: ID: Calib End Date: 04/30/2012 12:29

Lab File ID: P5B05054.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	171122	185943		543	500	8.7	15.0
n-Nonane	Ave	206121	228814		55.5	50.0	11.0	15.0

DIESEL RANGE ORGANICS BATCH WORKSHEET

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Batch Number: 42661 Batch Start Date: 05/03/12 11:54 Batch Analyst: Coast, Chris

Batch Method: 3510C Batch End Date:

Lab Sample ID	Client Sample ID	Method Chain	Basis	ReceivedpH	InitialAmount	FinalAmount	FirstAdjustpH	EXDIESELSPKW 00015	EXTPHSURR 00011
240-10727-I-2	GSP-MW1-042612	3510C, 8015B	T	7	1050 mL	5 mL	2		1 mL
240-10727-L-3	GSP-MW2-042612	3510C, 8015B	T	5	1050 mL	5 mL	2		1 mL
240-10727-K-4	GSP-MW3-042612	3510C, 8015B	T	5	990 mL	5 mL	2		1 mL
MB 240-42661/8		3510C, 8015B		7	1000 mL	5 mL	2		1 mL
LCS 240-42661/9		3510C, 8015B		7	1000 mL	5 mL	2	1 mL	1 mL

Batch Notes	
Na2SO4 Lot Number	275338
Prep Solvent Lot #	470851
Person's name who did the prep	cc/bpm

Basis	Basis Description
T	Total/NA

HOLDTIME

SDG 240-10727-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HG	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HG	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
M	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
M	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
M	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
HGF	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HGF	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HGF	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
MF	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
MF	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
MF	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
PCL	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/7/2012	5/15/2012	11	8	19
PCL	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/7/2012	5/15/2012	11	8	19
PCL	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/7/2012	5/15/2012	11	8	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/3/2012	5/9/2012	7	6	13
OS	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/3/2012	5/9/2012	7	6	13
OS	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/3/2012	5/9/2012	7	6	13
OV	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/1/2012	5/1/2012	5	0	5
OV	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/1/2012	5/1/2012	5	0	5
OV	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/1/2012	5/1/2012	5	0	5
OV	UG/L	TB-042612	240-10727-1	NM	4/26/2012	5/1/2012	5/1/2012	5	0	5
DRO	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/3/2012	5/4/2012	7	1	8
DRO	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/3/2012	5/4/2012	7	1	8
DRO	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/3/2012	5/4/2012	7	1	8
GRO	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	4/29/2012	4/29/2012	3	0	3
GRO	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	4/29/2012	4/29/2012	3	0	3
GRO	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	4/29/2012	4/29/2012	3	0	3

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE: JUNE 27, 2012**

FROM: **TERRI L. SOLOMON** **COPIES: DV FILE**

SUBJECT: **INORGANIC AND ORGANIC DATA VALIDATION – SELECT METALS, PERCHLORATE**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-10727-1

SAMPLES: 3/Aqueous/

GSP-MW1-042612 GSP-MW2-042612
GSP-MW3-042612

Overview

The sample set for Martin State Airport - Groundwater, SDG 240-10727-1, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for perchlorate and select total and dissolved metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, tungsten, vanadium and zinc. The samples were collected by Tetra Tech on April 26, 2012 and analyzed by TestAmerica. Metals analyses were conducted using SW-846 method 6020. Mercury analyses were conducted using SW-846 method 7470A. Perchlorate analyses were conducted using SW-846 method 6850.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, laboratory control sample recoveries, matrix spike/matrix spike duplicate recoveries, ICP serial dilution results, internal standard recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The contract required detection limit (CRDL) percent recovery for barium was > 110% quality control limit affecting all samples. Positive results < 2X CRDL for barium were qualified as biased high, "K".

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Antimony[(1)]	0.184 ug/L	0.92 ug/L
Cobalt[(1)]	0.0960 ug/L	0.48 ug/L
Molybdenum[(1)]	3.01 ug/L	15.05 ug/L
Thallium[(1)]	0.664 ug/L	3.32 ug/L
Tungsten[(1)]	1.17 ug/L	5.85 ug/L
Barium[(2)]	1.12 ug/L	5.6 ug/L
Copper[(2)]	0.546 ug/L	2.73 ug/L
Zinc[(2)]	6.30 ug/L	31.5 ug/L
Barium[(3)]	1.02 ug/L	5.1 ug/L
Copper[(3)]	0.607 ug/L	3.03 ug/L
Nickel[(3)]	0.216 ug/L	1.08 ug/L
Zinc[(3)]	9.92 ug/L	49.6 ug/L

(1) Maximum concentration present in a method blank affecting all samples.
(2) Maximum concentration present in a preparation blank (240-42315) affecting total and dissolved samples GSP-MW1-042612 and GSP-MW2-042612.
(3) Maximum concentration present in a preparation blank (240-42347) affecting total and dissolved samples GSP-MW3-042612.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results less than the blank action level reported for antimony, copper, molybdenum, thallium, tungsten and zinc were qualified "B" as a result of laboratory blank contamination.

- The internal standard recoveries for Lithium-6 were < 60% quality control limit affecting total and dissolved sample GSP-MW1-042612. The nondetected results reported for beryllium were qualified as biased low, "UL".

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

Nondetected results are reported to the method detection limits.

The contract required detection limit (CRDL) percent recoveries for cadmium, cobalt, copper, lead, nickel, silver and thallium were > 110% quality control limit affecting all samples. However,

no validation actions were required as all sample results were either > 2X CRDL, nondetects or were qualified as a result of blank contamination.

Executive Summary

Laboratory Performance: Several contaminants were present in the laboratory method / preparation blanks. The CRDL percent recovery for barium was > 110% quality control limit affecting all samples.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated. The internal standard recoveries for Lithium-6 were < 60% quality control limit affecting total and dissolved sample GSP-MW1-042612.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993 and the Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4		
FRACTION: M	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.18	B	A	0.13	U		0.27	B	A
ARSENIC		5.7			0.99	J	P	6		
BARIUM		73			10			9.9	K	C
BERYLLIUM		0.2	UL	N	0.2	U		0.2	U	
CADMIUM		0.13	U		0.13	U		0.13	U	
CHROMIUM		0.86	J	P	0.71	U		0.71	U	
COBALT		9.3			12			17		
COPPER		1.6	B	A	1.3	B	A	1.8	B	A
LEAD		0.18	U		0.18	U		0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		2.1	B	A	0.13	B	A	0.84	B	A
NICKEL		8.6			12			16		
SELENIUM		0.59	J	P	0.57	U		0.57	U	
SILVER		0.08	U		0.08	U		0.08	U	
THALLIUM		0.16	B	A	0.21	B	A	0.88	B	A
TUNGSTEN		0.37	U		0.37	U		1	B	A
VANADIUM		0.8	J	P	0.44	U		0.55	J	P
ZINC		25	B	A	27	B	A	51		

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4		
FRACTION: MF	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.19	B	A	0.13	U		0.13	U	
ARSENIC		5.6			0.92	J	P	5.5		
BARIUM		76			9.9	K	C	9.5	K	C
BERYLLIUM		0.2	UL	N	0.2	U		0.2	U	
CADMIUM		0.13	U		0.13	U		0.13	U	
CHROMIUM		0.82	J	P	0.71	U		0.71	U	
COBALT		9.4			12			16		
COPPER		1	B	A	1.7	B	A	0.67	B	A
LEAD		0.18	U		0.18	U		0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		2.2	B	A	0.093	U		0.25	B	A
NICKEL		8.9			12			15		
SELENIUM		0.72	J	P	0.57	U		0.57	U	
SILVER		0.08	U		0.08	U		0.08	U	
THALLIUM		0.3	B	A	0.16	B	A	0.5	B	A
TUNGSTEN		0.37	U		0.37	U		0.41	B	A
VANADIUM		1	J	P	0.44	U		0.44	U	
ZINC		25	B	A	27	B	A	51		

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612		
SDG: 240-10727-1	LAB_ID	240-10727-2			240-10727-3			240-10727-4		
FRACTION: MISC	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U		0.082	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW1-042612 Lab Sample ID: 240-10727-2

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 10:14

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.18	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	5.7	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	73	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	0.86	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	9.3	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.6	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	2.1	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	8.6	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.59	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.16	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	0.80	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	25	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW1-042612 Lab Sample ID: 240-10727-2

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 10:14

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW2-042612 Lab Sample ID: 240-10727-3

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 12:25

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.99	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	10	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	12	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.3	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.13	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	12	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.21	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	27	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW2-042612 Lab Sample ID: 240-10727-3

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 12:25

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW3-042612 Lab Sample ID: 240-10727-4

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 14:40

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.27	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	6.0	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	9.9	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	17	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.8	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.84	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	16	2.0	0.20	ug/L		B	1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.88	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	1.0	10	0.37	ug/L	J		1	6020
7440-62-2	Vanadium	0.55	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	51	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW3-042612 Lab Sample ID: 240-10727-4

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 14:40

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW1-042612 Lab Sample ID: 240-10727-2

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 10:14

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.19	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	5.6	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	76	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	0.82	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	9.4	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.0	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	2.2	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	8.9	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.72	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.30	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	1.0	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	25	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW2-042612 Lab Sample ID: 240-10727-3

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 12:25

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.92	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	9.9	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	12	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.7	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	12	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.16	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	27	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW3-042612 Lab Sample ID: 240-10727-4

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG ID.:

Matrix: Water Date Sampled: 04/26/2012 14:40

Reporting Basis: WET Date Received: 04/27/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	5.5	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	9.5	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	16	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.67	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.25	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	15	2.0	0.20	ug/L		B	1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.50	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	51	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	0.41	10	0.37	ug/L	J		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

TestAmerica Canton

Client Sample ID: GSP-MW1-042612

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E010420-001	Work Order #...:	MTAGA1AA	Matrix.....:	WATER
Date Sampled...:	04/26/12	Date Received..:	05/01/12		
Prep Date.....:	05/07/12	Analysis Date..:	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: GSP-MW2-042612

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E010420-002	Work Order #...:	MTAGC1AA	Matrix.....:	WATER
Date Sampled...:	04/26/12	Date Received..:	05/01/12		
Prep Date.....:	05/07/12	Analysis Date..:	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: GSP-MW3-042612

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E010420-003	**Work Order #...:** MTAGD1AA		**Matrix.....:** WATER	
Date Sampled...: 04/26/12	**Date Received..:** 05/01/12			
Prep Date.....: 05/07/12	**Analysis Date..:** 05/15/12			
Prep Batch #...: 2128058				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10727-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/27/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.3 and 2.3 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042612 (240-10727-1), GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/01/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42324/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10770-2 in batch 240-42324.

Refer to the QC report for details.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/03/2012 and analyzed on 05/09/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/29/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42085/7 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42628.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/03/2012 and analyzed on 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42661.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/01/2012 and analyzed on 05/02/2012.

The continuing calibration verification (CCV) for Molybdenum associated with batch 42586 recovered above the upper control limit. The samples and method blank associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/01/2012 and analyzed on 05/02/2012.

Barium, Copper and Zinc were detected in method blank MB 240-42315/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-42347/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The continuing calibration verification (CCV) for Molybdenum associated with batch 42586 recovered above the upper control limit. The samples and method blank associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

No other difficulties were encountered during the metals analyses.

All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples GSP-MW1-042612 (240-10727-2), GSP-MW2-042612 (240-10727-3) and GSP-MW3-042612 (240-10727-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Aparavage	Site Contact: Walt Pryor	Lab Contact: Pat Omeara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 1 COCs
City/State/Zip: Germantown, MD 20874	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 301 528-3021		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client: ☐ Lab pickup: ☐ Lab sampling: ☐ Job/SDG No:
Project Name: MSA Grossed Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04021-02	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs	Total ppm	Dss ppm	1,4 Dioxane	DRO	GRO	Perchlorate	Sample Specific Notes / Special Instructions:
TB-042612	4-26-12	—		X						2					N	G	X							
GSP-MW1-042612	↓	1014		X					2	5			5		↓	↓	X	⊗	⊗	X	X	X	⊗	
GSP-MW2-042612		1225		X					2	5			5				X	⊗	⊗	X	X	X	⊗	
GSP-MW3-042612	↓	1440		X					2	5			5		↓	↓	X	⊗	⊗	X	X	X	⊗	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	4-26-12 / 1700			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: Greg Burns	Company: TA	Date/Time: 4/27/12 0915

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TAL-0018 (1008)

05/30/2012

HOLDTIME

SDG 240-10727-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HG	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HG	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
M	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
M	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
M	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
HGF	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HGF	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
HGF	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/2/2012	5/3/2012	6	1	7
MF	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
MF	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
MF	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/1/2012	5/2/2012	5	1	6
PCL	UG/L	GSP-MW3-042612	240-10727-4	NM	4/26/2012	5/7/2012	5/15/2012	11	8	19
PCL	UG/L	GSP-MW2-042612	240-10727-3	NM	4/26/2012	5/7/2012	5/15/2012	11	8	19
PCL	UG/L	GSP-MW1-042612	240-10727-2	NM	4/26/2012	5/7/2012	5/15/2012	11	8	19

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10727-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10727-1	TB-042612	Water	04/26/2012 0000	04/27/2012 0915
240-10727-2	GSP-MW1-042612	Water	04/26/2012 1014	04/27/2012 0915
240-10727-3	GSP-MW2-042612	Water	04/26/2012 1225	04/27/2012 0915
240-10727-4	GSP-MW3-042612	Water	04/26/2012 1440	04/27/2012 0915

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10727-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL NC		SW846 3510C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-42586/5 05/02/2012 06:12				CCV 240-42586/58 05/02/2012 11:16				CCV 240-42586/70 05/02/2012 12:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	83.3		80.0	104	95.6		100	96	94.5		100	95
Arsenic	80.4		80.0	101	98.6		100	99	98.0		100	98
Barium	82.0		80.0	102	96.5		100	96	95.2		100	95
Beryllium	79.3		80.0	99	98.3		100	98	94.7		100	95
Cadmium	81.4		80.0	102	96.8		100	97	96.5		100	96
Chromium	81.6		80.0	102	98.3		100	98	98.4		100	98
Cobalt	81.1		80.0	101	98.8		100	99	100		100	100
Copper	84.4		80.0	105	102		100	102	102		100	102
Lead	82.1		80.0	103	97.8		100	98	96.3		100	96
Molybdenum	84.9		80.0	106	99.5		100	99	99.9		100	100
Nickel	82.5		80.0	103	98.9		100	99	100		100	100
Selenium	82.3		80.0	103	101		100	101	99.7		100	100
Silver	83.8		80.0	105	98.7		100	99	97.9		100	98
Thallium	81.6		80.0	102	99.0		100	99	100		100	100
Tungsten	80.6		80.0	101	98.6		100	99	98.6		100	99
Vanadium	80.2		80.0	100	97.7		100	98	97.1		100	97
Zinc	82.6		80.0	103	100		100	100	99.8		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-42586/82 05/02/2012 13:30				CCV 240-42586/94 05/02/2012 14:35				CCV 240-42586/122 05/02/2012 17:12			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	94.0		100	94	93.3		100	93	95.8		100	96
Arsenic	98.4		100	98	98.7		100	99	97.4		100	97
Barium	96.0		100	96	94.1		100	94	95.6		100	96
Beryllium	96.8		100	97	94.8		100	95	96.2		100	96
Cadmium	95.8		100	96	96.1		100	96	96.5		100	97
Chromium	99.3		100	99	99.9		100	100	99.8		100	100
Cobalt	101		100	101	101		100	101	100		100	100
Copper	102		100	102	102		100	102	101		100	101
Lead	94.7		100	95	94.5		100	94	96.2		100	96
Molybdenum	99.8		100	100	99.3		100	99	112		100	112
Nickel	101		100	101	102		100	102	101		100	101
Selenium	99.8		100	100	99.9		100	100	98.2		100	98
Silver	97.8		100	98	97.3		100	97	98.9		100	99
Thallium	101		100	101	101		100	101	103		100	103
Tungsten	98.4		100	98	98.3		100	98	101		100	101
Vanadium	97.1		100	97	98.1		100	98	98.3		100	98
Zinc	101		100	101	102		100	102	102		100	102

NO Samples Affected

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-42586/134 05/02/2012 18:18				CCV 240-42586/146 05/02/2012 19:27							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	96.9		100	97	97.4		100	97				
Arsenic	98.8		100	99	98.8		100	99				
Barium	96.6		100	97	96.6		100	97				
Beryllium	95.1		100	95	95.1		100	95				
Cadmium	98.4		100	98	98.1		100	98				
Chromium	99.8		100	100	99.6		100	100				
Cobalt	100		100	100	99.9		100	100				
Copper	103		100	103	103		100	103				
Lead	97.7		100	98	98.9		100	99				
Molybdenum	100		100	100	100		100	100				
Nickel	101		100	101	101		100	101				
Selenium	98.5		100	98	98.7		100	99				
Silver	100		100	100	99.1		100	99				
Thallium	102		100	102	101		100	101				
Tungsten	99.9		100	100	100		100	100				
Vanadium	98.0		100	98	97.8		100	98				
Zinc	101		100	101	101		100	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	ICV 240-42622/7-A 05/03/2012 16:06				CCVL 240-42622/10-A 05/03/2012 16:12				CCV 240-42622/12-A 05/03/2012 17:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.35		2.50	94	5.11		5.00	102	5.27		5.00	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	CCV 240-42622/12-A 05/03/2012 17:51				CCV 240-42622/12-A 05/03/2012 18:17							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.23		5.00	105	5.24		5.00	105				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-42586/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.09		105	50-150
Arsenic	2.00	2.08	J	104	50-150
Barium	1.00	1.15	J	115	50-150
Beryllium	1.00	1.04		104	50-150
Cadmium	0.500	0.625	J	125	50-150
Chromium	2.00	2.15		107	50-150
Cobalt	1.00	1.12		112	50-150
Copper	2.00	2.66		133	50-150
Lead	1.00	1.22		122	50-150
Molybdenum	10.0	10.0		100	50-150
Nickel	2.00	2.94		147	50-150
Selenium	2.00	2.12	J	106	50-150
Silver	0.500	0.569	J	114	50-150
Thallium	1.00	1.23	J	123	50-150
Vanadium	5.00	5.01	J	100	50-150
Tungsten	10.0	9.78	J	98	50-150
Zinc	10.0	10.4	J	104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-42622/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00189

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.191	J	95	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42586/6 05/02/2012 06:18		CCB 240-42586/59 05/02/2012 11:21		CCB 240-42586/71 05/02/2012 12:27		CCB 240-42586/83 05/02/2012 13:35	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	0.151	J	0.149	J	0.138	J
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	0.0630	J	0.0760	J	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.730	J	0.726	J	0.669	J	0.633	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.429	J	0.510	J	0.575	J	0.532	J
Tungsten	10	1.02	J	0.808	J	0.885	J	0.769	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-42586/95 05/02/2012 14:40		CCB 240-42586/123 05/02/2012 17:17		CCB 240-42586/135 05/02/2012 18:24		CCB 240-42586/147 05/02/2012 19:32	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	0.182	J	0.157	J	0.184	J
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	0.0950	J	0.0960	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.755	J	3.01	J	0.820	J	0.869	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.512	J	0.664	J	0.626	J	0.570	J
Tungsten	10	0.857	J	1.17	J	0.925	J	0.888	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42622/8-A 05/03/2012 16:08		CCB 240-42622/11-A 05/03/2012 17:28		CCB 240-42622/11-A 05/03/2012 17:52		CCB 240-42622/11-A 05/03/2012 18:18	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42315/1-A

Instrument Code: I8 Batch No.: 42586

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	1.12	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.546	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	6.30	J		6020

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42347/1-A

Instrument Code: I8 Batch No.: 42586

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	1.02	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.607	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.262	J	^	6020
7440-02-0	Nickel	0.216	J		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	9.92	J		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42491/1-A

Instrument Code: H4 Batch No.: 42777

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICSA 240-42586/8 Instrument ID: I8

Lab File ID: I8050212A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.212**	
Arsenic		**0.475**	
Barium		**0.435**	
Beryllium		**0.0650**	
Cadmium		**-0.259**	
Chromium		**0.720**	
Cobalt		**0.289**	
Copper		**0.650**	
Lead		**0.271**	
Molybdenum	**1000**	**1012**	**101**
Nickel		**0.712**	
Selenium		**0.216**	
Silver		**0.0660**	
Thallium		**0.194**	
Tungsten		**0.433**	
Vanadium		**0.271**	
Zinc		**1.99**	
Aluminum	*50000*	*50280*	*101*
Boron		*0.986*	
Calcium	*50000*	*51390*	*103*
Iron	*50000*	*50160*	*100*
Magnesium	*50000*	*51560*	*103*
Manganese		*0.358*	
Potassium	*50000*	*51690*	*103*
Sodium	*50000*	*51750*	*104*
Strontium		*1.18*	
Tin		*0.104*	
Titanium	*1000*	*1024*	*102*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICSAB 240-42586/9 Instrument ID: I8

Lab File ID: I8050212A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**100**	**101**	**101**
Arsenic	**100**	**98.5**	**99**
Barium	**100**	**101**	**101**
Beryllium	**100**	**103**	**103**
Cadmium	**100**	**99.4**	**99**
Chromium	**100**	**106**	**106**
Cobalt	**100**	**99.2**	**99**
Copper	**100**	**101**	**101**
Lead	**100**	**105**	**105**
Molybdenum	**1100**	**1129**	**103**
Nickel	**100**	**104**	**104**
Selenium	**100**	**103**	**103**
Silver	**100**	**102**	**102**
Thallium	**100**	**104**	**104**
Tungsten	**100**	**100**	**100**
Vanadium	**100**	**100**	**100**
Zinc	**100**	**103**	**103**
Aluminum	*50000*	*51270*	*103*
Boron	*100*	*103*	*103*
Calcium	*50000*	*51570*	*103*
Iron	*50000*	*51710*	*103*
Magnesium	*50000*	*52440*	*105*
Manganese	*100*	*106*	*106*
Potassium	*50000*	*50790*	*102*
Sodium	*50000*	*52400*	*105*
Strontium	*100*	*94.6*	*95*
Tin	*100*	*99.4*	*99*
Titanium	*1100*	*1148*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICSA 240-42586/120 Instrument ID: I8

Lab File ID: I8050212A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.179**	
Arsenic		**0.465**	
Barium		**0.208**	
Beryllium		**0.0940**	
Cadmium		**-0.411**	
Chromium		**0.513**	
Cobalt		**0.187**	
Copper		**0.596**	
Lead		**0.138**	
Molybdenum	**1000**	**1002**	**100**
Nickel		**0.561**	
Selenium		**0.0590**	
Silver		**0.0480**	
Thallium		**0.261**	
Tungsten		**0.349**	
Vanadium		**0.157**	
Zinc		**2.47**	
Aluminum	*50000*	*52270*	*105*
Boron		*6.99*	
Calcium	*50000*	*51730*	*103*
Iron	*50000*	*46660*	*93*
Magnesium	*50000*	*48690*	*97*
Manganese		*0.669*	
Potassium	*50000*	*47620*	*95*
Sodium	*50000*	*54360*	*109*
Strontium		*0.722*	
Tin		*0.178*	
Titanium	*1000*	*1027*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Lab Sample ID: ICSAB 240-42586/121 Instrument ID: I8

Lab File ID: I8050212A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**96.6**	**97**
Arsenic	**100**	**97.5**	**97**
Barium	**100**	**97.3**	**97**
Beryllium	**100**	**97.8**	**98**
Cadmium	**100**	**95.5**	**96**
Chromium	**100**	**107**	**107**
Cobalt	**100**	**101**	**101**
Copper	**100**	**102**	**102**
Lead	**100**	**101**	**101**
Molybdenum	**1100**	**1116**	**101**
Nickel	**100**	**105**	**105**
Selenium	**100**	**100**	**100**
Silver	**100**	**98.0**	**98**
Thallium	**100**	**108**	**108**
Tungsten	**100**	**99.9**	**100**
Vanadium	**100**	**99.5**	**100**
Zinc	**100**	**104**	**104**
Aluminum	*50000*	*51690*	*103*
Boron	*100*	*101*	*101*
Calcium	*50000*	*52300*	*105*
Iron	*50000*	*47060*	*94*
Magnesium	*50000*	*48420*	*97*
Manganese	*100*	*109*	*109*
Potassium	*50000*	*47230*	*94*
Sodium	*50000*	*54020*	*108*
Strontium	*100*	*94.4*	*94*
Tin	*100*	*95.3*	*95*
Titanium	*1100*	*1155*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

NOT IN SDG

Client ID: _____ Lab ID: 240-10748-D-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	96.8		0.26	J	100	97	44-153		6020
Arsenic	994		13		1000	98	82-123		6020
Barium	1090		110		1000	97	45-144		6020
Beryllium	944		1.0	U	1000	94	77-124		6020
Cadmium	955		1.0	U	1000	96	78-117		6020
Chromium	1020		2.0	U	1000	102	72-110		6020
Cobalt	1020		0.35	J	1000	102	67-114		6020
Copper	1010		0.33	J	1000	101	60-123		6020
Lead	1040		1.0	U	1000	104	73-115		6020
Molybdenum	106		9.4	J	100	97	80-110		6020
Nickel	1010		2.8		1000	101	72-111		6020
Selenium	977		5.0	U	1000	98	72-148		6020
Silver	98.9		1.0	U	100	99	10-139		6020
Thallium	260		0.62	J	250	104	69-117		6020
Vanadium	996		20	U	1000	100	70-112		6020
Tungsten	97.6		0.77	J	100	97	43-133		6020
Zinc	990		3.0	J	1000	99	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

NOT IN SDG

Client ID: _____ Lab ID: 240-10756-A-27-D MS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	97.3		0.31	J	100	97	44-153		6020
Arsenic	984		1.2	J	1000	98	82-123		6020
Barium	979		34		1000	94	45-144		6020
Beryllium	938		1.0	U	1000	94	77-124		6020
Cadmium	936		0.29	J	1000	94	78-117		6020
Chromium	979		1.3	J	1000	98	72-110		6020
Cobalt	965		0.20	J	1000	96	67-114		6020
Copper	960		2.9		1000	96	60-123		6020
Lead	989		2.8		1000	99	73-115		6020
Molybdenum	102		3.7	J	100	98	80-110		6020
Nickel	964		1.7	J	1000	96	72-111		6020
Selenium	978		1.5	J	1000	98	72-148		6020
Silver	96.7		1.0	U	100	97	10-139		6020
Thallium	246		0.66	J	250	98	69-117		6020
Vanadium	968		20	U	1000	97	70-112		6020
Tungsten	95.4		0.88	J	100	95	43-133		6020
Zinc	1060		110		1000	95	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

NOT IN SDG

Client ID: _____ Lab ID: 240-10725-K-8-B MS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.01		0.20	U	1.00	101	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

NOT IN SDG

Client ID: _____ Lab ID: 240-10725-N-8-B MS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.04		0.20	U	1.00	104	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

12 SDG

Client ID: _____ Lab ID: 240-10748-D-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	95.0		100	95	44-153	2	20		6020
Arsenic	987		1000	97	82-123	1	20		6020
Barium	1080		1000	96	45-144	1	20		6020
Beryllium	908		1000	91	77-124	4	20		6020
Cadmium	948		1000	95	78-117	1	20		6020
Chromium	995		1000	100	72-110	2	20		6020
Cobalt	989		1000	99	67-114	3	20		6020
Copper	1010		1000	100	60-123	0	20		6020
Lead	1020		1000	102	73-115	2	20		6020
Molybdenum	107		100	98	80-110	1	20		6020
Nickel	1000		1000	100	72-111	1	20		6020
Selenium	981		1000	98	72-148	0	20		6020
Silver	98.8		100	99	10-139	0	20		6020
Thallium	257		250	102	69-117	1	20		6020
Vanadium	984		1000	98	70-112	1	20		6020
Tungsten	96.2		100	95	43-133	1	20		6020
Zinc	989		1000	99	49-156	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

NOT IN SDG

Client ID: _____ Lab ID: 240-10756-A-27-E MSD

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	101		100	100	44-153	4	20		6020
Arsenic	1010		1000	101	82-123	3	20		6020
Barium	1010		1000	97	45-144	3	20		6020
Beryllium	950		1000	95	77-124	1	20		6020
Cadmium	957		1000	96	78-117	2	20		6020
Chromium	1010		1000	101	72-110	3	20		6020
Cobalt	997		1000	100	67-114	3	20		6020
Copper	985		1000	98	60-123	3	20		6020
Lead	1020		1000	101	73-115	3	20		6020
Molybdenum	104		100	101	80-110	3	20		6020
Nickel	992		1000	99	72-111	3	20		6020
Selenium	999		1000	100	72-148	2	20		6020
Silver	99.1		100	99	10-139	2	20		6020
Thallium	254		250	101	69-117	3	20		6020
Vanadium	1010		1000	101	70-112	4	20		6020
Tungsten	101		100	100	43-133	5	20		6020
Zinc	1080		1000	98	49-156	2	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

NOT IN SOW

Client ID: _____ Lab ID: 240-10725-K-8-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.04		1.00	104	69-134	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

NOT IN SDG

Client ID: _____ Lab ID: 240-10725-N-8-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.04		1.00	104	69-134	0	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-42315/2-A

Lab Name: TestAmerica Canton Job No.: 240-10727-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	93.6		94	80	120		6020
Arsenic	1000	948		95	80	120		6020
Barium	1000	942		94	80	120		6020
Beryllium	1000	916		92	80	120		6020
Cadmium	1000	948		95	80	120		6020
Chromium	1000	980		98	80	120		6020
Cobalt	1000	987		99	80	120		6020
Copper	1000	1020		102	80	120		6020
Lead	1000	1020		102	80	120		6020
Molybdenum	100	94.6		95	80	120		6020
Nickel	1000	1010		101	80	120		6020
Selenium	1000	966		97	80	120		6020
Silver	100	101		101	80	120		6020
Thallium	250	250		100	80	120		6020
Vanadium	1000	952		95	80	120		6020
Tungsten	100	90.9		91	80	120		6020
Zinc	1000	1000		100	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-42347/3-A

Lab Name: TestAmerica Canton Job No.: 240-10727-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	99.2		99	80	120		6020
Arsenic	1000	984		98	80	120		6020
Barium	1000	965		96	80	120		6020
Beryllium	1000	942		94	80	120		6020
Cadmium	1000	985		98	80	120		6020
Chromium	1000	1020		102	80	120		6020
Cobalt	1000	1020		102	80	120		6020
Copper	1000	1060		106	80	120		6020
Lead	1000	1060		106	80	120		6020
Molybdenum	100	99.0		99	80	120	^	6020
Nickel	1000	1040		104	80	120		6020
Selenium	1000	987		99	80	120		6020
Silver	100	106		106	80	120		6020
Thallium	250	264		105	80	120		6020
Vanadium	1000	990		99	80	120		6020
Tungsten	100	97.2		97	80	120		6020
Zinc	1000	1050		105	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-42491/2-A

Lab Name: TestAmerica Canton Job No.: 240-10727-1

Sample Matrix: Water LCS Source: MTHGICVW_00288

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.10		102	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

NOT IN SDG

Lab ID: 240-10748-D-1-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10727-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.26	J	10	U	NC		6020
Arsenic	13		13.3	J	NC		6020
Barium	110		114		NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	0.35	J	0.595	J	NC		6020
Copper	0.33	J	10	U	NC		6020
Lead	1.0	U	5.0	U	NC		6020
Molybdenum	9.4	J	9.71	J	NC		6020
Nickel	2.8		2.96	J	NC		6020
Selenium	5.0	U	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.62	J	1.48	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	0.77	J	50	U	NC		6020
Zinc	3.0	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

NOT IN SDG

Lab ID: 240-10756-A-27-A SD

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10727-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.31	J	2.0	U	NC		6020
Arsenic	1.2	J	5.0	U	NC		6020
Barium	34		6.82		NC		6020
Beryllium	1.0	U	1.0	U	NC		6020
Cadmium	0.29	J	1.0	U	NC		6020
Chromium	1.3	J	2.0	U	NC		6020
Cobalt	0.20	J	0.0820	J	NC		6020
Copper	2.9		0.610	J	NC		6020
Lead	2.8		0.560	J	NC		6020
Molybdenum	3.7	J	0.887	J	NC	^	6020
Nickel	1.7	J	0.372	J	NC		6020
Selenium	1.5	J	5.0	U	NC		6020
Silver	1.0	U	1.0	U	NC		6020
Thallium	0.66	J	0.338	J	NC		6020
Vanadium	20	U	20	U	NC		6020
Tungsten	0.88	J	10	U	NC		6020
Zinc	110		22.6		NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10727-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10727-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10727-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10727-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42315/1-A	05/01/2012 09:57	42315		50	50
LCS 240-42315/2-A	05/01/2012 09:57	42315		50	50
240-10748-D-1-B MS	05/01/2012 09:57	42315		50	50
240-10748-D-1-C MSD	05/01/2012 09:57	42315		50	50
240-10727-2	05/01/2012 09:57	42315		50	50
240-10727-2	05/01/2012 09:57	42315		50	50
240-10727-3	05/01/2012 09:57	42315		50	50
240-10727-3	05/01/2012 09:57	42315		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42347/1-A	05/01/2012 11:27	42347		50	50
LCS 240-42347/3-A	05/01/2012 11:27	42347		50	50
240-10756-A-27-D MS	05/01/2012 11:27	42347		50	50
240-10756-A-27-E MSD	05/01/2012 11:27	42347		50	50
240-10727-4	05/01/2012 11:27	42347		50	50
240-10727-4	05/01/2012 11:27	42347		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42491/1-A	05/02/2012 13:55	42491		100	100
LCS 240-42491/2-A	05/02/2012 13:55	42491		100	100
240-10725-K-8-B MS	05/02/2012 13:55	42491		100	100
240-10725-K-8-C MSD	05/02/2012 13:55	42491		100	100
240-10725-N-8-B MS	05/02/2012 13:55	42491		100	100
240-10725-N-8-C MSD	05/02/2012 13:55	42491		100	100
240-10727-2	05/02/2012 13:55	42491		100	100
240-10727-2	05/02/2012 13:55	42491		100	100
240-10727-3	05/02/2012 13:55	42491		100	100
240-10727-3	05/02/2012 13:55	42491		100	100
240-10727-4	05/02/2012 13:55	42491		100	100
240-10727-4	05/02/2012 13:55	42491		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/02/2012 End Date: 05/02/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-42586/2 IC	05:55	83		91		92		91		92	
STD3 240-42586/3 IC	06:01	77		87		87		84		87	
STD4 240-42586/4 IC	06:07	92		104		98		99		98	
ICV 240-42586/5	06:12	83		95		91		90		91	
ICB 240-42586/6	06:18	90		103		97		97		98	
CRI 240-42586/7	06:23	89		102		98		96		97	
ICSA 240-42586/8	06:28	70		84		82		81		85	
ICSAB 240-42586/9	06:34	61		79		78		79		83	
CCV 240-42586/58	11:16	65		88		82		79		81	
CCB 240-42586/59	11:21	74		97		87		86		86	
MB 240-42315/1-A	11:59	73		93		84		82		82	
LCS 240-42315/2-A	12:05	72		91		84		82		82	
240-10748-D-1-A SD	12:16	74		92		84		82		80	
CCV 240-42586/70	12:22	66		84		78		74		76	
CCB 240-42586/71	12:27	75		93		84		82		81	
240-10748-D-1-B MS	12:33	68		87		79		77		79	
240-10748-D-1-C MSD	12:39	73		90		81		78		79	
240-10727-2	13:24	59		80		73		69		71	
CCV 240-42586/82	13:30	59		80		74		71		72	
CCB 240-42586/83	13:35	70		89		80		78		78	
240-10727-2	13:41	58		79		73		68		71	
240-10727-3	13:46	65		87		79		78		78	
240-10727-3	13:51	68		87		79		78		77	
CCV 240-42586/94	14:35	65		83		75		71		72	
CCB 240-42586/95	14:40	75		92		82		79		78	
ICSA 240-42586/120	17:00	56		74		66		65		66	
ICSAB 240-42586/121	17:06	49		67		63		62		65	
CCV 240-42586/122	17:12	49		69		66		64		66	
CCB 240-42586/123	17:17	62		78		72		72		72	
MB 240-42347/1-A	17:55	55		74		71		71		71	
LCS 240-42347/3-A	18:01	56		74		70		69		70	
240-10756-A-27-A SD	18:13	60		78		71		70		70	
CCV 240-42586/134	18:18	54		73		67		65		66	
CCB 240-42586/135	18:24	63		80		72		71		70	
240-10756-A-27-D MS	18:30	53		73		66		64		65	
240-10756-A-27-E	18:36	52		72		65		63		64	
240-10727-4	18:43	66		81		72		72		71	
240-10727-4	18:49	65		80		72		72		71	
CCV 240-42586/146	19:27	57		75		68		66		66	
CCB 240-42586/147	19:32	66		82		74		73		71	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/02/2012 End Date: 05/02/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-42586/2 IC	05:55			96							
STD3 240-42586/3 IC	06:01			91							
STD4 240-42586/4 IC	06:07			99							
ICV 240-42586/5	06:12			95							
ICB 240-42586/6	06:18			98							
CRI 240-42586/7	06:23			97							
ICSA 240-42586/8	06:28			87							
ICSAB 240-42586/9	06:34			87							
CCV 240-42586/58	11:16			82							
CCB 240-42586/59	11:21			85							
MB 240-42315/1-A	11:59			82							
LCS 240-42315/2-A	12:05			83							
240-10748-D-1-A SD	12:16			80							
CCV 240-42586/70	12:22			77							
CCB 240-42586/71	12:27			81							
240-10748-D-1-B MS	12:33			77							
240-10748-D-1-C MSD	12:39			78							
240-10727-2	13:24			73							
CCV 240-42586/82	13:30			74							
CCB 240-42586/83	13:35			77							
240-10727-2	13:41			72							
240-10727-3	13:46			77							
240-10727-3	13:51			77							
CCV 240-42586/94	14:35			72							
CCB 240-42586/95	14:40			76							
ICSA 240-42586/120	17:00			65							
ICSAB 240-42586/121	17:06			65							
CCV 240-42586/122	17:12			67							
CCB 240-42586/123	17:17			70							
MB 240-42347/1-A	17:55			71							
LCS 240-42347/3-A	18:01			70							
240-10756-A-27-A SD	18:13			70							
CCV 240-42586/134	18:18			67							
CCB 240-42586/135	18:24			70							
240-10756-A-27-D MS	18:30			68							
240-10756-A-27-E	18:36			67							
240-10727-4	18:43			70							
240-10727-4	18:49			70							
CCV 240-42586/146	19:27			67							
CCB 240-42586/147	19:32			71							

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/02/2012 05:49 End Date: 05/02/2012 19:55

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-42586/1			05:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-42586/2 IC	1		05:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-42586/3 IC	1		06:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-42586/4 IC	1		06:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-42586/5	1		06:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-42586/6	1		06:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-42586/7	1		06:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-42586/8	1		06:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-42586/9	1		06:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42586/10			06:39																				
CCB 240-42586/11			06:45																				
CCV 240-42586/12			06:50																				
CCB 240-42586/13			06:56																				
ZZZZZZ			07:02																				
ZZZZZZ			07:07																				
ZZZZZZ			07:13																				
ZZZZZZ			07:18																				
ZZZZZZ			07:23																				
ZZZZZZ			07:30																				
ZZZZZZ			07:38																				
ZZZZZZ			07:45																				
ZZZZZZ			07:52																				
ZZZZZZ			07:59																				
CCV 240-42586/24			08:06																				
CCB 240-42586/25			08:11																				
ZZZZZZ			08:17																				
CCV 240-42586/27			08:22																				
CCB 240-42586/28			08:28																				
ZZZZZZ			08:33																				
ZZZZZZ			08:39																				
ZZZZZZ			08:44																				
ZZZZZZ			08:49																				
ZZZZZZ			08:55																				
ZZZZZZ			09:01																				
CCV 240-42586/35			09:07																				
CCB 240-42586/36			09:13																				
ZZZZZZ			09:18																				
ZZZZZZ			09:23																				
ZZZZZZ			09:30																				
ZZZZZZ			09:36																				
ZZZZZZ			09:41																				
ZZZZZZ			09:48																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/02/2012 05:49 End Date: 05/02/2012 19:55

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			09:55																			
ZZZZZZ			10:00																			
ZZZZZZ			10:05																			
CCV 240-42586/46			10:11																			
CCB 240-42586/47			10:16																			
ZZZZZZ			10:22																			
ZZZZZZ			10:27																			
ZZZZZZ			10:33																			
ZZZZZZ			10:38																			
ZZZZZZ			10:44																			
ZZZZZZ			10:49																			
ZZZZZZ			10:54																			
ZZZZZZ			11:00																			
ZZZZZZ			11:05																			
ZZZZZZ			11:11																			
CCV 240-42586/58	1		11:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-42586/59	1		11:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			11:27																			
ZZZZZZ			11:32																			
ZZZZZZ			11:38																			
ZZZZZZ			11:43																			
ZZZZZZ			11:48																			
ZZZZZZ			11:54																			
MB 240-42315/1-A	1	R	11:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
LCS 240-42315/2-A	1	R	12:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			12:11																			
240-10748-D-1-A SD ^5	5	D	12:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCV 240-42586/70	1		12:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-42586/71	1		12:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10748-D-1-B MS	1	D	12:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10748-D-1-C MSD	1	D	12:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			12:46																			
ZZZZZZ			12:52																			
ZZZZZZ			12:57																			
ZZZZZZ			13:02																			
ZZZZZZ			13:08																			
ZZZZZZ			13:13																			
ZZZZZZ			13:19																			
240-10727-2	1	R	13:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCV 240-42586/82	1		13:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-42586/83	1		13:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10727-2	1	D	13:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/02/2012 05:49 End Date: 05/02/2012 19:55

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
240-10727-3	1	R	13:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10727-3	1	D	13:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			13:57																				
ZZZZZZ			14:02																				
ZZZZZZ			14:08																				
ZZZZZZ			14:13																				
ZZZZZZ			14:18																				
ZZZZZZ			14:24																				
ZZZZZZ			14:29																				
CCV 240-42586/94	1		14:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42586/95	1		14:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			14:46																				
ZZZZZZ			14:51																				
ZZZZZZ			14:56																				
ZZZZZZ			15:03																				
ZZZZZZ			15:08																				
ZZZZZZ			15:14																				
ZZZZZZ			15:20																				
ZZZZZZ			15:28																				
ZZZZZZ			15:33																				
ZZZZZZ			15:39																				
CCV 240-42586/106			15:44																				
CCB 240-42586/107			15:49																				
ZZZZZZ			15:55																				
ZZZZZZ			16:00																				
ZZZZZZ			16:06																				
ZZZZZZ			16:11																				
ZZZZZZ			16:17																				
ZZZZZZ			16:22																				
ZZZZZZ			16:28																				
ZZZZZZ			16:33																				
ZZZZZZ			16:39																				
ZZZZZZ			16:44																				
CCV 240-42586/118			16:49																				
CCB 240-42586/119			16:55																				
ICSA 240-42586/120	1		17:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-42586/121	1		17:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42586/122	1		17:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42586/123	1		17:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			17:23																				
ZZZZZZ			17:28																				
ZZZZZZ			17:34																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/02/2012 05:49 End Date: 05/02/2012 19:55

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			17:39																				
ZZZZZZ			17:44																				
ZZZZZZ			17:50																				
MB 240-42347/1-A	1	R	17:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-42347/3-A	1	R	18:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			18:08																				
240-10756-A-27-A SD	1	R	18:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42586/134	1		18:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42586/135	1		18:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10756-A-27-D MS	1	R	18:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10756-A-27-E MSD	1	R	18:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10727-4	1	R	18:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10727-4	1	D	18:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			18:54																				
ZZZZZZ			19:00																				
ZZZZZZ			19:05																				
ZZZZZZ			19:11																				
ZZZZZZ			19:16																				
ZZZZZZ			19:22																				
CCV 240-42586/146	1		19:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42586/147	1		19:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			19:38																				
ZZZZZZ			19:43																				
CCV 240-42586/150			19:49																				
CCB 240-42586/151			19:55																				

Prep Types
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/03/2012 15:54 End Date: 05/03/2012 19:41

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-42622/1-A			15:54	X																				
IC 240-42622/2-A			15:55	X																				
IC 240-42622/3-A			15:57	X																				
IC 240-42622/4-A			15:59	X																				
IC 240-42622/5-A			16:01	X																				
IC 240-42622/6-A			16:04	X																				
ICV 240-42622/7-A	1		16:06	X																				
ICB 240-42622/8-A	1		16:08	X																				
CRA 240-42622/9-A	1		16:09	X																				
CCVL 240-42622/10-A	1		16:12	X																				
CCB 240-42622/11-A			16:14																					
ZZZZZZ			16:16																					
ZZZZZZ			16:18																					
ZZZZZZ			16:20																					
ZZZZZZ			16:22																					
ZZZZZZ			16:24																					
ZZZZZZ			16:26																					
ZZZZZZ			16:28																					
ZZZZZZ			16:30																					
ZZZZZZ			16:32																					
ZZZZZZ			16:34																					
CCV 240-42622/12-A			16:36																					
CCB 240-42622/11-A			16:38																					
ZZZZZZ			16:40																					
ZZZZZZ			16:42																					
ZZZZZZ			16:44																					
ZZZZZZ			16:46																					
ZZZZZZ			16:48																					
ZZZZZZ			16:50																					
ZZZZZZ			16:52																					
ZZZZZZ			16:54																					
ZZZZZZ			16:56																					
ZZZZZZ			16:59																					
CCV 240-42622/12-A			17:01																					
CCB 240-42622/11-A			17:03																					
ZZZZZZ			17:06																					
ZZZZZZ			17:08																					
ZZZZZZ			17:10																					
ZZZZZZ			17:12																					
ZZZZZZ			17:14																					
ZZZZZZ			17:16																					
ZZZZZZ			17:18																					

ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/03/2012 15:54 End Date: 05/03/2012 19:41

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			17:20	
ZZZZZZ			17:22	
ZZZZZZ			17:24	
CCV 240-42622/12-A	1		17:26	X
CCB 240-42622/11-A	1		17:28	X
ZZZZZZ			17:30	
ZZZZZZ			17:32	
MB 240-42491/1-A	1	T	17:34	X
LCS 240-42491/2-A	1	T	17:36	X
ZZZZZZ			17:38	
240-10725-K-8-B MS	1	T	17:40	X
240-10725-K-8-C MSD	1	T	17:42	X
ZZZZZZ			17:44	
240-10725-N-8-B MS	1	D	17:46	X
240-10725-N-8-C MSD	1	D	17:49	X
CCV 240-42622/12-A	1		17:51	X
CCB 240-42622/11-A	1		17:52	X
240-10727-2	1	T	17:54	X
240-10727-2	1	D	17:56	X
240-10727-3	1	T	17:59	X
240-10727-3	1	D	18:01	X
240-10727-4	1	T	18:04	X
240-10727-4	1	D	18:06	X
ZZZZZZ			18:08	
ZZZZZZ			18:10	
ZZZZZZ			18:13	
ZZZZZZ			18:15	
CCV 240-42622/12-A	1		18:17	X
CCB 240-42622/11-A	1		18:18	X
ZZZZZZ			18:21	
ZZZZZZ			18:23	
ZZZZZZ			18:25	
ZZZZZZ			18:28	
ZZZZZZ			18:30	
ZZZZZZ			18:32	
ZZZZZZ			18:34	
ZZZZZZ			18:36	
ZZZZZZ			18:38	
ZZZZZZ			18:40	
CCV 240-42622/12-A			18:42	
CCB 240-42622/11-A			18:44	
ZZZZZZ			18:46	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10727-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/03/2012 15:54 End Date: 05/03/2012 19:41

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			18:48	
ZZZZZZ			18:50	
ZZZZZZ			18:52	
ZZZZZZ			18:54	
ZZZZZZ			18:56	
ZZZZZZ			18:58	
ZZZZZZ			19:00	
ZZZZZZ			19:02	
ZZZZZZ			19:04	
CCV 240-42622/12-A			19:06	
CCB 240-42622/11-A			19:08	
ZZZZZZ			19:10	
ZZZZZZ			19:12	
ZZZZZZ			19:13	
ZZZZZZ			19:16	
ZZZZZZ			19:17	
ZZZZZZ			19:19	
ZZZZZZ			19:21	
ZZZZZZ			19:23	
ZZZZZZ			19:25	
ZZZZZZ			19:28	
CCV 240-42622/12-A			19:30	
CCB 240-42622/11-A			19:32	
ZZZZZZ			19:34	
ZZZZZZ			19:37	
CCV 240-42622/12-A			19:39	
CCB 240-42622/11-A			19:41	

Prep Types

D = Dissolved

T = Total/NA

Sample GSP-MW3-040212 total Arsenic rep result 6.0 ug/L

240-10727-h-4-a, 5/2/2012 18:43:55 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		66.249%	0.167	23.520
%RSD		7.914	4.052	5.075
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		3988.000	404.700	52.670
%RSD		0.321	4.196	1.621
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		т0.000	429.900	2234.000
%RSD		т0.000	1.198	1.087
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		т80.611%	71.840%	0.842
%RSD		т1.133	0.331	33.560
Run	Time	51V	52Cr	53Cl Cr
		ppb	ppb	ppb
x		0.551	0.009	0.309
%RSD		16.190	706.400	20.670
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		21.740	840.400	16.610
%RSD		2.587	1.665	1.707
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		15.810	1.817	51.330
%RSD		0.674	8.848	1.030
Run	Time	72Ge	75As	77Ar Cl
		ppb	ppb	ppb
x		72.106%	5.962	0.433
%RSD		0.754	6.524	18.800
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		0.439	18.060	0.840
%RSD		6.941	0.188	9.362
Run	Time	105Pd	107Ag	109Mo O2
		ppb	ppb	ppb
x		0.000	0.005	-0.190
%RSD		0.000	59.790	619.300
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.046	70.769%	0.173
%RSD		9.057	1.286	17.470
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		0.272	9.893	0.000
%RSD		5.968	4.592	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		70.083%	1.049	0.883
%RSD		2.214	7.169	5.546
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		0.093	0.000	
%RSD		64.430	0.000	

Case Narrative

TestAmerica West Sacramento Project Number G2E010420

WATER, 6850, Perchlorate
Sample: 1, 2, 3
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTELA1AC
SMCS: MTELA1AD

There are no other anomalies associated with this project.

ANALYTICAL METHODS SUMMARY

G2E010420

PARAMETER	ANALYTICAL METHOD
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010420 Work Order #...: MTELA1AA Matrix.....: WATER
MB Lot-Sample #: G2E070000-058

Prep Date.....: 05/07/12
Analysis Date..: 05/14/12 Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010420 Work Order #...: MTELA1AC Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	92	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010420 Work Order #...: MTELA1AC Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.62	ug/L	92	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010420 Work Order #...: MTELA1AD Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	97	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010420 Work Order #...: MTELA1AD Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.86	ug/L	97	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010420 Work Order #...: MTDHX1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E030450-004 MTDHX1AD-MSD
Date Sampled...: 05/01/12 Date Received..: 05/03/12
Prep Date.....: 05/07/12 Analysis Date..: 05/16/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	99	(80 - 120)			SW846 6850
	97	(80 - 120)	1.8	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...:	G2E010420	**Work Order #...:**	MTDHX1AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	G2E030450-004		MTDHX1AD-MSD		
Date Sampled...:	05/01/12	**Date Received..:**	05/03/12		
Prep Date.....:	05/07/12	**Analysis Date..:**	05/16/12		
Prep Batch #...:	2128058				
Dilution Factor:	1				

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.95	ug/L	99		SW846 6850
	ND	5.00	4.86	ug/L	97	1.8	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Tetra Tech, Inc. **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 27, 2012**
FROM:	**MICHELLE L. ALLEN**	**COPIES:**	**DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC/1,4-DIOXANE/DRO/GRO**
LOCKHEED MARTIN CORPORATION (LMC) – MARTIN STATE AIRPORT (MSA)
SDG 240-10770-1

SAMPLES: 4/Aqueous/VOC

GSP-MW4-042712 GSP-MW7-042712 GSP-MW8-042712
TB-042712

3/Aqueous/1,4-DIOXANE/DRO/GRO

GSP-MW4-042712 GSP-MW7-042712 GSP-MW8-042712

Overview

The sample set for LMC-MSA, SDG 240-10770-1 consisted of three (3) aqueous environmental samples and one (1) trip blank. All four (4) aqueous samples were analyzed for volatile organic compounds (VOC). The three (3) aqueous environmental samples were analyzed for the semi-volatile organic compound (SVOC), 1,4-dioxane, diesel range organics (DRO) and gasoline range organics (GRO). No field duplicate sample pair was included in this SDG.

The samples were collected by Tetra Tech, Inc. on April 27, 2012 and analyzed by Test America, Inc. All analyses were conducted in accordance with SW-846 Methods 8260C, 8270C, and 8015B analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, trip blank results, surrogate spike recoveries, blank spike results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major

- The initial and continuing calibrations performed on instrument A3UX16 in the VOC fraction had Relative Response Factors (RRFs) for tert-butyl alcohol below the 0.050 minimum response criterion. In addition, the continuing calibration RRF for vinyl acetate was below 0.05. All samples were affected. The non-detected results reported for these compounds in the affected samples were qualified as rejected, (UR).

- The VOC compound, 2-chloroethyl vinyl ether was not recovered in the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses of sample GSP-MW7-042712. The non-detected result reported for 2-chloroethyl vinyl ether was qualified as rejected, (UR), in the parent sample.

Minor

The following contaminants were detected in the laboratory method blanks at the following maximum concentrations:

Compound	Maximum Concentration (µg/L)	Action Level (µg/L)
1,2,3-Trichlorobenzene [1]	0.280	1.4
GRO (C6-C10) [2]	29.2	146

[1] Maximum concentration detected in the laboratory method blank, MB 240-42324/5, affecting all samples.
[2] Maximum concentration detected in the laboratory method blank, MB 240-42123/7, affecting all samples.

An action level of 5X the maximum concentration was used to evaluate for blank contamination. Sample aliquot and dilution factor, if applicable, were taken into consideration when evaluating for blank contamination. Positive results for GRO reported below the established action level were qualified as non-detected, (B). No action was necessary for 1,2,3-trichlorobenzene because no positive results were reported for this compound in the affected samples.

- Positive results reported below the Reporting Limit (RL) limit but above the Method Detection Limit (MDL) were qualified as estimated, (J).

Notes

Sample GSP-MW7-042712 was diluted 4X prior to analysis in the VOC fraction. The RLs of the non-detected results were elevated.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: Initial and/or continuing calibration RRFs for tert-butyl alcohol and vinyl acetate were below the quality control criterion resulting in the rejection of the non-detected results. Laboratory method blank contamination was noted in the VOC and GRO fractions.

Other Factors Affecting Data Quality: One sample required a dilution for the VOC fraction.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994) and SW-846 Methods 8260C, 8270C, and 8015B analytical and reporting protocols. The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech, Inc.
Michelle L. Allen
Chemist/Data Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Quality Assurance Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712			TB-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3			240-10770-1		
FRACTION: OV	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.92	U		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.88	U		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.72	U		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		1.1	U		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.6	U		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.76	U		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.52	U		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.68	U		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		1.7	U		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.024	U		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.6	U		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.48	U		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		2.7	U		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.96	U		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.52	U		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.88	U		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.72	U		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.56	U		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.64	U		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.52	U		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.52	U		0.13	U		0.13	U	
2-BUTANONE		0.57	U		2.3	U		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		4	UR	D	0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.44	U		0.11	U		0.11	U	
2-HEXANONE		0.41	U		1.6	U		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.72	U		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.48	U		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		1.3	U		0.32	U		0.32	U	
ACETONE		1.6	J	P	4.4	U		1.1	U		1.1	U	
BENZENE		0.13	U		0.52	U		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.52	U		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		1.2	U		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.6	U		0.15	U		0.15	U	
BROMOFORM		0.64	U		2.6	U		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		1.6	U		0.41	U		0.41	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712			TB-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3			240-10770-1		
FRACTION: OV	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.52	U		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.52	U		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.6	U		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.72	U		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		1.2	U		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.64	U		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		1.2	U		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		1.7			1.4	J	P	0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.56	U		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		1.1	U		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		1.2	U		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		6	U		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.44	U		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.68	U		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		1.2	U		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.52	U		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.96	U		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.68	U		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		1.3	U		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.96	U		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.48	U		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.56	U		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.56	U		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.52	U		0.13	U		0.13	U	
SILANOL, TRIMETHYL-					5.8	R	Z2	1.4	R	Z2			
STYRENE		0.11	U		0.44	U		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.27	U		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.52	U		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	16	UR	C	3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		1.2	U		0.29	U		0.29	U	
TOLUENE		0.13	U		0.52	U		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		1.1	U		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.76	U		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.76	U		0.19	U		0.19	U	
TRICHLOROETHENE		5.1			110			0.17	U		0.17	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712			TB-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3			240-10770-1		
FRACTION: OV	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		0.84	U		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.76	UR	C	0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.53	J	P	0.88	U		0.22	U		0.22	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3		
FRACTION: OS	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.48	U		0.47	U		0.48	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3		
FRACTION: PET	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		55	B	A	96	B	A	57	B	A
TPH (C10-C32)		330	J	P	240	U		230	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Matrix: Water Lab File ID: UXM5312.D

Analysis Method: 8260C Date Collected: 04/27/2012 13:53

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	1.6	J	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Matrix: Water Lab File ID: UXM5312.D

Analysis Method: 8260C Date Collected: 04/27/2012 13:53

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.7		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	5.1		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	0.53	J	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Matrix: Water Lab File ID: UXM5312.D

Analysis Method: 8260C Date Collected: 04/27/2012 13:53

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	86		63-129
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
2037-26-5	Toluene-d8 (Surr)	88		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Matrix: Water Lab File ID: UXM5312.D

Analysis Method: 8260C Date Collected: 04/27/2012 13:53

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:35

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Matrix: Water Lab File ID: UXM5318.D

Analysis Method: 8260C Date Collected: 04/27/2012 10:14

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 18:51

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	4.0	U	4.0	0.92
71-55-6	1,1,1-Trichloroethane	4.0	U	4.0	0.88
79-34-5	1,1,2,2-Tetrachloroethane	4.0	U	4.0	0.72
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	4.0	U	4.0	1.1
75-34-3	1,1-Dichloroethane	4.0	U	4.0	0.60
75-35-4	1,1-Dichloroethene	4.0	U	4.0	0.76
563-58-6	1,1-Dichloropropene	4.0	U	4.0	0.52
87-61-6	1,2,3-Trichlorobenzene	4.0	U	4.0	0.68
96-18-4	1,2,3-Trichloropropane	4.0	U	4.0	1.7
526-73-8	1,2,3-Trimethylbenzene	20	U	20	0.024
120-82-1	1,2,4-Trichlorobenzene	4.0	U	4.0	0.60
95-63-6	1,2,4-Trimethylbenzene	4.0	U	4.0	0.48
96-12-8	1,2-Dibromo-3-Chloropropane	8.0	U	8.0	2.7
95-50-1	1,2-Dichlorobenzene	4.0	U	4.0	0.52
107-06-2	1,2-Dichloroethane	4.0	U	4.0	0.88
78-87-5	1,2-Dichloropropane	4.0	U	4.0	0.72
541-73-1	1,3-Dichlorobenzene	4.0	U	4.0	0.56
142-28-9	1,3-Dichloropropane	4.0	U	4.0	0.64
106-46-7	1,4-Dichlorobenzene	4.0	U	4.0	0.52
594-20-7	2,2-Dichloropropane	4.0	U	4.0	0.52
110-75-8	2-Chloroethyl vinyl ether	40	U	40	4.0
95-49-8	2-Chlorotoluene	4.0	U	4.0	0.44
591-78-6	2-Hexanone	40	U	40	1.6
108-86-1	Bromobenzene	4.0	U	4.0	0.52
74-97-5	Bromochloromethane	4.0	U	4.0	1.2
106-43-4	4-Chlorotoluene	4.0	U	4.0	0.72
99-87-6	p-Isopropyltoluene	4.0	U	4.0	0.48
67-64-1	Acetone	40	U	40	4.4
71-43-2	Benzene	4.0	U	4.0	0.52
75-25-2	Bromoform	4.0	U	4.0	2.6
74-83-9	Bromomethane	4.0	U	4.0	1.6
75-15-0	Carbon disulfide	4.0	U	4.0	0.52
56-23-5	Carbon tetrachloride	4.0	U	4.0	0.52
108-90-7	Chlorobenzene	4.0	U	4.0	0.60
75-00-3	Chloroethane	4.0	U	4.0	1.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Matrix: Water Lab File ID: UXM5318.D

Analysis Method: 8260C Date Collected: 04/27/2012 10:14

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 18:51

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	4.0	U	4.0	0.64
74-87-3	Chloromethane	4.0	U	4.0	1.2
156-59-2	cis-1,2-Dichloroethene	1.4	J	4.0	0.68
10061-01-5	cis-1,3-Dichloropropene	4.0	U	4.0	0.56
87-68-3	Hexachlorobutadiene	4.0	U	4.0	1.2
74-95-3	Dibromomethane	4.0	U	4.0	1.1
75-27-4	Bromodichloromethane	4.0	U	4.0	0.60
75-71-8	Dichlorodifluoromethane	4.0	U	4.0	1.2
100-41-4	Ethylbenzene	4.0	U	4.0	0.68
106-93-4	1,2-Dibromoethane	4.0	U	4.0	0.96
108-20-3	Diisopropyl ether	40	U	40	6.0
91-20-3	Naphthalene	4.0	U	4.0	0.96
179601-23-1	m-Xylene & p-Xylene	8.0	U	8.0	0.96
104-51-8	n-Butylbenzene	4.0	U	4.0	0.48
98-82-8	Isopropylbenzene	4.0	U	4.0	0.52
103-65-1	n-Propylbenzene	4.0	U	4.0	0.56
78-93-3	2-Butanone	40	U	40	2.3
108-10-1	4-Methyl-2-pentanone	40	U	40	1.3
135-98-8	sec-Butylbenzene	4.0	U	4.0	0.52
1634-04-4	Methyl tert-butyl ether	20	U	20	0.68
994-05-8	Tert-amyl-methyl ether (TAME)	20	U	20	0.27
75-09-2	Methylene Chloride	4.0	U	4.0	1.3
95-47-6	o-Xylene	4.0	U	4.0	0.56
100-42-5	Styrene	4.0	U	4.0	0.44
637-92-3	Ethyl-t-butyl ether (ETBE)	20	U	20	0.44
98-06-6	tert-Butylbenzene	4.0	U	4.0	0.52
127-18-4	Tetrachloroethene	4.0	U	4.0	1.2
108-88-3	Toluene	4.0	U	4.0	0.52
156-60-5	trans-1,2-Dichloroethene	4.0	U	4.0	0.76
10061-02-6	trans-1,3-Dichloropropene	4.0	U	4.0	0.76
79-01-6	Trichloroethene	110		4.0	0.68
75-69-4	Trichlorofluoromethane	4.0	U	4.0	0.84
108-05-4	Vinyl acetate	8.0	U	8.0	0.76
75-01-4	Vinyl chloride	4.0	U	4.0	0.88
75-65-0	tert-Butyl alcohol	200	U	200	16
1330-20-7	Xylenes, Total	8.0	U	8.0	1.1

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Matrix: Water Lab File ID: UXM5318.D

Analysis Method: 8260C Date Collected: 04/27/2012 10:14

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 18:51

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	4.0	U	4.0	0.72

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	87		63-129
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
2037-26-5	Toluene-d8 (Surr)	88		74-115
1868-53-7	Dibromofluoromethane (Surr)	85		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Matrix: Water Lab File ID: UXM5318.D

Analysis Method: 8260C Date Collected: 04/27/2012 10:14

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 18:51

Soil Aliquot Vol: Dilution Factor: 4

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 1 TIC Result Total: 5.8

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.61	5.8	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Matrix: Water Lab File ID: UXM5311.D

Analysis Method: 8260C Date Collected: 04/27/2012 12:03

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Matrix: Water Lab File ID: UXM5311.D

Analysis Method: 8260C Date Collected: 04/27/2012 12:03

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Matrix: Water Lab File ID: UXM5311.D

Analysis Method: 8260C Date Collected: 04/27/2012 12:03

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	82		63-129
460-00-4	4-Bromofluorobenzene (Surr)	88		66-117
2037-26-5	Toluene-d8 (Surr)	84		74-115
1868-53-7	Dibromofluoromethane (Surr)	81		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Matrix: Water Lab File ID: UXM5311.D

Analysis Method: 8260C Date Collected: 04/27/2012 12:03

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 16:12

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.61	1.4	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: TB-042712 Lab Sample ID: 240-10770-1

Matrix: Water Lab File ID: UXM5303.D

Analysis Method: 8260C Date Collected: 04/27/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 13:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: TB-042712 Lab Sample ID: 240-10770-1

Matrix: Water Lab File ID: UXM5303.D

Analysis Method: 8260C Date Collected: 04/27/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 13:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: TB-042712 Lab Sample ID: 240-10770-1

Matrix: Water Lab File ID: UXM5303.D

Analysis Method: 8260C Date Collected: 04/27/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 13:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
460-00-4	4-Bromofluorobenzene (Surr)	98		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	94		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: TB-042712 Lab Sample ID: 240-10770-1

Matrix: Water Lab File ID: UXM5303.D

Analysis Method: 8260C Date Collected: 04/27/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 13:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW4-042712 | Lab Sample ID: 240-10770-4

Matrix: Water | Lab File ID: 20508021.D

Analysis Method: 8270C | Date Collected: 04/27/2012 13:53

Extract. Method: 3520C | Date Extracted: 05/03/2012 09:57

Sample wt/vol: 1030(mL) | Date Analyzed: 05/08/2012 14:56

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.97	U	0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		28-110
367-12-4	2-Fluorophenol (Surr)	54		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	80		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	53		27-111
4165-62-2	Phenol-d5 (Surr)	56		10-110
1718-51-0	Terphenyl-d14 (Surr)	67		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW7-042712 | Lab Sample ID: 240-10770-2

Matrix: Water | Lab File ID: 20508019.D

Analysis Method: 8270C | Date Collected: 04/27/2012 10:14

Extract. Method: 3520C | Date Extracted: 05/03/2012 09:57

Sample wt/vol: 1050(mL) | Date Analyzed: 05/08/2012 14:20

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		28-110
367-12-4	2-Fluorophenol (Surr)	59		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	71		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	62		27-111
4165-62-2	Phenol-d5 (Surr)	60		10-110
1718-51-0	Terphenyl-d14 (Surr)	71		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Matrix: Water Lab File ID: 20508020.D

Analysis Method: 8270C Date Collected: 04/27/2012 12:03

Extract. Method: 3520C Date Extracted: 05/03/2012 09:57

Sample wt/vol: 1020(mL) Date Analyzed: 05/08/2012 14:38

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.98	U	0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	50		28-110
367-12-4	2-Fluorophenol (Surr)	48		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	67		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	52		27-111
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	65		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Matrix: Water Lab File ID: YF004313.D

Analysis Method: 8015B Date Collected: 04/27/2012 13:53

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 16:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42123 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	55	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	64		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Matrix: Water Lab File ID: YF004309.D

Analysis Method: 8015B Date Collected: 04/27/2012 10:14

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 13:57

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42123 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	96	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	61		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Matrix: Water Lab File ID: YF004312.D

Analysis Method: 8015B Date Collected: 04/27/2012 12:03

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 16:00

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42123 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	57	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	61		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW4-042712 | Lab Sample ID: 240-10770-4

Matrix: Water | Lab File ID: P5B05051.D

Analysis Method: 8015B | Date Collected: 04/27/2012 13:53

Extraction Method: 3510C | Date Extracted: 05/03/2012 11:54

Sample wt/vol: 990(mL) | Date Analyzed: 05/04/2012 13:08

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	330	J	510	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	70		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Matrix: Water Lab File ID: P5B05049.D

Analysis Method: 8015B Date Collected: 04/27/2012 10:14

Extraction Method: 3510C Date Extracted: 05/03/2012 11:54

Sample wt/vol: 1000(mL) Date Analyzed: 05/04/2012 12:07

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	63		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Matrix: Water Lab File ID: P5B05050.D

Analysis Method: 8015B Date Collected: 04/27/2012 12:03

Extraction Method: 3510C Date Extracted: 05/03/2012 11:54

Sample wt/vol: 1050(mL) Date Analyzed: 05/04/2012 12:37

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	480	U	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	73		10-110

Appendix C

Support Documentation

MARTIN STATE AIRPORT - GROUNDWATER
SDG 240-10770-1

SAMPLE IDENTIFICATION	GSP-MW7-042712
COMPOUND	TRICHLOROETHENE
COMPOUND AREA	987189
INTERNAL STANDARD AMOUNT (ng)	50
VOLUME WATER PURGED (ml)	5
DILUTION FACTOR	4
INTERNAL STANDARD AREA	1362003
AVERAGE RRF	0.2698
ml to µl	1000
ng to µg	1000
=	107.5 µg/L

987189 x 50 ng x 4 x 1000ml x 1µg /1362003 x 0.2698 x 5ml x 1L x 1000ng

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
29 3-Chloro-1-propene	76		3.484					
28 Methyl acetate	43		3.496					
30 Methylene Chloride	84	3.591	3.579	0.012	90	29855	0.1455	
31 2-Methyl-2-propanol	59		3.674					
32 Acrylonitrile	53		3.792					
33 trans-1,2-Dichloroethene	96		3.840					
34 Methyl tert-butyl ether	73		3.840					
35 Hexane	86		4.089					
36 1,1-Dichloroethane	63		4.208					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.279					
39 2-Chloro-1,3-butadiene	53		4.291					
40 Tert-butyl ethyl ether	59		4.587					
42 cis-1,2-Dichloroethene	96	4.717	4.706	0.011	64	15220	0.3619	
41 2-Butanone (MEK)	43		4.706					
43 2,2-Dichloropropane	77		4.717					
44 Propionitrile	54		4.753					
45 Ethyl acetate	43		4.765					
46 Methacrylonitrile	41		4.895					
47 Chlorobromomethane	128		4.919					
48 Tetrahydrofuran	42		4.966					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97		5.156					
51 Cyclohexane	56		5.215					
52 1,1-Dichloropropene	75		5.299					
53 Carbon tetrachloride	117		5.310					
54 Isobutyl alcohol	41		5.346					
56 1,2-Dichloroethane	62		5.465					
55 Benzene	78		5.476					
57 Tert-amyl methyl ether	73		5.559					
61 Ethyl acrylate	55		5.605					
58 n-Heptane	100		5.702					
59 n-Butanol	56		5.903					
60 Trichloroethene	130	6.022	6.022	0.0	96	987189	26.9	
63 Methylcyclohexane	83		6.200					
62 1,2-Dichloropropane	63		6.212					
64 Methyl methacrylate	41		6.283					
65 Dibromomethane	93		6.306					
66 1,4-Dioxane	88		6.318					
67 Dichlorobromomethane	83		6.437					
68 2-Nitropropane	41		6.627					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91		7.137					
73 trans-1,3-Dichloropropene	75		7.314					
74 Ethyl methacrylate	69		7.386					
75 1,1,2-Trichloroethane	97		7.480					
76 1,3-Dichloropropane	76		7.635					
77 Tetrachloroethene	164		7.646					
78 2-Hexanone	43		7.694					
81 1-Chlorohexane	91		7.788					

RRF = 0.2698

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
132 n-Butyl acetate	43		7.813					
79 Chlorodibromomethane	129		7.848					
80 Tetrahydrothiophene	60		7.860					
123 Ethylene Dibromide	107		7.967					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
85 o-Xylene	106		9.010					
86 Styrene	104		9.010					
87 Bromoform	173		9.188					
88 Isopropylbenzene	105		9.354					
89 Cyclohexanone	55		9.437					
135 1,4-Dichlorobutane	55		9.437					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
93 trans-1,4-Dichloro-2-butene	53		9.674					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.840					
96 1,3,5-Trimethylbenzene	105		9.923					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.244					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.576					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.659					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
108 1,3,5-Trichlorobenzene	180		12.022					
109 1,2,4-Trichlorobenzene	180		12.639					
110 Hexachlorobutadiene	225		12.817					
111 Naphthalene	128		12.888					
112 1,2,3-Trichlorobenzene	180		13.149					
113 2-Methylnaphthalene	142		14.240					
S 137 Trihalomethanes, Total	1		0.000					
S 11 1,2-Dichloroethene, Total	96				0		0.3619	
S 9 1,3-Dichloropropene, Total	75		6.760					
S 114 Xylenes, Total	106		16.530					

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120501-9570.b\UXM5318.D		
Lims ID:	240-10770-B-2	Client ID:	GSP-MW7-042712
Inject. Date:	01-May-2012 18:51:30	Dil. Factor:	4.0000
Sample Type:	Client		
Sample ID:	240-0009570-021		
Misc. Info.:	M20501A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	20
Lims Batch ID:	42324	Lims Sample ID:	21
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120501-9570.b\8260_16.m		
Last Update:	02-May-2012 10:55:43	Calib Date:	29-Apr-2012 19:50:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120429-9509.b\UXM5250.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-17		
First Level Reviewer: williamsla		Date:	02-May-2012 11:07:24

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1362003	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.394	-0.001	90	922953	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	98	426990	10.0	
$ 142 2,5-Dibromotoluene	1		0.000					
$ 5 Dibromofluoromethane (Surr)	113	5.121	5.109	0.012	65	283913	8.72	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	468123	8.89	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1283387	8.96	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	81	477229	9.34	
136 Hexachloroethane TIC	1		0.000					
133 Benzyl chloride	126		0.000					
134 Chlorodifluoromethane TIC	1		0.000					
138 Butyl Methacrylate TIC	1		0.000					
139 C6-C12	1		0.000					
140 C6-C10	1		0.000					
12 Dichlorodifluoromethane	85		1.658					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62		1.954					
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.405					
17 Dichlorofluoromethane	67		2.595					
18 Trichlorofluoromethane	101		2.666					
25 Methylal	45		2.856					
19 Ethyl ether	59		2.927					
20 Acrolein	56		3.034					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
24 Iodomethane	142		3.294					
26 Carbon disulfide	76		3.366					
27 Acetonitrile	41		3.425					

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A2HP5R\20120504-9661.b\P5B05051.D		
Lims ID:	240-10770-K-4-A	Client ID:	GSP-MW4-042712
Inject. Date:	04-May-2012 13:08:07	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009661-011		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP5R
Vol. Injected:	1.0000	ALS Bottle#:	61
Lims Batch ID:	42755	Lims Sample ID:	11
Detector:	GC FID2B		
Method:	\\Ncchrom\ChromData\A2HP5R\20120504-9661.b\TPH5R.m		
Last Update:	07-May-2012 11:41:19	Calib Date:	30-Apr-2012 15:32:13
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP5R\20120430-9518.b\P5B04314.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
4.034	4.028	0.006	14443839	70.1	
A 15 Diesel					
9.356	5.058 - 13.654		8259365	48.3	
A 17 C10-C32					
10.045	5.058 - 15.033		11057698	64.6	

extraction = 990ml / 5ml

CF = 171121.938

$$\frac{11057698\ ng/\mu l}{171121.938} \times \frac{5ml}{990ml} \times \frac{1\ mg}{1000\ ng} \times \frac{1000000\ \mu l}{1L}$$

= 326 mg/L

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'Meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330-497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: 301 528-3021		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: MSA Ground Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04021-02	Shipping/Tracking No:			Job/SDG No:
PO #				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs	Total PPM	Diss PPM	1,4 Dioxane	DRO	GRO	Perchlorate				Sample Specific Notes / Special Instructions:
TB-042712	4-27-12	—		X						2					N	G	X										
GSP-MW7-042712	↓	1014		X					2	5			5		↓	↓	X	X	X	X	X	X	X				
GSP-MW8-042712	↓	1203		X					2	5			5		↓	↓	X	X	X	X	X	X	X				
GSP-MW4-042712	↓	1353		X					2	5			5		↓	↓	X	X	X	X	X	X	X				

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	4-27-12 / 1517	Paul Gaylord	TestAmerica	4/27/12/1517
Paul Gaylord	TestAmerica	4/27/12/1620			
			Received in Laboratory by: Mike Gallone	TAL	4/28/12 1000

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TAL-0018 (1008)

05/30/2012

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10770-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/28/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.4 and 1.2 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042712 (240-10770-1), GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/01/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42324/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample GSP-MW7-042712MS/MSD (240-10770-2) in batch 240-42324.

Refer to the QC report for details.

Sample GSP-MW7-042712 (240-10770-2)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/03/2012 and analyzed on 05/08/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 43632/8270.

No other difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/30/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42123/7 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/03/2012 and analyzed on 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42661.

No other difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

Several analytes were detected in method blank MB 240-42485/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and 05/03/2012 and analyzed on 05/03/2012 and 05/04/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and 05/03/2012 and analyzed on 05/03/2012 and 05/04/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10770-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10770-1TB	TB-042712	Water	04/27/2012 0000	04/28/2012 1000
240-10770-2	GSP-MW7-042712	Water	04/27/2012 1014	04/28/2012 1000
240-10770-3	GSP-MW8-042712	Water	04/27/2012 1203	04/28/2012 1000
240-10770-4	GSP-MW4-042712	Water	04/27/2012 1353	04/28/2012 1000

DATA REPORTING QUALIFIERS

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10770-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Indicates an Estimated Value for TICs
	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
	T	Result is a tentatively identified compound (TIC) and an estimated value.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	N	This flag indicates the presumptive evidence of a compound.
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
GC VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
Metals		
	B	Compound was found in the blank and sample.
	^	ICV,CCV,ICB,CCB, ISA, ISB, CRI, CRA, DLCK or MRL standard: Instrument related QC exceeds the control limits.
	U	Indicates the analyte was analyzed for but not detected.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-042712	240-10770-1	94	92	95	98
GSP-MW7-042712	240-10770-2	85	87	88	91
GSP-MW8-042712	240-10770-3	81	82	84	88
GSP-MW4-042712	240-10770-4	87	86	88	91
	MB 240-42324/5	87	88	90	94
	LCS 240-42324/4	87	82	87	95
GSP-MW7-042712 MS	240-10770-2 MS	89	85	91	95
GSP-MW7-042712 MSD	240-10770-2 MSD	86	84	91	95

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: STD8260 240-42092/4 Date Analyzed: 04/29/2012 16:26

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5241.D Heated Purge: (Y/N) N

Calibration ID: 8426

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1530000	5.70	1036987	8.39	499405	10.64
UPPER LIMIT		3060000	6.20	2073974	8.89	998810	11.14
LOWER LIMIT		765000	5.20	518494	7.89	249703	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42092/14		1382789	5.70	929711	8.39	462842	10.64
CCVIS 240-42324/2		1685652	5.70	1127991	8.39	551448	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: CCVIS 240-42324/2 Date Analyzed: 05/01/2012 10:57

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5299.D Heated Purge: (Y/N) N

Calibration ID: 8428

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1685652	5.70	1127991	8.39	551448	10.64
UPPER LIMIT		3371304	6.20	2255982	8.89	1102896	11.14
LOWER LIMIT		842826	5.20	563996	7.89	275724	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-42324/3		1584858	5.70	1039768	8.39	509719	10.64
LCS 240-42324/4		1635403	5.70	1080601	8.39	561237	10.64
MB 240-42324/5		1511836	5.70	1024126	8.39	489807	10.64
240-10770-1	TB-042712	1435323	5.70	969675	8.39	455010	10.64
240-10770-3	GSP-MW8-042712	1507618	5.70	1016861	8.39	471906	10.64
240-10770-4	GSP-MW4-042712	1457135	5.70	982988	8.39	456091	10.64
240-10770-2	GSP-MW7-042712	1362003	5.70	922953	8.39	426990	10.64
240-10770-2 MS	GSP-MW7-042712 MS	1398521	5.70	928051	8.39	457817	10.64
240-10770-2 MSD	GSP-MW7-042712 MSD	1446927	5.70	965602	8.39	481690	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42092/2	UXM5239.D	04/29/2012	15:41
	STD8260 240-42092/3	UXM5240.D	04/29/2012	16:03
	STD8260 240-42092/4	UXM5241.D	04/29/2012	16:26
	STD8260 240-42092/5	UXM5242.D	04/29/2012	16:49
	STD8260 240-42092/6	UXM5243.D	04/29/2012	17:12
	STD8260 240-42092/7	UXM5244.D	04/29/2012	17:34
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50
	ICV 240-42092/14	UXM5251.D	04/29/2012	20:13

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42092/7	UXM5244.D
Level 2	STD8260 240-42092/6	UXM5243.D
Level 3	STD8260 240-42092/5	UXM5242.D
Level 4	STD8260 240-42092/4	UXM5241.D
Level 5	STD8260 240-42092/3	UXM5240.D
Level 6	STD8260 240-42092/2	UXM5239.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2475 0.3038	0.2649	0.2905	0.2889	0.3016	Ave		0.2829			0.1000	7.8		15.0			
Chloromethane	0.4695 0.4320	0.4893	0.4830	0.4487	0.4452	Ave		0.4613			0.1000	4.9		15.0			
Vinyl chloride	0.4202 0.4041	0.4409	0.4365	0.4256	0.4202	Ave		0.4246			0.1000	3.1		15.0			
Bromomethane	0.1730 0.1493	0.1760	0.1733	0.1676	0.1710	Ave		0.1684			0.0500	5.8		15.0			
Chloroethane	0.2470 0.2229	0.2473	0.2344	0.2374	0.2336	Ave		0.2371				3.9		15.0			
Trichlorofluoromethane	0.2704 0.3132	0.3068	0.3031	0.3070	0.3204	Ave		0.3035			0.1000	5.7		15.0			
Acrolein	0.0469 0.0473	0.0483	0.0502	0.0508	0.0498	Ave		0.0489				3.3		15.0			
1,1-Dichloroethene	0.2340 0.2501	0.2402	0.2424	0.2499	0.2511	Ave		0.2446			0.1000	2.8		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1512 0.1622	0.1553	0.1500	0.1479	0.1608	Ave		0.1546			0.0500	3.8		15.0			
Acetone	0.2162 0.0864	0.1595	0.1181	0.1099	0.0970	Lin1	0.2842	0.0868			0.0500				0.9960		0.9950
Iodomethane	0.3345 0.3288	0.3415	0.3505	0.3469	0.3574	Ave		0.3433				3.1		15.0			
Carbon disulfide	0.6238 0.8183	0.6509	0.6976	0.7556	0.8104	Ave		0.7261			0.1000	11.0		15.0			
Acetonitrile	0.0391 0.0299	0.0368	0.0353	0.0335	0.0333	Ave		0.0346				9.2		15.0			
Methyl acetate	0.2451 0.2094	0.2377	0.2404	0.2374	0.2264	Ave		0.2327			0.1000	5.6		15.0			
Methylene Chloride	0.4532 0.2926	0.3791	0.3449	0.3188	0.3120	Lin1	0.1763	0.2950			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0187 0.0171	0.0206	0.0189	0.0189	0.0192	Ave		0.0189				6.0		15.0			
Acrylonitrile	0.1145 0.1022	0.1105	0.1139	0.1170	0.1105	Ave		0.1114				4.6		15.0			
trans-1,2-Dichloroethene	0.2839 0.2770	0.2945	0.2944	0.2851	0.2889	Ave		0.2873			0.1000	2.4		15.0			
Methyl tert-butyl ether	0.8507 0.8216	0.8205	0.8460	0.8461	0.8566	Ave		0.8402			0.1000	1.8		15.0			
Hexane	0.0529 0.0560	0.0521	0.0488	0.0501	0.0574	Ave		0.0529				6.3		15.0			
1,1-Dichloroethane	0.5478 0.5504	0.5906	0.5789	0.5698	0.5773	Ave		0.5691			0.1000	3.0		15.0			
Vinyl acetate	0.0438 0.0547	0.0420	0.0492	0.0562	0.0568	Ave		0.0505				13.0		15.0			
2-Butanone	0.1431 0.1214	0.1392	0.1413	0.1375	0.1314	Ave		0.1356			0.0500	5.9		15.0			
cis-1,2-Dichloroethene	0.3153 0.3006	0.3006	0.3107	0.3096	0.3157	Ave		0.3087			0.1000	2.2		15.0			
2,2-Dichloropropane	0.2459 0.3076	0.2799	0.2938	0.3057	0.3261	Ave		0.2932				9.5		15.0			
Bromochloromethane	0.1255 0.1262	0.1225	0.1298	0.1329	0.1330	Ave		0.1283				3.3		15.0			
Tetrahydrofuran	0.0875 0.0744	0.0826	0.0830	0.0854	0.0842	Ave		0.0828				5.4		15.0			
Chloroform	0.5169 0.5153	0.5299	0.5388	0.5290	0.5477	Ave		0.5296				2.4		15.0			
1,1,1-Trichloroethane	0.3234 0.3831	0.3500	0.3674	0.3840	0.3986	Ave		0.3678			0.1000	7.4		15.0			
Cyclohexane	0.4217 0.4832	0.4863	0.4431	0.4476	0.4809	Ave		0.4605			0.1000	5.8		15.0			
1,1-Dichloropropene	0.4359 0.4194	0.4199	0.4223	0.4252	0.4356	Ave		0.4264				1.8		15.0			
Carbon tetrachloride	0.2456 0.3072	0.2543	0.2617	0.2867	0.3066	Ave		0.2770			0.1000	9.7		15.0			
1,2-Dichloroethane	0.4838 0.4518	0.4761	0.4673	0.4667	0.4711	Ave		0.4694			0.1000	2.3		15.0			
Benzene	1.2256 1.2453	1.2535	1.2750	1.2420	1.2666	Ave		1.2513			0.5000	1.4		15.0			
Trichloroethene	0.2714 0.2655	0.2671	0.2733	0.2695	0.2719	Ave		0.2698			0.2000	1.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.3056 0.3781	0.3553	0.3486	0.3331	0.3656	Ave		0.3477			0.1000	7.4		15.0			
1,2-Dichloropropane	0.2994 0.3048	0.3058	0.3148	0.3132	0.3116	Ave		0.3083			0.1000	1.9		15.0			
Dibromomethane	0.1675 0.1555	0.1521	0.1644	0.1597	0.1644	Ave		0.1606				3.7		15.0			
1,4-Dioxane	0.0023 0.0020	0.0024	0.0025	0.0025	0.0025	Ave		0.0024				8.2		15.0			
Bromodichloromethane	0.2586 0.3533	0.2732	0.3036	0.3210	0.3455	Ave		0.3092			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1532 0.1582	0.1459	0.1670	0.1699	0.1653	Ave		0.1599				5.8		15.0			
cis-1,3-Dichloropropene	0.3061 0.4576	0.3249	0.3845	0.4238	0.4469	Lin1	-0.212	0.4568			0.1500				0.9990		0.9950
4-Methyl-2-pentanone	0.2451 0.2575	0.2540	0.2759	0.2780	0.2752	Ave		0.2643			0.0500	5.3		15.0			
Toluene	1.7728 1.9294	1.8880	1.8619	1.8474	1.9604	Ave		1.8766			0.4000	3.5		15.0			
trans-1,3-Dichloropropene	0.3835 0.6056	0.4211	0.4964	0.5287	0.6010	Lin1	-0.314	0.6041			0.1000				0.9980		0.9950
Ethyl methacrylate	0.4455 0.5778	0.5229	0.5765	0.5788	0.6242	Ave		0.5543				11.0		15.0			
1,1,2-Trichloroethane	0.3279 0.3212	0.3141	0.3421	0.3341	0.3447	Ave		0.3307			0.1000	3.6		15.0			
1,3-Dichloropropane	0.6891 0.6635	0.6944	0.7152	0.6928	0.7223	Ave		0.6962				3.0		15.0			
Tetrachloroethene	0.2452 0.2600	0.2630	0.2668	0.2612	0.2738	Ave		0.2617			0.2000	3.6		15.0			
2-Hexanone	0.2323 0.2576	0.2818	0.2796	0.2822	0.2852	Ave		0.2698			0.0500	7.8		15.0			
Dibromochloromethane	0.1872 0.3114	0.2160	0.2464	0.2709	0.3057	Lin1	-0.171	0.3097							0.9980		0.9950
1,2-Dibromoethane	0.2962 0.3220	0.3089	0.3344	0.3261	0.3462	Ave		0.3223				5.5		15.0			
Chlorobenzene	1.0759 1.0855	1.1279	1.1114	1.0941	1.1299	Ave		1.1041			0.3000	2.0		15.0			
1,1,1,2-Tetrachloroethane	0.2665 0.3469	0.2706	0.3066	0.3249	0.3538	Ave		0.3116				12.0		15.0			
Ethylbenzene	0.5227 0.5869	0.5825	0.6026	0.5858	0.6163	Ave		0.5828				5.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6757 0.7551	0.7220	0.7191	0.7176	0.7638	Ave		0.7256				4.3		15.0			
o-Xylene	0.6806 0.7276	0.7176	0.7304	0.7130	0.7551	Ave		0.7207				3.4		15.0			
Styrene	1.0565 1.2902	1.1310	1.1966	1.1904	1.2870	Ave		1.1920			0.3000	7.6		15.0			
Bromoform	0.0815 0.1487	0.0938	0.1133	0.1171	0.1413	Lin1	-0.094	0.1455			0.1000				0.9950		0.9950
Isopropylbenzene	1.5492 1.8304	1.6861	1.6648	1.6944	1.8507	Ave		1.7126			0.1000	6.6		15.0			
1,1,2,2-Tetrachloroethane	0.8553 0.8338	0.9184	0.9469	0.9293	0.9310	Ave		0.9025			0.3000	5.1		15.0			
Bromobenzene	0.8074 0.7779	0.8287	0.8325	0.8084	0.8409	Ave		0.8159				2.8		15.0			
1,2,3-Trichloropropane	0.2880 0.2558	0.2803	0.2925	0.2919	0.2938	Ave		0.2837				5.1		15.0			
trans-1,4-Dichloro-2-butene	0.2181 0.2689	0.2471	0.2346	0.2535	0.2845	Ave		0.2511				9.5		15.0			
n-Propylbenzene	0.7292 0.8665	0.8823	0.8741	0.8947	0.9118	Ave		0.8598				7.7		15.0			
2-Chlorotoluene	0.8583 0.7918	0.8579	0.8258	0.8361	0.8474	Ave		0.8362				3.0		15.0			
1,3,5-Trimethylbenzene	2.5787 2.8481	2.7830	2.7962	2.7951	2.9477	Ave		2.7914				4.3		15.0			
4-Chlorotoluene	0.8421 0.8602	0.8907	0.8940	0.8564	0.9136	Ave		0.8762				3.1		15.0			
tert-Butylbenzene	2.2870 2.5025	2.5077	2.4568	2.4969	2.5752	Ave		2.4710				4.0		15.0			
1,2,4-Trimethylbenzene	2.7586 2.9544	2.8331	2.8754	2.9504	3.0668	Ave		2.9065				3.7		15.0			
sec-Butylbenzene	2.8024 3.1977	3.0238	2.9596	3.0216	3.2137	Ave		3.0365				5.1		15.0			
1,3-Dichlorobenzene	1.5037 1.4698	1.4901	1.5135	1.5069	1.5495	Ave		1.5056			0.6000	1.8		15.0			
p-Isopropyltoluene	2.2069 2.6255	2.4647	2.4703	2.4761	2.6715	Ave		2.4858				6.6		15.0			
1,4-Dichlorobenzene	1.6073 1.5308	1.6512	1.5577	1.5557	1.6211	Ave		1.5873			0.5000	2.9		15.0			
n-Butylbenzene	2.0896 2.4436	2.2004	2.2368	2.2659	2.4792	Ave		2.2859				6.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 15:41 Calibration End Date: 04/29/2012 17:34 Calibration ID: 8426

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.4966 1.3945	1.5126	1.5119	1.4682	1.5239	Ave		1.4846			0.4000	3.2		15.0			
1,2-Dibromo-3-Chloropropane	0.0886 0.0950	0.0916	0.0904	0.0972	0.1086	Ave		0.0952			0.0500	7.6		15.0			
1,3,5-Trichlorobenzene	0.7904 0.7093	0.7633	0.7631	0.7837	0.8038	Ave		0.7690				4.3		15.0			
1,2,4-Trichlorobenzene	0.6476 0.5852	0.7228	0.7185	0.6951	0.7215	Ave		0.6818			0.2000	8.1		15.0			
Hexachlorobutadiene	0.2814 0.2092	0.2884	0.2495	0.2645	0.2531	Ave		0.2577				11.0		15.0			
Naphthalene	1.9527 1.6802	2.0647	2.2163	2.2497	2.2115	Ave		2.0625				11.0		15.0			
1,2,3-Trichlorobenzene	0.6221 0.4278	0.6296	0.6285	0.6505	0.5938	Ave		0.5920				14.0		15.0			
Dibromofluoromethane (Surr)	0.2331 0.2366	0.2278	0.2460	0.2403	0.2499	Ave		0.2389				3.4		15.0			
1,2-Dichloroethane-d4 (Surr)	0.4238 0.3659	0.3675	0.3946	0.3884	0.3801	Ave		0.3867				5.5		15.0			
Toluene-d8 (Surr)	1.5539 1.5702	1.4814	1.5599	1.5466	1.5977	Ave		1.5516				2.5		15.0			
4-Bromofluorobenzene (Surr)	0.5499 0.5492	0.5504	0.5556	0.5412	0.5764	Ave		0.5538				2.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

1CV

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2340	0.1000	8.27	10.0	-17.3	20.0
Chloromethane	Ave	0.4613	0.4720	0.1000	10.2	10.0	2.3	20.0
Vinyl chloride	Ave	0.4246	0.4443	0.1000	10.5	10.0	4.6	20.0
Bromomethane	Ave	0.1684	0.1539	0.0500	9.14	10.0	-8.6	20.0
Chloroethane	Ave	0.2371	0.2329	0.0500	9.82	10.0	-1.8	20.0
Trichlorofluoromethane	Ave	0.3035	0.3240	0.1000	10.7	10.0	6.8	20.0
Acrolein	Ave	0.0489	0.0264		16.2	30.0	-46.0*	20.0
1,1-Dichloroethene	Ave	0.2446	0.2652	0.1000	10.8	10.0	8.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1709	0.0500	11.1	10.0	10.6	20.0
Acetone	Lin1		0.1057	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.3433	0.3416		9.95	10.0	-0.5	20.0
Carbon disulfide	Ave	0.7261	0.7042	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0346	0.0393		34.0	30.0	13.4	20.0
Methyl acetate	Ave	0.2327	0.2751	0.1000	11.8	10.0	18.2	20.0
Methylene Chloride	Lin1		0.3299	0.1000	10.6	10.0	6.0	20.0
tert-Butyl alcohol	Ave	0.0189	0.0195		207	200	3.2	20.0
Acrylonitrile	Ave	0.1114	0.1186		31.9	30.0	6.5	20.0
Methyl tert-butyl ether	Ave	0.8402	0.8405	0.1000	10.0	10.0	0.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2952	0.1000	10.3	10.0	2.7	20.0
Hexane	Ave	0.0529	0.0579		10.9	10.0	9.4	20.0
1,1-Dichloroethane	Ave	0.5691	0.6028	0.1000	10.6	10.0	5.9	20.0
Vinyl acetate	Ave	0.0505	0.0387		7.67	10.0	-23.3*	20.0
2-Butanone	Ave	0.1356	0.1389	0.0500	20.5	20.0	2.4	20.0
2,2-Dichloropropane	Ave	0.2932	0.2855		9.74	10.0	-2.6	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.3186	0.1000	10.3	10.0	3.2	20.0
Bromochloromethane	Ave	0.1283	0.1312		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0828	0.0852		10.3	10.0	2.9	20.0
Chloroform	Ave	0.5296	0.5462	0.2000	10.3	10.0	3.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3794	0.1000	10.3	10.0	3.2	20.0
Cyclohexane	Ave	0.4605	0.4767	0.1000	10.4	10.0	3.5	20.0
1,1-Dichloropropene	Ave	0.4264	0.4383		10.3	10.0	2.8	20.0
Carbon tetrachloride	Ave	0.2770	0.2912	0.1000	10.5	10.0	5.1	20.0
1,2-Dichloroethane	Ave	0.4694	0.4938	0.1000	10.5	10.0	5.2	20.0
Benzene	Ave	1.251	1.319	0.5000	10.5	10.0	5.4	20.0
Trichloroethene	Ave	0.2698	0.2968	0.2000	11.0	10.0	10.0	20.0
1,2-Dichloropropane	Ave	0.3083	0.3319	0.1000	10.8	10.0	7.7	20.0
Methylcyclohexane	Ave	0.3477	0.3665	0.1000	10.5	10.0	5.4	20.0
Dibromomethane	Ave	0.1606	0.1738		10.8	10.0	8.2	20.0
Bromodichloromethane	Ave	0.3092	0.3331	0.1000	10.8	10.0	7.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1599	0.1722		10.8	10.0	7.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.4089	0.1500	9.41	10.0	-5.9	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2914	0.0500	22.1	20.0	10.3	20.0
Toluene	Ave	1.877	1.918	0.4000	10.2	10.0	2.2	20.0
trans-1,3-Dichloropropene	Lin1		0.5291	0.1000	9.28	10.0	-7.2	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3442	0.1000	10.4	10.0	4.1	20.0
1,3-Dichloropropane	Ave	0.6962	0.7105		10.2	10.0	2.0	20.0
Tetrachloroethene	Ave	0.2617	0.2644	0.2000	10.1	10.0	1.0	20.0
2-Hexanone	Ave	0.2698	0.2927	0.0500	21.7	20.0	8.5	20.0
Dibromochloromethane	Lin1		0.2623		9.02	10.0	-9.8	20.0
1,2-Dibromoethane	Ave	0.3223	0.3341		10.4	10.0	3.7	20.0
Chlorobenzene	Ave	1.104	1.136	0.3000	10.3	10.0	2.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3283		10.5	10.0	5.4	20.0
Ethylbenzene	Ave	0.5828	0.6250		10.7	10.0	7.2	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.7452		20.5	20.0	2.7	20.0
o-Xylene	Ave	0.7207	0.7518		10.4	10.0	4.3	20.0
Styrene	Ave	1.192	1.255	0.3000	10.5	10.0	5.3	20.0
Bromoform	Lin1		0.1220	0.1000	9.03	10.0	-9.7	20.0
Isopropylbenzene	Ave	1.713	1.779	0.1000	10.4	10.0	3.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.9195	0.3000	10.2	10.0	1.9	20.0
Bromobenzene	Ave	0.8159	0.8010		9.82	10.0	-1.8	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2982		10.5	10.0	5.1	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2617		20.8	20.0	4.2	20.0
n-Propylbenzene	Ave	0.8598	0.9010		10.5	10.0	4.8	20.0
2-Chlorotoluene	Ave	0.8362	0.8214		9.82	10.0	-1.8	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.836		10.2	10.0	1.6	20.0
4-Chlorotoluene	Ave	0.8762	0.8813		10.1	10.0	0.6	20.0
tert-Butylbenzene	Ave	2.471	2.497		10.1	10.0	1.1	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.988		10.3	10.0	2.8	20.0
sec-Butylbenzene	Ave	3.036	3.064		10.1	10.0	0.9	20.0
1,3-Dichlorobenzene	Ave	1.506	1.484	0.6000	9.85	10.0	-1.5	20.0
p-Isopropyltoluene	Ave	2.486	2.579		10.4	10.0	3.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.584	0.5000	9.98	10.0	-0.2	20.0
n-Butylbenzene	Ave	2.286	2.295		10.0	10.0	0.4	20.0
1,2-Dichlorobenzene	Ave	1.485	1.504	0.4000	10.1	10.0	1.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.1049	0.0500	11.0	10.0	10.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6660	0.2000	9.77	10.0	-2.3	20.0
Hexachlorobutadiene	Ave	0.2577	0.2217		8.60	10.0	-14.0	20.0
Naphthalene	Ave	2.063	2.211		10.7	10.0	7.2	20.0
1,2,3-Trichlorobenzene	Ave	0.5920	0.6250		10.6	10.0	5.6	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2274		9.72	10.2	-4.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3583		9.46	10.2	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

10V

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.552	1.491		9.81	10.2	-3.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5469		10.1	10.2	-1.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICV 240-42092/14 Calibration Date: 04/29/2012 20:13

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5251.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3065		9.63	10.0	-3.7	20.0
Diisopropyl ether	Ave	0.2775	0.2745		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		527	500	5.4	20.0
Cyclohexanone	Lin1		0.0256		52.9	200	-73.6*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	3.178		10.7	10.0	6.6	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab File ID: BFB2918.D BFB Injection Date: 05/01/2012

Instrument ID: A3UX16 BFB Injection Time: 10:27

Analysis Batch No.: 42324

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	22.3	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.1	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	65.4	
175	5.0 - 9.0 % of mass 174	4.4	(6.7)1
176	95.0 - 101.0 % of mass 174	62.9	(96.2)1
177	5.0 - 9.0 % of mass 176	4.0	(6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-42324/2	UXM5299.D	05/01/2012	10:57
	CCV 240-42324/3	UXM5300.D	05/01/2012	11:20
	LCS 240-42324/4	UXM5301.D	05/01/2012	11:42
	MB 240-42324/5	UXM5302.D	05/01/2012	12:05
TB-042712	240-10770-1	UXM5303.D	05/01/2012	13:05
GSP-MW8-042712	240-10770-3	UXM5311.D	05/01/2012	16:12
GSP-MW4-042712	240-10770-4	UXM5312.D	05/01/2012	16:35
GSP-MW7-042712	240-10770-2	UXM5318.D	05/01/2012	18:51
GSP-MW7-042712 MS	240-10770-2 MS	UXM5319.D	05/01/2012	19:14
GSP-MW7-042712 MSD	240-10770-2 MSD	UXM5320.D	05/01/2012	19:37

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCVIS 240-42324/2 Calibration Date: 05/01/2012 10:57

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5299.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2829	0.2970	0.1000	10.5	10.0	5.0	20.0
Chloromethane	Ave	0.4613	0.4543	0.1000	9.85	10.0	-1.5	20.0
Vinyl chloride	Ave	0.4246	0.4174	0.1000	9.83	10.0	-1.7	20.0
Bromomethane	Ave	0.1684	0.1468	0.0500	8.72	10.0	-12.8	20.0
Chloroethane	Ave	0.2371	0.2172	0.0500	9.16	10.0	-8.4	20.0
Trichlorofluoromethane	Ave	0.3035	0.3345	0.1000	11.0	10.0	10.2	20.0
Acrolein	Ave	0.0489	0.0408		83.3	100	-16.7	20.0
1,1-Dichloroethene	Ave	0.2446	0.2333	0.1000	9.54	10.0	-4.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1546	0.1599	0.0500	10.3	10.0	3.5	20.0
Acetone	Lin1		0.0858	0.0500	16.5	20.0	-17.5	20.0
Iodomethane	Ave	0.3433	0.3386		9.86	10.0	-1.4	20.0
Carbon disulfide	Ave	0.7261	0.7276	0.1000	10.0	10.0	0.2	20.0
Acetonitrile	Ave	0.0346	0.0275		79.3	100	-20.7*	20.0
Methyl acetate	Ave	0.2327	0.1924	0.1000	16.5	20.0	-17.3	20.0
Methylene Chloride	Lin1		0.3022	0.1000	9.65	10.0	-3.5	20.0
tert-Butyl alcohol	Ave	0.0189	0.0167		176	200	-11.8	20.0
Acrylonitrile	Ave	0.1114	0.0928		16.7	20.0	-16.7	20.0
Methyl tert-butyl ether	Ave	0.8402	0.7564	0.1000	9.00	10.0	-10.0	20.0
trans-1,2-Dichloroethene	Ave	0.2873	0.2720	0.1000	9.47	10.0	-5.3	20.0
Hexane	Ave	0.0529	0.0545		10.3	10.0	3.0	20.0
1,1-Dichloroethane	Ave	0.5691	0.5175	0.1000	9.09	10.0	-9.1	20.0
Vinyl acetate	Ave	0.0505	0.0467		9.26	10.0	-7.4	20.0
2-Butanone	Ave	0.1356	0.1103	0.0500	16.3	20.0	-18.7	20.0
cis-1,2-Dichloroethene	Ave	0.3087	0.2874	0.1000	9.31	10.0	-6.9	20.0
2,2-Dichloropropane	Ave	0.2932	0.2845		9.70	10.0	-3.0	20.0
Bromochloromethane	Ave	0.1283	0.1235		9.62	10.0	-3.8	20.0
Tetrahydrofuran	Ave	0.0828	0.0679		8.20	10.0	-18.0	20.0
Chloroform	Ave	0.5296	0.4972	0.2000	9.39	10.0	-6.1	20.0
1,1,1-Trichloroethane	Ave	0.3678	0.3668	0.1000	9.97	10.0	-0.3	20.0
Cyclohexane	Ave	0.4605	0.4548	0.1000	9.88	10.0	-1.2	20.0
1,1-Dichloropropene	Ave	0.4264	0.3992		9.36	10.0	-6.4	20.0
Carbon tetrachloride	Ave	0.2770	0.2807	0.1000	10.1	10.0	1.3	20.0
1,2-Dichloroethane	Ave	0.4694	0.4211	0.1000	8.97	10.0	-10.3	20.0
Benzene	Ave	1.251	1.160	0.5000	9.27	10.0	-7.3	20.0
Trichloroethene	Ave	0.2698	0.2566	0.2000	9.51	10.0	-4.9	20.0
Methylcyclohexane	Ave	0.3477	0.3573	0.1000	10.3	10.0	2.7	20.0
1,2-Dichloropropane	Ave	0.3083	0.2800	0.1000	9.08	10.0	-9.2	20.0
Dibromomethane	Ave	0.1606	0.1466		9.13	10.0	-8.7	20.0
1,4-Dioxane	Ave	0.0024	0.0019		407	500	-18.6	20.0
Bromodichloromethane	Ave	0.3092	0.3093	0.1000	10.0	10.0	0.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCVIS 240-42324/2 Calibration Date: 05/01/2012 10:57

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5299.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1599	0.1407		17.6	20.0	-12.0	20.0
cis-1,3-Dichloropropene	Lin1		0.3920	0.1500	9.05	10.0	-9.5	20.0
4-Methyl-2-pentanone	Ave	0.2643	0.2298	0.0500	17.4	20.0	-13.0	20.0
Toluene	Ave	1.877	1.757	0.4000	9.36	10.0	-6.4	20.0
trans-1,3-Dichloropropene	Lin1		0.4892	0.1000	8.62	10.0	-13.8	20.0
Ethyl methacrylate	Ave	0.5543	0.5192		9.37	10.0	-6.3	20.0
1,1,2-Trichloroethane	Ave	0.3307	0.3008	0.1000	9.10	10.0	-9.0	20.0
1,3-Dichloropropane	Ave	0.6962	0.6149		8.83	10.0	-11.7	20.0
Tetrachloroethene	Ave	0.2617	0.2658	0.2000	10.2	10.0	1.6	20.0
2-Hexanone	Ave	0.2698	0.2311	0.0500	17.1	20.0	-14.3	20.0
Dibromochloromethane	Lin1		0.2569		8.85	10.0	-11.5	20.0
1,2-Dibromoethane	Ave	0.3223	0.2904		9.01	10.0	-9.9	20.0
Chlorobenzene	Ave	1.104	1.009	0.3000	9.14	10.0	-8.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3116	0.3090		9.92	10.0	-0.8	20.0
Ethylbenzene	Ave	0.5828	0.5479		9.40	10.0	-6.0	20.0
m-Xylene & p-Xylene	Ave	0.7256	0.6861		18.9	20.0	-5.4	20.0
o-Xylene	Ave	0.7207	0.6592		9.15	10.0	-8.5	20.0
Styrene	Ave	1.192	1.127	0.3000	9.45	10.0	-5.5	20.0
Bromoform	Lin1		0.1151	0.1000	8.56	10.0	-14.4	20.0
Isopropylbenzene	Ave	1.713	1.644	0.1000	9.60	10.0	-4.0	20.0
1,1,2,2-Tetrachloroethane	Ave	0.9025	0.7806	0.3000	8.65	10.0	-13.5	20.0
Bromobenzene	Ave	0.8159	0.7710		9.45	10.0	-5.5	20.0
1,2,3-Trichloropropane	Ave	0.2837	0.2458		8.66	10.0	-13.4	20.0
trans-1,4-Dichloro-2-butene	Ave	0.2511	0.2026		8.07	10.0	-19.3	20.0
n-Propylbenzene	Ave	0.8598	0.8329		9.69	10.0	-3.1	20.0
2-Chlorotoluene	Ave	0.8362	0.7811		9.34	10.0	-6.6	20.0
1,3,5-Trimethylbenzene	Ave	2.791	2.681		9.60	10.0	-4.0	20.0
4-Chlorotoluene	Ave	0.8762	0.8220		9.38	10.0	-6.2	20.0
tert-Butylbenzene	Ave	2.471	2.351		9.51	10.0	-4.9	20.0
1,2,4-Trimethylbenzene	Ave	2.906	2.770		9.53	10.0	-4.7	20.0
sec-Butylbenzene	Ave	3.036	2.925		9.63	10.0	-3.7	20.0
1,3-Dichlorobenzene	Ave	1.506	1.424	0.6000	9.46	10.0	-5.4	20.0
p-Isopropyltoluene	Ave	2.486	2.368		9.52	10.0	-4.8	20.0
1,4-Dichlorobenzene	Ave	1.587	1.488	0.5000	9.38	10.0	-6.2	20.0
n-Butylbenzene	Ave	2.286	2.212		9.68	10.0	-3.2	20.0
1,2-Dichlorobenzene	Ave	1.485	1.376	0.4000	9.27	10.0	-7.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0952	0.0868	0.0500	9.12	10.0	-8.8	20.0
1,3,5-Trichlorobenzene	Ave	0.7690	0.7679		9.99	10.0	-0.1	20.0
1,2,4-Trichlorobenzene	Ave	0.6818	0.6628	0.2000	9.72	10.0	-2.8	20.0
Hexachlorobutadiene	Ave	0.2577	0.2465		9.56	10.0	-4.4	20.0
Naphthalene	Ave	2.063	1.789		8.67	10.0	-13.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCVIS 240-42324/2 Calibration Date: 05/01/2012 10:57

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5299.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5920	0.5701		9.63	10.0	-3.7	20.0
Dibromofluoromethane (Surr)	Ave	0.2389	0.2122		9.07	10.2	-11.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3050		8.05	10.2	-21.1*	20.0
Toluene-d8 (Surr)	Ave	1.552	1.334		8.78	10.2	-14.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.4954		9.13	10.2	-10.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCV 240-42324/3 Calibration Date: 05/01/2012 11:20

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5300.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.5354		10.1	10.0	1.2	20.0
Ethyl ether	Ave	0.3182	0.2987		9.39	10.0	-6.1	20.0
3-Chloro-1-propene	Ave	0.1408	0.1459		10.4	10.0	3.6	20.0
Diisopropyl ether	Ave	0.2775	0.2701		48.7	50.0	-2.7	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.5114		9.92	10.0	-0.8	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.8626		9.69	10.0	-3.1	20.0
Propionitrile	Ave	0.0386	0.0370		19.1	20.0	-4.3	20.0
Ethyl acetate	Ave	0.2719	0.2520		18.5	20.0	-7.3	20.0
Methacrylonitrile	Ave	0.1921	0.1757		9.15	10.0	-8.5	20.0
Isobutyl alcohol	Ave	0.0086	0.0077		178	200	-11.0	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.7080		9.89	10.0	-1.1	20.0
n-Heptane	Ave	0.0406	0.0444		10.9	10.0	9.3	20.0
n-Butanol	Lin1		0.0054		163	200	-18.7	20.0
2-Nitropropane	Qua		0.0417		20.2	20.0	1.0	20.0
Cyclohexanone	Lin1		0.0639		64.6	100	-35.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.860		9.59	10.0	-4.1	20.0
2-Methylnaphthalene	Qua		0.5682		11.8	20.0	-41.0*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCV 240-42324/3 Calibration Date: 05/01/2012 11:20

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 15:41

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 17:34

Lab File ID: UXM5300.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2389	0.2164		9.25	10.2	-9.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3867	0.3361		8.87	10.2	-13.1	20.0
Toluene-d8 (Surr)	Ave	1.552	1.436		9.45	10.2	-7.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5538	0.5323		9.81	10.2	-3.9	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab File ID: UXM5302.D Lab Sample ID: MB 240-42324/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/01/2012 12:05

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42324/4	UXM5301.D	05/01/2012 11:42
TB-042712	240-10770-1	UXM5303.D	05/01/2012 13:05
GSP-MW8-042712	240-10770-3	UXM5311.D	05/01/2012 16:12
GSP-MW4-042712	240-10770-4	UXM5312.D	05/01/2012 16:35
GSP-MW7-042712	240-10770-2	UXM5318.D	05/01/2012 18:51
GSP-MW7-042712 MS	240-10770-2 MS	UXM5319.D	05/01/2012 19:14
GSP-MW7-042712 MSD	240-10770-2 MSD	UXM5320.D	05/01/2012 19:37

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42324/5

Matrix: Water Lab File ID: UXM5302.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.280	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42324/5

Matrix: Water Lab File ID: UXM5302.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42324/5

Matrix: Water Lab File ID: UXM5302.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	88		63-129
460-00-4	4-Bromofluorobenzene (Surr)	94		66-117
2037-26-5	Toluene-d8 (Surr)	90		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42324/5

Matrix: Water Lab File ID: UXM5302.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/01/2012 12:05

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42324 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5301.D

Lab ID: LCS 240-42324/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	9.45	95	72-116	
1,1,1-Trichloroethane	10.0	9.44	94	74-118	
1,1,2,2-Tetrachloroethane	10.0	8.83	88	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	9.91	99	74-151	
1,1-Dichloroethane	10.0	9.10	91	82-115	
1,1-Dichloroethene	10.0	9.77	98	78-131	
1,1-Dichloropropene	10.0	9.02	90	83-114	
1,2,3-Trichlorobenzene	10.0	9.28	93	54-126	
1,2,3-Trichloropropane	10.0	8.93	89	73-129	
1,2,3-Trimethylbenzene	10.0	9.10	91	70-130	
1,2,4-Trichlorobenzene	10.0	8.99	90	48-135	
1,2,4-Trimethylbenzene	10.0	8.94	89	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.30	93	42-136	
1,2-Dichlorobenzene	10.0	8.93	89	81-110	
1,2-Dichloroethane	10.0	9.17	92	71-127	
1,2-Dichloropropane	10.0	9.19	92	81-115	
1,3-Dichlorobenzene	10.0	8.91	89	80-110	
1,3-Dichloropropane	10.0	8.90	89	79-116	
1,4-Dichlorobenzene	10.0	8.70	87	82-110	
2,2-Dichloropropane	10.0	9.56	96	50-129	
2-Chloroethyl vinyl ether	10.0	9.03 J	90	52-131	
2-Chlorotoluene	10.0	8.56	86	76-116	
2-Hexanone	20.0	19.6	98	55-133	
Bromobenzene	10.0	8.72	87	76-115	
Bromochloromethane	10.0	9.54	95	77-120	
4-Chlorotoluene	10.0	8.66	87	77-115	
p-Isopropyltoluene	10.0	9.32	93	74-120	
Acetone	20.0	21.9	110	43-136	
Benzene	10.0	9.17	92	83-112	
Bromoform	10.0	8.47	85	40-131	
Bromomethane	10.0	7.98	80	11-185	
Carbon disulfide	10.0	8.80	88	62-142	
Carbon tetrachloride	10.0	9.85	99	66-128	
Chlorobenzene	10.0	9.08	91	85-110	
Chloroethane	10.0	8.25	83	25-153	
Chloroform	10.0	8.99	90	79-117	
Chloromethane	10.0	8.26	83	44-126	
cis-1,2-Dichloroethene	10.0	9.25	93	80-113	
cis-1,3-Dichloropropene	10.0	8.18	82	61-115	
Hexachlorobutadiene	10.0	8.21	82	36-134	
Dibromomethane	10.0	9.38	94	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5301.D

Lab ID: LCS 240-42324/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	9.82	98	72-121	
Dichlorodifluoromethane	10.0	6.28	63	19-129	
Ethylbenzene	10.0	9.32	93	83-112	
1,2-Dibromoethane	10.0	9.45	95	79-113	
Diisopropyl ether	10.0	8.96 J	90	77-118	
Naphthalene	10.0	9.17	92	32-141	
m-Xylene & p-Xylene	20.0	18.5	93	83-113	
n-Butylbenzene	10.0	8.95	90	66-125	
Isopropylbenzene	10.0	9.38	94	75-114	
n-Propylbenzene	10.0	9.12	91	74-121	
2-Butanone	20.0	18.6	93	60-126	
4-Methyl-2-pentanone	20.0	18.8	94	63-128	
sec-Butylbenzene	10.0	8.81	88	70-117	
Methyl tert-butyl ether	10.0	8.97	90	52-144	
Methylene Chloride	10.0	9.15	92	66-131	
o-Xylene	10.0	9.45	95	83-113	
Styrene	10.0	9.49	95	79-114	
tert-Butylbenzene	10.0	8.75	88	71-115	
Tetrachloroethene	10.0	9.38	94	79-114	
Toluene	10.0	9.07	91	84-111	
trans-1,2-Dichloroethene	10.0	8.96	90	83-117	
trans-1,3-Dichloropropene	10.0	8.21	82	58-117	
Trichloroethene	10.0	9.28	93	76-117	
Trichlorofluoromethane	10.0	10.5	105	49-157	
Vinyl acetate	10.0	8.54	85	46-161	
Vinyl chloride	10.0	8.63	86	53-127	
tert-Butyl alcohol	200	195	98	70-130	
Xylenes, Total	30.0	28.0	93	83-112	
Dibromochloromethane	10.0	8.17	82	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5319.D

Lab ID: 240-10770-2 MS Client ID: GSP-MW7-042712 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	40.0	4.0 U	40.8	102	64-118	
1,1,1-Trichloroethane	40.0	4.0 U	38.3	96	68-121	
1,1,2,2-Tetrachloroethane	40.0	4.0 U	39.7	99	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	40.0	4.0 U	42.8	107	70-152	
1,1-Dichloroethane	40.0	4.0 U	39.4	98	79-116	
1,1-Dichloroethene	40.0	4.0 U	40.4	101	74-135	
1,1-Dichloropropene	40.0	4.0 U	38.5	96	80-114	
1,2,3-Trichlorobenzene	40.0	4.0 U	42.0	105	45-129	
1,2,3-Trichloropropane	40.0	4.0 U	39.8	100	67-132	
1,2,3-Trimethylbenzene	40.0	20 U	40.4	101	70-130	
1,2,4-Trichlorobenzene	40.0	4.0 U	38.7	97	38-138	
1,2,4-Trimethylbenzene	40.0	4.0 U	39.2	98	67-124	
1,2-Dibromo-3-Chloropropane	40.0	8.0 U	39.8	100	32-139	
1,2-Dichlorobenzene	40.0	4.0 U	39.6	99	75-111	
1,2-Dichloroethane	40.0	4.0 U	40.0	100	68-129	
1,2-Dichloropropane	40.0	4.0 U	39.6	99	78-115	
1,3-Dichlorobenzene	40.0	4.0 U	38.8	97	73-110	
1,3-Dichloropropane	40.0	4.0 U	39.4	99	74-118	
1,4-Dichlorobenzene	40.0	4.0 U	38.8	97	75-110	
2,2-Dichloropropane	40.0	4.0 U	36.1	90	38-127	
2-Chloroethyl vinyl ether	40.0	40 U	40 U	0	10-150	F
2-Chlorotoluene	40.0	4.0 U	37.7	94	69-117	
2-Hexanone	80.0	40 U	83.2	104	47-139	
Bromobenzene	40.0	4.0 U	38.6	97	71-116	
Bromochloromethane	40.0	4.0 U	39.0	98	73-121	
4-Chlorotoluene	40.0	4.0 U	37.9	95	71-116	
p-Isopropyltoluene	40.0	4.0 U	41.2	103	64-122	
Acetone	80.0	40 U	82.4	103	33-145	
Benzene	40.0	4.0 U	39.5	99	72-121	
Bromoform	40.0	4.0 U	32.5	81	32-128	
Bromomethane	40.0	4.0 U	30.2	76	10-186	
Carbon disulfide	40.0	4.0 U	34.8	87	57-147	
Carbon tetrachloride	40.0	4.0 U	38.9	97	59-129	
Chlorobenzene	40.0	4.0 U	39.2	98	80-110	
Chloroethane	40.0	4.0 U	35.6	89	21-165	
Chloroform	40.0	4.0 U	37.7	94	76-118	
Chloromethane	40.0	4.0 U	40.8	102	33-132	
cis-1,2-Dichloroethene	40.0	1.4 J	40.4	97	70-120	
cis-1,3-Dichloropropene	40.0	4.0 U	32.8	82	51-110	
Hexachlorobutadiene	40.0	4.0 U	34.7	87	27-132	
Dibromomethane	40.0	4.0 U	40.0	100	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5319.D

Lab ID: 240-10770-2 MS Client ID: GSP-MW7-042712 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	40.0	4.0 U	39.3	98	67-120	
Dichlorodifluoromethane	40.0	4.0 U	26.6	66	17-128	
Ethylbenzene	40.0	4.0 U	38.8	97	75-116	
1,2-Dibromoethane	40.0	4.0 U	39.3	98	74-113	
Diisopropyl ether	40.0	40 U	35.6 J	89	73-118	
Naphthalene	40.0	4.0 U	40.8	102	15-158	
m-Xylene & p-Xylene	80.0	8.0 U	78.0	98	75-117	
n-Butylbenzene	40.0	4.0 U	39.2	98	56-127	
Isopropylbenzene	40.0	4.0 U	39.7	99	68-116	
n-Propylbenzene	40.0	4.0 U	40.4	101	64-124	
2-Butanone	80.0	40 U	80.0	100	54-129	
4-Methyl-2-pentanone	80.0	40 U	83.6	105	56-131	
sec-Butylbenzene	40.0	4.0 U	39.0	97	60-119	
Methyl tert-butyl ether	40.0	20 U	35.9	90	46-144	
Methylene Chloride	40.0	4.0 U	39.9	100	63-128	
o-Xylene	40.0	4.0 U	39.4	98	76-116	
Styrene	40.0	4.0 U	39.8	100	71-117	
tert-Butylbenzene	40.0	4.0 U	38.7	97	61-119	
Tetrachloroethene	40.0	4.0 U	40.4	101	70-117	
Toluene	40.0	4.0 U	39.0	98	78-114	
trans-1,2-Dichloroethene	40.0	4.0 U	39.0	98	80-119	
trans-1,3-Dichloropropene	40.0	4.0 U	32.7	82	46-116	
Trichloroethene	40.0	110	145	93	66-120	
Trichlorofluoromethane	40.0	4.0 U	41.2	103	46-157	
Vinyl acetate	40.0	8.0 U	37.0	93	43-157	
Vinyl chloride	40.0	4.0 U	38.8	97	49-130	
tert-Butyl alcohol	800	200 U	821	103	70-130	
Xylenes, Total	120	8.0 U	117	98	76-116	
Dibromochloromethane	40.0	4.0 U	34.9	87	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5320.D

Lab ID: 240-10770-2 MSD Client ID: GSP-MW7-042712 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	40.0	40.0	100	2	30	64-118	
1,1,1-Trichloroethane	40.0	38.7	97	1	30	68-121	
1,1,2,2-Tetrachloroethane	40.0	39.9	100	1	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	40.0	42.0	105	2	30	70-152	
1,1-Dichloroethane	40.0	39.1	98	1	30	79-116	
1,1-Dichloroethene	40.0	40.8	102	1	30	74-135	
1,1-Dichloropropene	40.0	38.3	96	1	30	80-114	
1,2,3-Trichlorobenzene	40.0	40.4	101	4	30	45-129	
1,2,3-Trichloropropane	40.0	38.3	96	4	30	67-132	
1,2,3-Trimethylbenzene	40.0	39.6	99	2	30	70-130	
1,2,4-Trichlorobenzene	40.0	37.4	94	3	30	38-138	
1,2,4-Trimethylbenzene	40.0	38.4	96	2	30	67-124	
1,2-Dibromo-3-Chloropropane	40.0	42.0	105	5	30	32-139	
1,2-Dichlorobenzene	40.0	38.4	96	3	30	75-111	
1,2-Dichloroethane	40.0	39.8	99	1	30	68-129	
1,2-Dichloropropane	40.0	39.4	99	1	30	78-115	
1,3-Dichlorobenzene	40.0	39.2	98	1	30	73-110	
1,3-Dichloropropane	40.0	39.8	99	1	30	74-118	
1,4-Dichlorobenzene	40.0	37.8	95	3	30	75-110	
2,2-Dichloropropane	40.0	35.1	88	3	30	38-127	
2-Chloroethyl vinyl ether	40.0	40 U	0	NC	30	10-150	F
2-Chlorotoluene	40.0	37.6	94	0	30	69-117	
2-Hexanone	80.0	84.4	106	1	30	47-139	
Bromobenzene	40.0	38.5	96	0	30	71-116	
Bromochloromethane	40.0	39.0	98	0	30	73-121	
4-Chlorotoluene	40.0	37.2	93	2	30	71-116	
p-Isopropyltoluene	40.0	39.0	98	5	30	64-122	
Acetone	80.0	73.2	92	12	30	33-145	
Benzene	40.0	39.5	99	0	30	72-121	
Bromoform	40.0	33.7	84	4	30	32-128	
Bromomethane	40.0	30.3	76	0	30	10-186	
Carbon disulfide	40.0	35.0	88	1	30	57-147	
Carbon tetrachloride	40.0	38.7	97	1	30	59-129	
Chlorobenzene	40.0	39.0	97	1	30	80-110	
Chloroethane	40.0	34.5	86	3	30	21-165	
Chloroform	40.0	37.6	94	0	30	76-118	
Chloromethane	40.0	38.2	96	6	30	33-132	
cis-1,2-Dichloroethene	40.0	39.8	96	1	30	70-120	
cis-1,3-Dichloropropene	40.0	33.3	83	1	30	51-110	
Hexachlorobutadiene	40.0	35.1	88	1	30	27-132	
Dibromomethane	40.0	40.4	101	1	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5320.D

Lab ID: 240-10770-2 MSD Client ID: GSP-MW7-042712 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	40.0	40.4	101	3	30	67-120	
Dichlorodifluoromethane	40.0	26.5	66	0	30	17-128	
Ethylbenzene	40.0	39.1	98	1	30	75-116	
1,2-Dibromoethane	40.0	40.0	100	2	30	74-113	
Diisopropyl ether	40.0	36.8 J	92	3	30	73-118	
Naphthalene	40.0	39.7	99	3	30	15-158	
m-Xylene & p-Xylene	80.0	78.0	98	0	30	75-117	
n-Butylbenzene	40.0	37.6	94	4	30	56-127	
Isopropylbenzene	40.0	39.0	97	2	30	68-116	
n-Propylbenzene	40.0	38.5	96	5	30	64-124	
2-Butanone	80.0	79.2	99	1	30	54-129	
4-Methyl-2-pentanone	80.0	84.8	106	1	30	56-131	
sec-Butylbenzene	40.0	37.6	94	3	30	60-119	
Methyl tert-butyl ether	40.0	36.4	91	2	30	46-144	
Methylene Chloride	40.0	38.1	95	5	30	63-128	
o-Xylene	40.0	39.0	97	1	30	76-116	
Styrene	40.0	39.7	99	0	30	71-117	
tert-Butylbenzene	40.0	37.7	94	3	30	61-119	
Tetrachloroethene	40.0	40.4	101	0	30	70-117	
Toluene	40.0	39.0	98	0	30	78-114	
trans-1,2-Dichloroethene	40.0	37.5	94	4	30	80-119	
trans-1,3-Dichloropropene	40.0	33.8	85	3	30	46-116	
Trichloroethene	40.0	142	87	2	30	66-120	
Trichlorofluoromethane	40.0	41.2	103	0	30	46-157	
Vinyl acetate	40.0	36.6	92	1	30	43-157	
Vinyl chloride	40.0	38.9	97	0	30	49-130	
tert-Butyl alcohol	800	808	101	2	30	70-130	
Xylenes, Total	120	117	98	0	30	76-116	
Dibromochloromethane	40.0	35.1	88	1	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
GSP-MW7-042712	240-10770-2	59	60	62	54	71	71
GSP-MW8-042712	240-10770-3	48	51	52	50	67	65
GSP-MW4-042712	240-10770-4	54	56	53	52	80	67
	MB 240-42632/8-A	58	60	54	55	76	79
	LCS 240-42632/9-A	77	81	73	68	98	80

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		203831	3.51	750748	4.40	449631	5.66
UPPER LIMIT		407662	4.01	1501496	4.90	899262	6.16
LOWER LIMIT		101916	3.01	375374	3.90	224816	5.16
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		219450	3.51	793338	4.40	481824	5.66
CCV 240-43126/2 CCVIS		203268	3.39	807358	4.28	443644	5.54

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		701859	6.74	609578	8.73	444154	10.12
UPPER LIMIT		1403718	7.24	1219156	9.23	888308	10.62
LOWER LIMIT		350930	6.24	304789	8.23	222077	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		750463	6.74	697064	8.71	502891	10.10
CCV 240-43126/2 CCVIS		728055	6.61	667024	8.58	498151	9.89

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: CCV 240-43126/2 Date Analyzed: 05/08/2012 09:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20508002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		203268	3.39	807358	4.28	443644	5.54
UPPER LIMIT		406536	3.89	1614716	4.78	887288	6.04
LOWER LIMIT		101634	2.89	403679	3.78	221822	5.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42632/8-A		211107	3.40	855069	4.28	486388	5.53
LCS 240-42632/9-A		184504	3.39	751512	4.28	442403	5.54
240-10770-2	GSP-MW7-042712	230198	3.39	895040	4.28	542958	5.53
240-10770-3	GSP-MW8-042712	221630	3.39	884395	4.28	518699	5.53
240-10770-4	GSP-MW4-042712	236232	3.39	906019	4.28	535464	5.53

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: CCV 240-43126/2 Date Analyzed: 05/08/2012 09:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20508002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		728055	6.61	667024	8.58	498151	9.89
UPPER LIMIT		1456110	7.11	1334048	9.08	996302	10.39
LOWER LIMIT		364028	6.11	333512	8.08	249076	9.39
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42632/8-A		779010	6.61	700518	8.57	536668	9.87
LCS 240-42632/9-A		707870	6.61	666696	8.56	502242	9.85
240-10770-2	GSP-MW7-042712	851955	6.61	779875	8.59	600062	9.90
240-10770-3	GSP-MW8-042712	821335	6.61	760311	8.56	592310	9.87
240-10770-4	GSP-MW4-042712	867539	6.61	812616	8.58	631764	9.89

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab File ID: 20508007.D Lab Sample ID: MB 240-42632/8-A

Matrix: Water Date Extracted: 05/03/2012 09:57

Instrument ID: A4HP7 Date Analyzed: 05/08/2012 10:37

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42632/9-A	20508008.D	05/08/2012 10:56
GSP-MW7-042712	240-10770-2	20508019.D	05/08/2012 14:20
GSP-MW8-042712	240-10770-3	20508020.D	05/08/2012 14:38
GSP-MW4-042712	240-10770-4	20508021.D	05/08/2012 14:56

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10770-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42632/8-A

Matrix: Water | Lab File ID: 20508007.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/03/2012 09:57

Sample wt/vol: 1000(mL) | Date Analyzed: 05/08/2012 10:37

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	55		28-110
367-12-4	2-Fluorophenol (Surr)	58		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	76		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	54		27-111
4165-62-2	Phenol-d5 (Surr)	60		10-110
1718-51-0	Terphenyl-d14 (Surr)	79		37-119

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508008.D

Lab ID: LCS 240-42632/9-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.2	61	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab File ID: 20502001.D DFTPP Injection Date: 05/02/2012

Instrument ID: A4HP7 DFTPP Injection Time: 10:03

Analysis Batch No.: 42463

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	60.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	45.5	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	50.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.2	
365	Greater than 0.75% of mass 198	2.0	
441	Present, but less than mass 443	7.0	
442	40.0 - 110.0% of mass 198	44.8	
443	15.0 - 24.0% of mass 442	8.8	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-42463/2	20502002.D	05/02/2012	10:23
	STD4 240-42463/3	20502003.D	05/02/2012	10:42
	STD3 240-42463/4	20502004.D	05/02/2012	11:01
	STD2 240-42463/5	20502005.D	05/02/2012	11:19
	STD1 240-42463/6	20502006.D	05/02/2012	11:38
	STD9 240-42463/7	20502007.D	05/02/2012	11:57
	STD8 240-42463/8	20502008.D	05/02/2012	12:16
	STD7 240-42463/9	20502009.D	05/02/2012	12:35
	STD6 240-42463/10	20502010.D	05/02/2012	12:54
	ICV 240-42463/11	20502011.D	05/02/2012	13:13

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42463

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2012 10:23 Calibration End Date: 05/02/2012 12:54 Calibration ID: 8490

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42463/6	20502006.D
Level 2	STD2 240-42463/5	20502005.D
Level 3	STD3 240-42463/4	20502004.D
Level 4	STD4 240-42463/3	20502003.D
Level 5	STD5 240-42463/2	20502002.D
Level 6	STD6 240-42463/10	20502010.D
Level 7	STD7 240-42463/9	20502009.D
Level 8	STD8 240-42463/8	20502008.D
Level 9	STD9 240-42463/7	20502007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5797	0.7266 0.5728	0.4617 0.6094	0.5087 0.5684	0.4851	Ave		0.5640				15.0		15.0			
N-Nitrosodimethylamine	0.8841	0.7933 0.8811	0.7168 0.9316	0.7448 0.9112	0.7452	Ave		0.8260				10.0		15.0			
Pyridine	1.5075	1.3258 1.5146	1.1707 1.6776	1.1870 1.6034	1.1707	Ave		1.3947				15.0		15.0			
Ethyl methacrylate	1.1731	0.9728 1.1757	1.0484 1.2864	1.0037 1.2062	1.0290	Ave		1.1119				10.0		15.0			
Benzaldehyde	1.3735 0.7433	1.0441 +++++	1.0548 +++++	1.0867 +++++	0.9578	Ave		1.0434				20.0	*	15.0			
3-Chloropropionitrile	1.0012	0.9519 1.0222	0.9033 1.1093	0.8667 1.0492	0.8718	Ave		0.9719				9.1		15.0			
Malononitrile	1.5032	1.4102 1.2671	1.3756 1.2102	1.4463 1.0266	1.4564	Ave		1.3370				12.0		15.0			
Benzoic acid	0.2334	+++++ 0.2441	+++++ 0.2610	0.1647 0.2825	0.2322	Qua	0.0075	0.1951	0.0017						0.9990		0.9900
Phenol	1.7085	1.5885 1.7359	1.4815 1.9095	1.5782 1.8649	1.5731	Ave		1.6800				9.0		15.0			
Aniline	2.1278	1.9210 2.1146	1.8743 2.3821	2.0349 2.3349	1.9327	Ave		2.0903				9.0		15.0			
Bis(2-chloroethyl)ether	1.2927	1.2120 1.4453	1.3088 1.4464	1.1722 1.4211	1.1887	Ave		1.3109				8.8		15.0			
2-Chlorophenol	1.5020	1.3476 1.5269	1.3800 1.6760	1.4496 1.6251	1.4098	Ave		1.4896				7.8		15.0			
1,3-Dichlorobenzene	1.6350	1.3701 1.6113	1.5553 1.7820	1.5792 1.6988	1.5113	Ave		1.5929				7.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICV 240-42463/11 Calibration Date: 05/02/2012 13:13

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20502011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5264		9.33	10.0	-6.7	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.8251		9.99	10.0	-0.1	50.0
Pyridine	Ave	1.395	1.479		10.6	10.0	6.0	50.0
Ethyl methacrylate	Ave	1.112	1.109		9.97	10.0	-0.3	50.0
3-Chloropropionitrile	Ave	0.9719	0.9803		10.1	10.0	0.9	50.0
Malononitrile	Ave	1.337	1.496		11.2	10.0	11.9	50.0
Benzaldehyde	Ave	1.043	0.6145		5.89	10.0	-41.1	50.0
Phenol	Ave	1.680	1.722		10.2	10.0	2.5	20.0
Aniline	Ave	2.090	2.144		10.3	10.0	2.6	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.327		10.1	10.0	1.2	50.0
2-Chlorophenol	Ave	1.490	1.506		10.1	10.0	1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.567		9.84	10.0	-1.6	50.0
1,4-Dichlorobenzene	Ave	1.646	1.623		9.86	10.0	-1.4	20.0
Benzyl alcohol	Ave	0.8859	0.8898		10.0	10.0	0.4	50.0
1,2-Dichlorobenzene	Ave	1.544	1.517		9.83	10.0	-1.7	50.0
2-Methylphenol	Ave	1.290	1.293		10.0	10.0	0.2	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.616		9.29	10.0	-7.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.366		10.3	10.0	3.2	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.8701	0.0500	9.68	10.0	-3.2	50.0
Acetophenone	Ave	1.873	1.869		9.98	10.0	-0.2	50.0
Hexachloroethane	Ave	0.5453	0.5299		9.72	10.0	-2.8	50.0
Nitrobenzene	Ave	0.3636	0.3573		9.83	10.0	-1.7	50.0
Isophorone	Ave	0.6461	0.6605		10.2	10.0	2.2	50.0
2,4-Dimethylphenol	Ave	0.3785	0.3876		10.2	10.0	2.4	50.0
2-Nitrophenol	Ave	0.2067	0.2181		10.5	10.0	5.5	20.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3733		10.3	10.0	2.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3789		10.1	10.0	1.3	50.0
Benzoic acid	Qua		0.2340		20.3	20.0	1.5	50.0
2,4-Dichlorophenol	Ave	0.3173	0.3295		10.4	10.0	3.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3617		10.4	10.0	3.9	50.0
Naphthalene	Ave	1.144	1.159		10.1	10.0	1.3	50.0
4-Chloroaniline	Ave	0.4747	0.4591		9.67	10.0	-3.3	50.0
Hexachlorobutadiene	Ave	0.1832	0.1824		9.96	10.0	-0.4	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.3260		9.86	10.0	-1.4	50.0
Caprolactam	Qua		0.1203		10.5	10.0	5.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3207		10.6	10.0	6.1	20.0
2-Methylnaphthalene	Ave	0.7358	0.7408		10.1	10.0	0.7	50.0
1-Methylnaphthalene	Ave	0.7008	0.7068		10.1	10.0	0.8	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5505		9.87	10.0	-1.3	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3366	0.0500	10.3	10.0	3.3	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab File ID: 20508001.D DFTPP Injection Date: 05/08/2012

Instrument ID: A4HP7 DFTPP Injection Time: 08:46

Analysis Batch No.: 43126

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	61.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	58.2	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	25.0 - 75.0% of mass 198	61.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	26.3	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	11.9	
442	40.0 - 110.0% of mass 198	74.4	
443	15.0 - 24.0% of mass 442	14.6	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43126/2	20508002.D	05/08/2012	09:05
	MB 240-42632/8-A	20508007.D	05/08/2012	10:37
	LCS 240-42632/9-A	20508008.D	05/08/2012	10:56
GSP-MW7-042712	240-10770-2	20508019.D	05/08/2012	14:20
GSP-MW8-042712	240-10770-3	20508020.D	05/08/2012	14:38
GSP-MW4-042712	240-10770-4	20508021.D	05/08/2012	14:56

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCV 240-43126/2 Calibration Date: 05/08/2012 09:05

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5272		9.35	10.0	-6.5	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.7907		9.57	10.0	-4.3	50.0
Pyridine	Ave	1.395	1.390		9.97	10.0	-0.3	50.0
Ethyl methacrylate	Ave	1.112	1.104		9.92	10.0	-0.8	50.0
3-Chloropropionitrile	Ave	0.9719	0.8004		8.24	10.0	-17.6	50.0
Malononitrile	Ave	1.337	1.340		10.0	10.0	0.2	50.0
Benzaldehyde	Ave	1.043	0.7144		6.85	10.0	-31.5	50.0
Phenol	Ave	1.680	1.721		10.2	10.0	2.4	20.0
Aniline	Ave	2.090	2.189		10.5	10.0	4.7	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.311		10.0	10.0	0.0	50.0
2-Chlorophenol	Ave	1.490	1.473		9.89	10.0	-1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.599		10.0	10.0	0.4	50.0
1,4-Dichlorobenzene	Ave	1.646	1.662		10.1	10.0	1.0	50.0
Benzyl alcohol	Ave	0.8859	0.8606		9.71	10.0	-2.9	50.0
1,2-Dichlorobenzene	Ave	1.544	1.529		9.91	10.0	-0.9	50.0
2-Methylphenol	Ave	1.290	1.300		10.1	10.0	0.7	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.634		9.39	10.0	-6.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.360		10.3	10.0	2.7	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.9308	0.0500	10.4	10.0	3.6	50.0
Acetophenone	Ave	1.873	1.935		10.3	10.0	3.3	50.0
Hexachloroethane	Ave	0.5453	0.5619		10.3	10.0	3.0	50.0
Nitrobenzene	Ave	0.3636	0.3688		10.1	10.0	1.4	50.0
Isophorone	Ave	0.6461	0.6574		10.2	10.0	1.7	50.0
2-Nitrophenol	Ave	0.2067	0.2114		10.2	10.0	2.3	20.0
2,4-Dimethylphenol	Ave	0.3785	0.3801		10.0	10.0	0.4	50.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3290		9.06	10.0	-9.4	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3772		10.1	10.0	0.9	50.0
Benzoic acid	Qua		0.1909		17.0	20.0	-15.0	50.0
2,4-Dichlorophenol	Ave	0.3173	0.2887		9.10	10.0	-9.0	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3214		9.23	10.0	-7.7	50.0
Naphthalene	Ave	1.144	1.081		9.45	10.0	-5.5	50.0
4-Chloroaniline	Ave	0.4747	0.4497		9.48	10.0	-5.2	50.0
Hexachlorobutadiene	Ave	0.1832	0.1595		8.71	10.0	-12.9	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.2901		8.78	10.0	-12.2	50.0
Caprolactam	Qua		0.1216		10.6	10.0	6.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3096		10.2	10.0	2.4	20.0
2-Methylnaphthalene	Ave	0.7358	0.7177		9.75	10.0	-2.5	50.0
1-Methylnaphthalene	Ave	0.7008	0.6679		9.53	10.0	-4.7	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5324		9.54	10.0	-4.6	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3328	0.0500	10.2	10.0	2.1	50.0

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
GSP-MW7-042712	240-10770-2	61
GSP-MW8-042712	240-10770-3	61
GSP-MW4-042712	240-10770-4	64
	MB 240-42123/7	63
	LCS 240-42123/8	80
GSP-MW7-042712 MS	240-10770-2 MS	34
GSP-MW7-042712 MSD	240-10770-2 MSD	72

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: MB 240-42123/7

Matrix: Water Date Extracted: 04/30/2012 12:37

Lab File ID:(1) YF004307.D Lab File ID:(2)

Date Analyzed:(1) 04/30/2012 12:37 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-42123/8	04/30/2012 13:17	
GSP-MW7-042712	240-10770-2	04/30/2012 13:57	
GSP-MW7-042712 MS	240-10770-2 MS	04/30/2012 14:38	
GSP-MW7-042712 MSD	240-10770-2 MSD	04/30/2012 15:19	
GSP-MW8-042712	240-10770-3	04/30/2012 16:00	
GSP-MW4-042712	240-10770-4	04/30/2012 16:41	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42123/7

Matrix: Water Lab File ID: YF004307.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 04/30/2012 12:37

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42123 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	29.2	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	63		10-150

FORM III

GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF004308.D

Lab ID: LCS 240-42123/8 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	920	115	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF004310.D

Lab ID: 240-10770-2 MS Client ID: GSP-MW7-042712 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	96 J	961	108	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF004311.D

Lab ID: 240-10770-2 MSD Client ID: GSP-MW7-042712 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	996	113	4	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: CCV 240-42123/6 Date Analyzed: 04/30/2012 11:58

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF004306.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.75		
UPPER LIMIT				9.85		
LOWER LIMIT				9.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-42123/6 CCVRT		04/30/2012 11:58	YF004306.D	9.75		
MB 240-42123/7		04/30/2012 12:37	YF004307.D	9.75		
LCS 240-42123/8		04/30/2012 13:17	YF004308.D	9.75		
240-10770-2	GSP-MW7-042712	04/30/2012 13:57	YF004309.D	9.74		
240-10770-2 MS	GSP-MW7-042712 MS	04/30/2012 14:38	YF004310.D	9.75		
240-10770-2 MSD	GSP-MW7-042712 MSD	04/30/2012 15:19	YF004311.D	9.75		
240-10770-3	GSP-MW8-042712	04/30/2012 16:00	YF004312.D	9.75		
240-10770-4	GSP-MW4-042712	04/30/2012 16:41	YF004313.D	9.75		
CCV 240-42123/14		04/30/2012 17:22	YF004314.D	9.75		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Total Petroleum Hydrocarbons (C6-C10)	11.810	11.810	11.810	11.810	11.810	11.810					4.817 - 18.802	11.810
C6-C12	13.469	13.469	13.469	13.469	13.469	13.469					4.917 - 22.022	13.469
Trifluorotoluene (Surr)	9.768	9.772	9.769	9.772	9.771	9.774					9.522 - 10.022	9.771

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: YPID Start Date: 04/30/2012 10:39

Analysis Batch Number: 42123 End Date: 04/30/2012 17:22

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		04/30/2012 10:39	1		RTX-VRX 0.45(mm)
CCV 240-42123/6 CCVRT		04/30/2012 11:58	1	YF004306.D	RTX-VRX 0.45(mm)
MB 240-42123/7		04/30/2012 12:37	1	YF004307.D	RTX-VRX 0.45(mm)
LCS 240-42123/8		04/30/2012 13:17	1	YF004308.D	RTX-VRX 0.45(mm)
240-10770-2	GSP-MW7-042712	04/30/2012 13:57	1	YF004309.D	RTX-VRX 0.45(mm)
240-10770-2 MS	GSP-MW7-042712 MS	04/30/2012 14:38	1	YF004310.D	RTX-VRX 0.45(mm)
240-10770-2 MSD	GSP-MW7-042712 MSD	04/30/2012 15:19	1	YF004311.D	RTX-VRX 0.45(mm)
240-10770-3	GSP-MW8-042712	04/30/2012 16:00	1	YF004312.D	RTX-VRX 0.45(mm)
240-10770-4	GSP-MW4-042712	04/30/2012 16:41	1	YF004313.D	RTX-VRX 0.45(mm)
CCV 240-42123/14		04/30/2012 17:22	1	YF004314.D	RTX-VRX 0.45(mm)

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCV 240-42123/6 Calibration Date: 04/30/2012 11:58

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF004306.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	314543		839	800	4.9	15.0
C6-C12	Ave	336931	352216		836	800	4.5	15.0
Trifluorotoluene (Surr)	Ave	420494	322967		7.68	10.0	-23.2*	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCV 240-42123/14 Calibration Date: 04/30/2012 17:22

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF004314.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	313365		836	800	4.5	15.0
C6-C12	Ave	336931	350568		832	800	4.0	15.0
Trifluorotoluene (Surr)	Ave	420494	304096		7.23	10.0	-27.7*	15.0

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C91 #
GSP-MW7-042712	240-10770-2	63
GSP-MW8-042712	240-10770-3	73
GSP-MW4-042712	240-10770-4	70
	MB 240-42661/8-A	60
	LCS 240-42661/9-A	80

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: MB 240-42661/8-A

Matrix: Water Date Extracted: 05/03/2012 11:54

Lab File ID:(1) P5B05052.D Lab File ID:(2)

Date Analyzed:(1) 05/04/2012 13:38 Date Analyzed:(2)

Instrument ID:(1) A2HP5R Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
GSP-MW7-042712	240-10770-2	05/04/2012 12:07	
GSP-MW8-042712	240-10770-3	05/04/2012 12:37	
GSP-MW4-042712	240-10770-4	05/04/2012 13:08	
	LCS 240-42661/9-A	05/04/2012 14:08	

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10770-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42661/8-A

Matrix: Water | Lab File ID: P5B05052.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3510C | Date Extracted: 05/03/2012 11:54

Sample wt/vol: 1000(mL) | Date Analyzed: 05/04/2012 13:38

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42755 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	60		10-110

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P5B05053.D

Lab ID: LCS 240-42661/9-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	2330	93	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Sample No.: CCVRT 240-42755/4 Date Analyzed: 05/04/2012 09:33

Instrument ID: A2HP5R GC Column: ID: ()

Lab File ID (Standard): P5B05044.D Heated Purge: (Y/N) N

Calibration ID: 8454

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				4.03		
UPPER LIMIT				4.13		
LOWER LIMIT				3.93		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-42755/4		05/04/2012 09:33	P5B05044.D	4.03		
240-10770-2	GSP-MW7-042712	05/04/2012 12:07	P5B05049.D	4.03		
240-10770-3	GSP-MW8-042712	05/04/2012 12:37	P5B05050.D	4.03		
240-10770-4	GSP-MW4-042712	05/04/2012 13:08	P5B05051.D	4.03		
MB 240-42661/8-A		05/04/2012 13:38	P5B05052.D	4.03		
LCS 240-42661/9-A		05/04/2012 14:08	P5B05053.D	4.03		
CCV 240-42755/14		05/04/2012 14:39	P5B05054.D	4.03		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: A2HP5R Start Date: 04/30/2012 10:28

Analysis Batch Number: 42117 End Date: 04/30/2012 17:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-42117/4 IC		04/30/2012 10:28	1	P5B04304.D	
STD2 240-42117/5 IC		04/30/2012 10:58	1	P5B04305.D	
ICRT 240-42117/6		04/30/2012 11:29	1	P5B04306.D	
STD4 240-42117/7 IC		04/30/2012 11:59	1	P5B04307.D	
STD5 240-42117/8 IC		04/30/2012 12:29	1	P5B04308.D	
ICV 240-42117/9		04/30/2012 12:59	1	P5B04309.D	
STD1 240-42117/10 IC		04/30/2012 13:30	1		
STD2 240-42117/11 IC		04/30/2012 14:00	1		
STD3 240-42117/12 IC		04/30/2012 14:31	1		
STD4 240-42117/13 IC		04/30/2012 15:01	1		
STD5 240-42117/14 IC		04/30/2012 15:32	1		
ICV 240-42117/15		04/30/2012 16:02	1		
ZZZZZ		04/30/2012 16:33	1		
CCV 240-42117/18		04/30/2012 17:33	1		

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42117

SDG No.:

Instrument ID: A2HP5R GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2012 10:28 Calibration End Date: 04/30/2012 12:29 Calibration ID: 8454

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42117/4	P5B04304.D
Level 2	STD2 240-42117/5	P5B04305.D
Level 3	ICRT 240-42117/6	P5B04306.D
Level 4	STD4 240-42117/7	P5B04307.D
Level 5	STD5 240-42117/8	P5B04308.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Diesel	9.351	9.351	9.351	9.351	9.351						5.054 - 13.650	9.351
n-Nonane	4.024	4.020	4.025	4.026	4.023						3.954 - 4.094	4.024

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10770-1 Analy Batch No.: 42117

SDG No.:

Instrument ID: A2HP5R GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/30/2012 10:28 Calibration End Date: 04/30/2012 12:29 Calibration ID: 8454

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42117/4	P5B04304.D
Level 2	STD2 240-42117/5	P5B04305.D
Level 3	ICRT 240-42117/6	P5B04306.D
Level 4	STD4 240-42117/7	P5B04307.D
Level 5	STD5 240-42117/8	P5B04308.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	202380 139479	154697	180905	178149	Ave		171121.938				14.0		20.0			
n-Nonane	238010 169073	182724	223067	217729	Ave		206120.531				14.0		20.0			

Note: The ml coefficient is the same as Ave CF for an Ave curve type.

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICV 240-42117/9 Calibration Date: 04/30/2012 12:59

Instrument ID: A2HP5R Calib Start Date: 04/30/2012 10:28

GC Column: ID: Calib End Date: 04/30/2012 12:29

Lab File ID: P5B04309.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	171122	171949		502	500	0.5	20.0

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: A2HP5R Start Date: 05/04/2012 09:33

Analysis Batch Number: 42755 End Date: 05/04/2012 14:39

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-42755/4		05/04/2012 09:33	1	P5B05044.D	
ZZZZZ		05/04/2012 10:04	1		
ZZZZZ		05/04/2012 10:35	1		
ZZZZZ		05/04/2012 11:06	1		
ZZZZZ		05/04/2012 11:36	1		
240-10770-2	GSP-MW7-042712	05/04/2012 12:07	1	P5B05049.D	
240-10770-3	GSP-MW8-042712	05/04/2012 12:37	1	P5B05050.D	
240-10770-4	GSP-MW4-042712	05/04/2012 13:08	1	P5B05051.D	
MB 240-42661/8-A		05/04/2012 13:38	1	P5B05052.D	
LCS 240-42661/9-A		05/04/2012 14:08	1	P5B05053.D	
CCV 240-42755/14		05/04/2012 14:39	1	P5B05054.D	

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCVRT 240-42755/4 Calibration Date: 05/04/2012 09:33

Instrument ID: A2HP5R Calib Start Date: 04/30/2012 10:28

GC Column: ID: Calib End Date: 04/30/2012 12:29

Lab File ID: P5B05044.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	171122	146148		427	500	-14.6	15.0
n-Nonane	Ave	206121	181559		44.0	50.0	-11.9	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: CCV 240-42755/14 Calibration Date: 05/04/2012 14:39

Instrument ID: A2HP5R Calib Start Date: 04/30/2012 10:28

GC Column: ID: Calib End Date: 04/30/2012 12:29

Lab File ID: P5B05054.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	171122	185943		543	500	8.7	15.0
n-Nonane	Ave	206121	228814		55.5	50.0	11.0	15.0

HOLDTIME

SDG 240-10770-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
HG	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
HG	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
M	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
M	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
M	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
HGF	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
HGF	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
HGF	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
MF	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
MF	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
MF	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
PCL	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/7/2012	5/15/2012	10	8	18
PCL	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/7/2012	5/15/2012	10	8	18
PCL	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/7/2012	5/15/2012	10	8	18

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/3/2012	5/8/2012	6	5	11
OS	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/3/2012	5/8/2012	6	5	11
OS	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/3/2012	5/8/2012	6	5	11
OV	UG/L	TB-042712	240-10770-1	NM	4/27/2012	5/1/2012	5/1/2012	4	0	4
OV	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/1/2012	5/1/2012	4	0	4
OV	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/1/2012	5/1/2012	4	0	4
OV	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/1/2012	5/1/2012	4	0	4
OV	UG/L	TB-042712	240-10770-1	TB	4/27/2012	5/1/2012	5/1/2012	4	0	4
DRO	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
DRO	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
DRO	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
GRO	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	4/30/2012	4/30/2012	3	0	3
GRO	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	4/30/2012	4/30/2012	3	0	3
GRO	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	4/30/2012	4/30/2012	3	0	3

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE: JUNE 27, 2012**

FROM: **TERRI L. SOLOMON** **COPIES: DV FILE**

SUBJECT: **INORGANIC AND ORGANIC DATA VALIDATION – SELECT METALS, PERCHLORATE**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-10770-1

SAMPLES: 3/Aqueous/

GSP-MW4-042712 GSP-MW7-042712
GSP-MW8-042712

Overview

The sample set for Martin State Airport - Groundwater, SDG 240-10770-1, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for perchlorate and select total and dissolved metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, tungsten, vanadium and zinc. The samples were collected by Tetra Tech on April 27, 2012 and analyzed by TestAmerica. Metals analyses were conducted using SW-846 method 6020. Mercury analyses were conducted using SW-846 method 7470A. Perchlorate analyses were conducted using SW-846 method 6850.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, laboratory control sample recoveries, matrix spike/matrix spike duplicate recoveries, ICP serial dilution results, internal standard recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The contract required detection limit (CRDL) percent recoveries for copper and nickel were > 110% quality control limit affecting all samples. Positive results < 2X CRDL for copper and nickel were qualified as either biased high, "K" or estimated, "J", as a result of conflicting noncompliances.

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Antimony[(1)]	0.322 ug/L	1.61 ug/L
Cadmium[(1)]	0.172 ug/L	0.86 ug/L
Cobalt[(1)]	0.169 ug/L	0.845 ug/L
Lead[(1)]	0.191 ug/L	0.955 ug/L
Molybdenum[(1)]	0.854 ug/L	4.27 ug/L
Thallium[(1)]	0.686 ug/L	3.43 ug/L
Tungsten[(1)]	0.956 ug/L	4.78 ug/L
Barium[(2)]	0.541 ug/L	2.705 ug/L
Copper[(2)]	0.388 ug/L	1.94 ug/L
Zinc[(2)]	4.57 ug/L	22.85 ug/L

  [(1)] Maximum concentration present in a method blank affecting all samples.
  [(2)] Maximum concentration present in a preparation blank (240-42485) affecting all total and dissolved samples.

  An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results less than the blank action level reported for antimony, cadmium, copper, lead, molybdenum and thallium were qualified "B" as a result of laboratory blank contamination.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

Nondetected results are reported to the method detection limits.

The contract required detection limit (CRDL) percent recoveries for barium, cadmium, cobalt, copper, lead, nickel, silver and thallium were > 110% quality control limit affecting all samples. However, no validation actions were required as all sample results were either > 2X CRDL, nondetects or were qualified as a result of blank contamination.

Executive Summary

Laboratory Performance: Several contaminants were present in the laboratory method / preparation blanks. The CRDL percent recoveries for copper and nickel were > 110% quality control limit affecting all samples.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993 and the Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3		
FRACTION: M	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.41	B	A	0.13	B	A
ARSENIC		6.5			1.4	J	P	0.85	J	P
BARIUM		27			44			48		
BERYLLIUM		0.2	U		0.22	J	P	0.35	J	P
CADMIUM		0.13	U		0.13	U		0.13	U	
CHROMIUM		0.71	U		0.71	U		0.71	U	
COBALT		11			6.4			11		
COPPER		0.59	B	A	1.9	B	A	3.4	K	C
LEAD		0.18	U		0.28	B	A	0.53	B	A
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.26	B	A	1.2	B	A	0.24	B	A
NICKEL		0.94	J	CP	7.1			15		
SELENIUM		0.57	U		0.83	J	P	4.4	J	P
SILVER		0.08	U		0.08	U		0.08	U	
THALLIUM		0.35	B	A	0.82	B	A	0.32	B	A
TUNGSTEN		0.37	U		1	B	A	0.37	U	
VANADIUM		0.44	U		0.92	J	P	0.44	U	
ZINC		2.3	U		730			77		

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3		
FRACTION: MF	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.28	B	A	0.13	U	
ARSENIC		6.4			1.4	J	P	0.58	J	P
BARIUM		27			45			49		
BERYLLIUM		0.2	U		0.2	U		0.36	J	P
CADMIUM		0.13	U		0.13	U		0.2	B	A
CHROMIUM		0.71	U		0.71	U		0.71	U	
COBALT		11			6.3			12		
COPPER		0.5	B	A	1.5	B	A	3.8	K	C
LEAD		0.18	U		0.18	U		0.48	B	A
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.14	B	A	0.76	B	A	0.15	B	A
NICKEL		1.1	J	CP	7.2			16		
SELENIUM		0.58	J	P	0.57	U		4.7	J	P
SILVER		0.08	U		0.08	U		0.08	U	
THALLIUM		0.26	B	A	0.47	B	A	0.23	B	A
TUNGSTEN		0.37	U		0.47	B	A	0.37	U	
VANADIUM		0.44	U		0.71	J	P	0.44	U	
ZINC		2.3	U		760			72		

PROJ_NO: 04021	NSAMPLE	GSP-MW4-042712			GSP-MW7-042712			GSP-MW8-042712		
SDG: 240-10770-1	LAB_ID	240-10770-4			240-10770-2			240-10770-3		
FRACTION: MISC	SAMP_DATE	4/27/2012			4/27/2012			4/27/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U		0.45	J	P

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 13:53

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	6.5	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	27	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	11	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.59	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.26	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	0.94	2.0	0.20	ug/L	J	^	1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.35	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	20	20	2.3	ug/L	U		1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 13:53

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 10:14

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.41	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	1.4	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	44	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.22	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	6.4	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.9	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.28	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	1.2	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	7.1	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	0.83	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.82	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	1.0	10	0.37	ug/L	J		1	6020
7440-62-2	Vanadium	0.92	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	730	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 10:14

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 12:03

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.13	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	0.85	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	48	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.35	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	11	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	3.4	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.53	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.24	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	15	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	4.4	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.32	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	77	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 12:03

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW4-042712 Lab Sample ID: 240-10770-4

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 13:53

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	6.4	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	27	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	11	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.50	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.14	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.1	2.0	0.20	ug/L	J	^	1	6020
7782-49-2	Selenium	0.58	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.26	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	20	20	2.3	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW7-042712 Lab Sample ID: 240-10770-2

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 10:14

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.28	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	1.4	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	45	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	6.3	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.5	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.76	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	7.2	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.47	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	0.71	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	760	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	0.47	10	0.37	ug/L	J		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW8-042712 Lab Sample ID: 240-10770-3

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG ID.:

Matrix: Water Date Sampled: 04/27/2012 12:03

Reporting Basis: WET Date Received: 04/28/2012 10:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.58	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	49	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.36	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.20	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	12	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	3.8	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.48	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.15	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	16	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	4.7	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.23	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	72	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

TestAmerica Canton

Client Sample ID: GSP-MW4-042712

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E010422-003	**Work Order #...:** MTAGG1AA		**Matrix.....:** WATER
Date Sampled...: 04/27/12	**Date Received..:** 05/01/12		
Prep Date.....: 05/07/12	**Analysis Date..:** 05/15/12		
Prep Batch #...: 2128058			
Dilution Factor: 1	**Method.....:** SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: GSP-MW7-042712

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E010422-001	Work Order #...:	MTAGE1AA	Matrix.....:	WATER
Date Sampled...:	04/27/12	Date Received..:	05/01/12		
Prep Date.....:	05/07/12	Analysis Date..:	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: GSP-MW8-042712

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E010422-002	Work Order #...:	MTAGF1AA	Matrix.....:	WATER
Date Sampled...:	04/27/12	Date Received..:	05/01/12		
Prep Date.....:	05/07/12	Analysis Date..:	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.45 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10770-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 04/28/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 0.4 and 1.2 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-042712 (240-10770-1), GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/01/2012.

1,2,3-Trichlorobenzene was detected in method blank MB 240-42324/5 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample GSP-MW7-042712MS/MSD (240-10770-2) in batch 240-42324.

Refer to the QC report for details.

Sample GSP-MW7-042712 (240-10770-2)[4X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/03/2012 and analyzed on 05/08/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 43632/8270.

No other difficulties were encountered during the SVOCs analyses. All quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 04/30/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42123/7 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/03/2012 and analyzed on 05/04/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 42661.

No other difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

Several analytes were detected in method blank MB 240-42485/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and 05/03/2012 and analyzed on 05/03/2012 and 05/04/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples GSP-MW7-042712 (240-10770-2), GSP-MW8-042712 (240-10770-3) and GSP-MW4-042712 (240-10770-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/02/2012 and 05/03/2012 and analyzed on 05/03/2012 and 05/04/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech INC.	Client Project Manager: Tony Apanavage	Site Contact: Walt Payon	Lab Contact: Pat O'Meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330-497-9396	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (In BUS days)	Analyses	For lab use only:
Phone: 301 528-3021		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab picking ☐ Lab sampling ☐ Job/SDG No.:
Project Name: MSA Ground water Sampling	Method of Shipment/Carrier: Fed EX			
Project Number: 112IC04021-02	Shipping/Tracking No:			
PO #				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C/ Grab G	VOCs	Total Fe	Diss Fe	1,4 Dioxane	DRO	GRO	Perchlorate	Sample Specific Notes / Special Instructions:
TB-042712	4-27-12	—		X						2					N	G	X							
GSP-MW7-042712	"	1014		X					2	5			5		"	"	X	X	X	X	X	X	X	
GSP-MW8-042712	"	1203		X					2	5			5		"	"	X	X	X	X	X	X	X	
GSP-MW4-042712	"	1353		X					2	5			5		"	"	X	X	X	X	X	X	X	

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by: Walt Payon	Company: TT Inc.	Date/Time: 4-27-12 / 1517	Received by: Paul Hayeland	Company: TestAmerica	Date/Time: 4/27/12 1517
Relinquished by: Paul Hayeland	Company: TestAmerica	Date/Time: 4/27/12 1620	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: Mike Hanson	Company: TAL	Date/Time: 4/28/12 1000

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TAL-0018 (1008)

05/30/2012

HOLDTIME

SDG 240-10770-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
HG	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
HG	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
M	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
M	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
M	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
HGF	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
HGF	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/3/2012	5/4/2012	6	1	7
HGF	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
MF	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
MF	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
MF	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/2/2012	5/3/2012	5	1	6
PCL	UG/L	GSP-MW8-042712	240-10770-3	NM	4/27/2012	5/7/2012	5/15/2012	10	8	18
PCL	UG/L	GSP-MW7-042712	240-10770-2	NM	4/27/2012	5/7/2012	5/15/2012	10	8	18
PCL	UG/L	GSP-MW4-042712	240-10770-4	NM	4/27/2012	5/7/2012	5/15/2012	10	8	18

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10770-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10770-1TB	TB-042712	Water	04/27/2012 0000	04/28/2012 1000
240-10770-2	GSP-MW7-042712	Water	04/27/2012 1014	04/28/2012 1000
240-10770-3	GSP-MW8-042712	Water	04/27/2012 1203	04/28/2012 1000
240-10770-4	GSP-MW4-042712	Water	04/27/2012 1353	04/28/2012 1000

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10770-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL NC		SW846 3510C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-42666/5 05/03/2012 06:17				CCV 240-42666/22 05/03/2012 07:54				CCV 240-42666/34 05/03/2012 09:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.2		80.0	103	98.3		100	98	96.3		100	96
Arsenic	80.9		80.0	101	98.9		100	99	98.8		100	99
Barium	80.9		80.0	101	97.7		100	98	97.5		100	98
Beryllium	81.5		80.0	102	97.5		100	97	97.4		100	97
Cadmium	80.4		80.0	101	99.6		100	100	98.7		100	99
Chromium	79.7		80.0	100	96.9		100	97	98.0		100	98
Cobalt	81.2		80.0	102	99.0		100	99	100		100	100
Copper	83.2		80.0	104	101		100	101	101		100	101
Lead	82.4		80.0	103	99.3		100	99	96.7		100	97
Molybdenum	83.6		80.0	105	103		100	103	101		100	101
Nickel	83.1		80.0	104	101		100	101	102		100	102
Selenium	80.7		80.0	101	101		100	101	99.9		100	100
Silver	82.7		80.0	103	101		100	101	98.9		100	99
Thallium	81.3		80.0	102	100		100	100	100		100	100
Tungsten	80.4		80.0	101	98.4		100	98	97.0		100	97
Vanadium	79.7		80.0	100	96.7		100	97	96.8		100	97
Zinc	81.5		80.0	102	99.8		100	100	99.5		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-42666/46 05/03/2012 10:08											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	96.7		100	97								
Arsenic	99.6		100	100								
Barium	97.3		100	97								
Beryllium	98.3		100	98								
Cadmium	97.6		100	98								
Chromium	98.7		100	99								
Cobalt	99.6		100	100								
Copper	102		100	102								
Lead	94.3		100	94								
Molybdenum	101		100	101								
Nickel	101		100	101								
Selenium	101		100	101								
Silver	99.1		100	99								
Thallium	101		100	101								
Tungsten	96.5		100	96								
Vanadium	98.7		100	99								
Zinc	101		100	101								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	ICV 240-42622/7-A 05/03/2012 16:06				CCVL 240-42622/10-A 05/03/2012 16:12				CCV 240-42622/12-A 05/03/2012 17:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.35		2.50	94	5.11		5.00	102	5.27		5.00	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	CCV 240-42622/12-A 05/03/2012 17:51				CCV 240-42622/12-A 05/03/2012 18:17				CCV 240-42622/12-A 05/03/2012 18:42			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.23		5.00	105	5.24		5.00	105	5.24		5.00	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	ICV 240-42622/7-A 05/04/2012 10:43				CCVL 240-42622/10-A 05/04/2012 10:53				CCV 240-42622/12-A 05/04/2012 12:07			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.29		2.50	92	5.09		5.00	102	5.15		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	CCV 240-42622/12-A 05/04/2012 12:34											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.12		5.00	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-42666/8 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.96	J	98	50-150
Arsenic	2.00	2.19	J	110	50-150
Barium	1.00	1.33	J	133	50-150
Beryllium	1.00	1.08		108	50-150
Cadmium	0.500	0.658	J	132	50-150
Chromium	2.00	2.08		104	50-150
Cobalt	1.00	1.20		120	50-150
Copper	2.00	2.72		136	50-150
Lead	1.00	1.22		122	50-150
Molybdenum	10.0	9.90	J	99	50-150
Nickel	2.00	3.13	^	156	50-150
Selenium	2.00	2.16	J	108	50-150
Silver	0.500	0.603	J	121	50-150
Thallium	1.00	1.20	J	120	50-150
Vanadium	5.00	4.78	J	96	50-150
Tungsten	10.0	9.47	J	95	50-150
Zinc	10.0	10.6	J	106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-42622/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00189

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.191	J	95	50-150

Lab Sample ID: CRA 240-42622/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00189

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.186	J	93	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42666/6 05/03/2012 06:22		CCB 240-42666/23 05/03/2012 08:00		CCB 240-42666/35 05/03/2012 09:08		CCB 240-42666/47 05/03/2012 10:13	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.149	J	0.322	J	0.131	J	0.138	J
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	0.239	J	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	0.172	J	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	0.0800	J	0.169	J	0.0610	J	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	0.191	J	1.0	U	1.0	U
Molybdenum	10	0.858	J	0.854	J	0.632	J	0.678	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.496	J	0.686	J	0.554	J	0.489	J
Tungsten	10	1.07	J	0.956	J	0.868	J	0.833	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42622/8-A 05/03/2012 16:08		CCB 240-42622/11-A 05/03/2012 17:28		CCB 240-42622/11-A 05/03/2012 17:52		CCB 240-42622/11-A 05/03/2012 18:18	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-42622/11-A 05/03/2012 18:44							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42622/8-A 05/04/2012 10:45		CCB 240-42622/11-A 05/04/2012 12:09		CCB 240-42622/11-A 05/04/2012 12:35			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42485/1-A

Instrument Code: I8 Batch No.: 42666

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.541	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.388	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.312	J		6020
7440-02-0	Nickel	2.0	U	^	6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.332	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	4.57	J		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42491/1-A

Instrument Code: H4 Batch No.: 42777

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42671/1-A

Instrument Code: H4 Batch No.: 42975

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICSA 240-42666/9 Instrument ID: I8

Lab File ID: I8050312A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.163**	
Arsenic		**0.572**	
Barium		**0.131**	
Beryllium		**0.0050**	
Cadmium		**-0.414**	
Chromium		**0.479**	
Cobalt		**0.118**	
Copper		**0.523**	
Lead		**0.0560**	
Molybdenum	**1000**	**1018**	**102**
Nickel		**0.562**	
Selenium		**0.0360**	
Silver		**0.0380**	
Thallium		**0.111**	
Tungsten		**0.347**	
Vanadium		**0.0780**	
Zinc		**1.08**	
Aluminum	*50000*	*48650*	*97*
Boron		*0.397*	
Calcium	*50000*	*50780*	*102*
Iron	*50000*	*50610*	*101*
Magnesium	*50000*	*50890*	*102*
Manganese		*0.237*	
Potassium	*50000*	*50870*	*102*
Sodium	*50000*	*51340*	*103*
Strontium		*0.331*	
Tin		*0.0580*	
Titanium	*1000*	*1045*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Lab Sample ID: ICSAB 240-42666/10 Instrument ID: I8

Lab File ID: I8050312A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**100**	**100**
Arsenic	**100**	**98.6**	**99**
Barium	**100**	**101**	**101**
Beryllium	**100**	**104**	**104**
Cadmium	**100**	**98.5**	**98**
Chromium	**100**	**105**	**105**
Cobalt	**100**	**100**	**100**
Copper	**100**	**101**	**101**
Lead	**100**	**106**	**106**
Molybdenum	**1100**	**1138**	**103**
Nickel	**100**	**107**	**107**
Selenium	**100**	**101**	**101**
Silver	**100**	**101**	**101**
Thallium	**100**	**104**	**104**
Tungsten	**100**	**99.6**	**100**
Vanadium	**100**	**99.2**	**99**
Zinc	**100**	**103**	**103**
Aluminum	*50000*	*48390*	*97*
Boron	*100*	*99.3*	*99*
Calcium	*50000*	*51380*	*103*
Iron	*50000*	*50960*	*102*
Magnesium	*50000*	*50690*	*101*
Manganese	*100*	*107*	*107*
Potassium	*50000*	*50370*	*101*
Sodium	*50000*	*51610*	*103*
Strontium	*100*	*95.2*	*95*
Tin	*100*	*98.8*	*99*
Titanium	*1100*	*1153*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: GSP-MW8-042712 MS Lab ID: 240-10770-3 MS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.913		0.20	U	1.00	91	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Not in SDG

Client ID: _____ Lab ID: 240-10807-B-5-B MS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	95.7		0.42	J	100	95	44-153		6020
Arsenic	959		2.7	J	1000	96	82-123		6020
Barium	1360		370		1000	99	45-144		6020
Beryllium	980		1.0	U	1000	98	77-124		6020
Cadmium	933		0.14	J	1000	93	78-117		6020
Chromium	974		2.6		1000	97	72-110		6020
Cobalt	968		2.6		1000	97	67-114		6020
Copper	931		0.63	J	1000	93	60-123		6020
Lead	984		0.19	J	1000	98	73-115		6020
Molybdenum	104		0.87	J	100	103	80-110		6020
Nickel	962		10		1000	95	72-111	^	6020
Selenium	948		0.87	J	1000	95	72-148		6020
Silver	92.5		1.0	U	100	92	10-139		6020
Thallium	244		0.66	J	250	97	69-117		6020
Vanadium	978		20	U	1000	98	70-112		6020
Tungsten	96.9		2.2	J	100	95	43-133		6020
Zinc	921		3.7	J	1000	92	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

NOT IN SDG

Client ID: _____ Lab ID: 240-10725-K-8-B MS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.01		0.20	U	1.00	101	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Not in SDG

Client ID: _____ Lab ID: 240-10725-N-8-B MS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.04		0.20	U	1.00	104	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: GSP-MW8-042712 MSD Lab ID: 240-10770-3 MSD

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.918		1.00	92	69-134	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

NOT IN SDG

Client ID: _____ Lab ID: 240-10807-B-5-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	95.8		100	95	44-153	0	20		6020
Arsenic	958		1000	96	82-123	0	20		6020
Barium	1350		1000	98	45-144	1	20		6020
Beryllium	964		1000	96	77-124	2	20		6020
Cadmium	918		1000	92	78-117	2	20		6020
Chromium	973		1000	97	72-110	0	20		6020
Cobalt	963		1000	96	67-114	1	20		6020
Copper	932		1000	93	60-123	0	20		6020
Lead	981		1000	98	73-115	0	20		6020
Molybdenum	103		100	103	80-110	0	20		6020
Nickel	957		1000	95	72-111	1	20	^	6020
Selenium	947		1000	95	72-148	0	20		6020
Silver	92.4		100	92	10-139	0	20		6020
Thallium	247		250	98	69-117	1	20		6020
Vanadium	979		1000	98	70-112	0	20		6020
Tungsten	97.8		100	96	43-133	1	20		6020
Zinc	920		1000	92	49-156	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

NOT IN SDG

Client ID: _____ Lab ID: 240-10725-K-8-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.04	1.00	104	69-134	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

NOT IN SDG

Client ID: _____ Lab ID: 240-10725-N-8-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.04	1.00	104	69-134	0	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-42485/2-A

Lab Name: TestAmerica Canton Job No.: 240-10770-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	92.0		92	80	120		6020
Arsenic	1000	918		92	80	120		6020
Barium	1000	918		92	80	120		6020
Beryllium	1000	905		91	80	120		6020
Cadmium	1000	934		93	80	120		6020
Chromium	1000	943		94	80	120		6020
Cobalt	1000	951		95	80	120		6020
Copper	1000	975		98	80	120		6020
Lead	1000	1010		101	80	120		6020
Molybdenum	100	92.2		92	80	120		6020
Nickel	1000	979		98	80	120	^	6020
Selenium	1000	939		94	80	120		6020
Silver	100	97.5		98	80	120		6020
Thallium	250	242		97	80	120		6020
Vanadium	1000	921		92	80	120		6020
Tungsten	100	88.0		88	80	120		6020
Zinc	1000	962		96	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-42491/2-A

Lab Name: TestAmerica Canton Job No.: 240-10770-1

Sample Matrix: Water LCS Source: MTHGICVW_00288

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.10		102	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-42671/2-A

Lab Name: TestAmerica Canton Job No.: 240-10770-1

Sample Matrix: Water LCS Source: MTHGICVW_00289

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.45		89	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-10807-B-5-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10770-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.42	J	0.670	J	NC		6020
Arsenic	2.7	J	3.93	J	NC		6020
Barium	370		371		NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	0.14	J	5.0	U	NC		6020
Chromium	2.6		10	U	NC		6020
Cobalt	2.6		2.89	J	NC		6020
Copper	0.63	J	10	U	NC		6020
Lead	0.19	J	5.0	U	NC		6020
Molybdenum	0.87	J	1.34	J	NC		6020
Nickel	10		11.6		NC	^	6020
Selenium	0.87	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.66	J	1.64	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	2.2	J	3.01	J	NC		6020
Zinc	3.7	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10770-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10770-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10770-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10770-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42485/1-A	05/02/2012 10:01	42485		50	50
LCS 240-42485/2-A	05/02/2012 10:01	42485		50	50
240-10807-B-5-B MS	05/02/2012 10:01	42485		50	50
240-10807-B-5-C MSD	05/02/2012 10:01	42485		50	50
240-10770-2	05/02/2012 10:01	42485		50	50
240-10770-2	05/02/2012 10:01	42485		50	50
240-10770-3	05/02/2012 10:01	42485		50	50
240-10770-3	05/02/2012 10:01	42485		50	50
240-10770-4	05/02/2012 10:01	42485		50	50
240-10770-4	05/02/2012 10:01	42485		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42491/1-A	05/02/2012 13:55	42491		100	100
LCS 240-42491/2-A	05/02/2012 13:55	42491		100	100
240-10725-K-8-B MS	05/02/2012 13:55	42491		100	100
240-10725-K-8-C MSD	05/02/2012 13:55	42491		100	100
240-10725-N-8-B MS	05/02/2012 13:55	42491		100	100
240-10725-N-8-C MSD	05/02/2012 13:55	42491		100	100
240-10770-2	05/02/2012 13:55	42491		100	100
240-10770-2	05/02/2012 13:55	42491		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42671/1-A	05/03/2012 15:55	42671		100	100
LCS 240-42671/2-A	05/03/2012 15:55	42671		100	100
240-10770-3	05/03/2012 15:55	42671		100	100
240-10770-3 MS	05/03/2012 15:55	42671		100	100
240-10770-3 MSD	05/03/2012 15:55	42671		100	100
240-10770-3	05/03/2012 15:55	42671		100	100
240-10770-4	05/03/2012 15:55	42671		100	100
240-10770-4	05/03/2012 15:55	42671		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/03/2012 End Date: 05/03/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-42666/2 IC	06:00	95		94		97		94		95	
STD3 240-42666/3 IC	06:05	94		93		92		88		91	
STD4 240-42666/4 IC	06:12	102		112		104		106		104	
ICV 240-42666/5	06:17	98		102		99		97		97	
ICB 240-42666/6	06:22	104		113		105		103		103	
CRI 240-42666/8	06:33	104		112		103		102		102	
ICSA 240-42666/9	06:39	86		92		87		88		91	
ICSAB 240-42666/10	06:44	70		84		84		85		89	
CCV 240-42666/22	07:54	83		93		90		87		89	
CCB 240-42666/23	08:00	93		105		95		95		95	
MB 240-42485/1-A	08:05	95		106		98		96		95	
LCS 240-42485/2-A	08:11	92		101		94		92		94	
240-10807-B-5-A SD	08:23	89		102		93		90		90	
240-10807-B-5-B MS	08:28	75		82		77		73		76	
240-10807-B-5-C MSD	08:34	75		83		77		72		77	
240-10770-2	08:41	95		107		95		92		92	
240-10770-2	08:46	92		104		95		91		91	
240-10770-3	08:52	92		106		96		94		93	
240-10770-3	08:57	93		105		95		94		93	
CCV 240-42666/34	09:03	85		96		89		86		86	
CCB 240-42666/35	09:08	95		107		97		94		94	
240-10770-4	09:14	88		98		90		86		85	
240-10770-4	09:19	84		97		88		84		84	
CCV 240-42666/46	10:08	85		97		86		83		83	
CCB 240-42666/47	10:13	93		107		94		92		90	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/03/2012 End Date: 05/03/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-42666/2 IC	06:00			98							
STD3 240-42666/3 IC	06:05			94							
STD4 240-42666/4 IC	06:12			103							
ICV 240-42666/5	06:17			99							
ICB 240-42666/6	06:22			101							
CRI 240-42666/8	06:33			102							
ICSA 240-42666/9	06:39			91							
ICSAB 240-42666/10	06:44			91							
CCV 240-42666/22	07:54			90							
CCB 240-42666/23	08:00			94							
MB 240-42485/1-A	08:05			95							
LCS 240-42485/2-A	08:11			95							
240-10807-B-5-A SD	08:23			91							
240-10807-B-5-B MS	08:28			80							
240-10807-B-5-C MSD	08:34			79							
240-10770-2	08:41			91							
240-10770-2	08:46			89							
240-10770-3	08:52			91							
240-10770-3	08:57			91							
CCV 240-42666/34	09:03			86							
CCB 240-42666/35	09:08			90							
240-10770-4	09:14			86							
240-10770-4	09:19			86							
CCV 240-42666/46	10:08			81							
CCB 240-42666/47	10:13			86							

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/03/2012 05:54 End Date: 05/03/2012 10:51

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-42666/1			05:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-42666/2 IC	1		06:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-42666/3 IC	1		06:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-42666/4 IC	1		06:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-42666/5	1		06:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-42666/6	1		06:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-42666/7			06:28																				
CRI 240-42666/8	1		06:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-42666/9	1		06:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-42666/10	1		06:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42666/11			06:50																				
CCB 240-42666/12			06:55																				
CCV 240-42666/13			07:04																				
CCB 240-42666/14			07:10																				
ZZZZZZ			07:15																				
ZZZZZZ			07:21																				
ZZZZZZ			07:26																				
ZZZZZZ			07:31																				
ZZZZZZ			07:37																				
ZZZZZZ			07:42																				
ZZZZZZ			07:49																				
CCV 240-42666/22	1		07:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42666/23	1		08:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-42485/1-A	1	R	08:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-42485/2-A	1	R	08:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:17																				
240-10807-B-5-A SD ^5	5	R	08:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10807-B-5-B MS	1	R	08:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10807-B-5-C MSD	1	R	08:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10770-2	1	R	08:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10770-2	1	D	08:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10770-3	1	R	08:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10770-3	1	D	08:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42666/34	1		09:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42666/35	1		09:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10770-4	1	R	09:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10770-4	1	D	09:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			09:24																				
ZZZZZZ			09:30																				
ZZZZZZ			09:35																				
ZZZZZZ			09:41																				
ZZZZZZ			09:46																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/03/2012 05:54 End Date: 05/03/2012 10:51

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			09:52																				
ZZZZZZ			09:57																				
ZZZZZZ			10:02																				
CCV 240-42666/46	1		10:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42666/47	1		10:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:19																				
ZZZZZZ			10:24																				
ZZZZZZ			10:29																				
ZZZZZZ			10:35																				
ZZZZZZ			10:40																				
CCV 240-42666/53			10:45																				
CCB 240-42666/54			10:51																				

Prep Types

D = Dissolved

R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/03/2012 15:54 End Date: 05/03/2012 19:41

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-42622/1-A			15:54	X																				
IC 240-42622/2-A			15:55	X																				
IC 240-42622/3-A			15:57	X																				
IC 240-42622/4-A			15:59	X																				
IC 240-42622/5-A			16:01	X																				
IC 240-42622/6-A			16:04	X																				
ICV 240-42622/7-A	1		16:06	X																				
ICB 240-42622/8-A	1		16:08	X																				
CRA 240-42622/9-A	1		16:09	X																				
CCVL 240-42622/10-A	1		16:12	X																				
CCB 240-42622/11-A			16:14																					
ZZZZZZ			16:16																					
ZZZZZZ			16:18																					
ZZZZZZ			16:20																					
ZZZZZZ			16:22																					
ZZZZZZ			16:24																					
ZZZZZZ			16:26																					
ZZZZZZ			16:28																					
ZZZZZZ			16:30																					
ZZZZZZ			16:32																					
ZZZZZZ			16:34																					
CCV 240-42622/12-A			16:36																					
CCB 240-42622/11-A			16:38																					
ZZZZZZ			16:40																					
ZZZZZZ			16:42																					
ZZZZZZ			16:44																					
ZZZZZZ			16:46																					
ZZZZZZ			16:48																					
ZZZZZZ			16:50																					
ZZZZZZ			16:52																					
ZZZZZZ			16:54																					
ZZZZZZ			16:56																					
ZZZZZZ			16:59																					
CCV 240-42622/12-A			17:01																					
CCB 240-42622/11-A			17:03																					
ZZZZZZ			17:06																					
ZZZZZZ			17:08																					
ZZZZZZ			17:10																					
ZZZZZZ			17:12																					
ZZZZZZ			17:14																					
ZZZZZZ			17:16																					
ZZZZZZ			17:18																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/03/2012 15:54 End Date: 05/03/2012 19:41

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			17:20	
ZZZZZZ			17:22	
ZZZZZZ			17:24	
CCV 240-42622/12-A	1		17:26	X
CCB 240-42622/11-A	1		17:28	X
ZZZZZZ			17:30	
ZZZZZZ			17:32	
MB 240-42491/1-A	1	T	17:34	X
LCS 240-42491/2-A	1	T	17:36	X
ZZZZZZ			17:38	
240-10725-K-8-B MS	1	T	17:40	X
240-10725-K-8-C MSD	1	T	17:42	X
ZZZZZZ			17:44	
240-10725-N-8-B MS	1	D	17:46	X
240-10725-N-8-C MSD	1	D	17:49	X
CCV 240-42622/12-A	1		17:51	X
CCB 240-42622/11-A	1		17:52	X
ZZZZZZ			17:54	
ZZZZZZ			17:56	
ZZZZZZ			17:59	
ZZZZZZ			18:01	
ZZZZZZ			18:04	
ZZZZZZ			18:06	
ZZZZZZ			18:08	
ZZZZZZ			18:10	
ZZZZZZ			18:13	
ZZZZZZ			18:15	
CCV 240-42622/12-A	1		18:17	X
CCB 240-42622/11-A	1		18:18	X
ZZZZZZ			18:21	
ZZZZZZ			18:23	
ZZZZZZ			18:25	
240-10770-2	1	T	18:28	X
240-10770-2	1	D	18:30	X
ZZZZZZ			18:32	
ZZZZZZ			18:34	
ZZZZZZ			18:36	
ZZZZZZ			18:38	
ZZZZZZ			18:40	
CCV 240-42622/12-A	1		18:42	X
CCB 240-42622/11-A	1		18:44	X
ZZZZZZ			18:46	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/03/2012 15:54 End Date: 05/03/2012 19:41

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			18:48	
ZZZZZZ			18:50	
ZZZZZZ			18:52	
ZZZZZZ			18:54	
ZZZZZZ			18:56	
ZZZZZZ			18:58	
ZZZZZZ			19:00	
ZZZZZZ			19:02	
ZZZZZZ			19:04	
CCV 240-42622/12-A			19:06	
CCB 240-42622/11-A			19:08	
ZZZZZZ			19:10	
ZZZZZZ			19:12	
ZZZZZZ			19:13	
ZZZZZZ			19:16	
ZZZZZZ			19:17	
ZZZZZZ			19:19	
ZZZZZZ			19:21	
ZZZZZZ			19:23	
ZZZZZZ			19:25	
ZZZZZZ			19:28	
CCV 240-42622/12-A			19:30	
CCB 240-42622/11-A			19:32	
ZZZZZZ			19:34	
ZZZZZZ			19:37	
CCV 240-42622/12-A			19:39	
CCB 240-42622/11-A			19:41	

Prep Types

D = Dissolved

T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-42622/1-A			10:31	X																				
IC 240-42622/2-A			10:33	X																				
IC 240-42622/3-A			10:35	X																				
IC 240-42622/4-A			10:37	X																				
IC 240-42622/5-A			10:39	X																				
IC 240-42622/6-A			10:41	X																				
ICV 240-42622/7-A	1		10:43	X																				
ICB 240-42622/8-A	1		10:45	X																				
CRA 240-42622/9-A	1		10:48	X																				
CCVL 240-42622/10-A	1		10:53	X																				
CCB 240-42622/11-A			10:55																					
ZZZZZZ			10:56																					
ZZZZZZ			10:58																					
ZZZZZZ			11:00																					
ZZZZZZ			11:02																					
ZZZZZZ			11:04																					
ZZZZZZ			11:06																					
ZZZZZZ			11:09																					
ZZZZZZ			11:11																					
ZZZZZZ			11:13																					
ZZZZZZ			11:15																					
CCV 240-42622/12-A			11:17																					
CCB 240-42622/11-A			11:19																					
ZZZZZZ			11:21																					
ZZZZZZ			11:24																					
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
ZZZZZZ			11:30																					
ZZZZZZ			11:32																					
ZZZZZZ			11:34																					
ZZZZZZ			11:36																					
ZZZZZZ			11:38																					
ZZZZZZ			11:40																					
CCV 240-42622/12-A			11:42																					
CCB 240-42622/11-A			11:44																					
ZZZZZZ			11:46																					
ZZZZZZ			11:48																					
ZZZZZZ			11:50																					
ZZZZZZ			11:53																					
ZZZZZZ			11:55																					
ZZZZZZ			11:57																					
ZZZZZZ			11:59																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			12:00																					
ZZZZZZ			12:03																					
ZZZZZZ			12:05																					
CCV 240-42622/12-A	1		12:07	X																				
CCB 240-42622/11-A	1		12:09	X																				
MB 240-42671/1-A	1	T	12:12	X																				
LCS 240-42671/2-A	1	T	12:14	X																				
240-10770-3	1	T	12:16	X																				
240-10770-3 MS	1	T	12:18	X																				
240-10770-3 MSD	1	T	12:20	X																				
240-10770-3	1	D	12:22	X																				
240-10770-4	1	T	12:25	X																				
240-10770-4	1	D	12:27	X																				
ZZZZZZ			12:29																					
ZZZZZZ			12:31																					
CCV 240-42622/12-A	1		12:34	X																				
CCB 240-42622/11-A	1		12:35	X																				
ZZZZZZ			12:37																					
ZZZZZZ			12:39																					
ZZZZZZ			12:41																					
ZZZZZZ			12:43																					
ZZZZZZ			12:46																					
ZZZZZZ			12:47																					
ZZZZZZ			12:49																					
ZZZZZZ			12:51																					
ZZZZZZ			12:53																					
ZZZZZZ			12:55																					
CCV 240-42622/12-A			12:59																					
CCB 240-42622/11-A			13:00																					
ZZZZZZ			13:03																					
ZZZZZZ			13:06																					
CCV 240-42622/12-A			13:09																					
CCB 240-42622/11-A			13:11																					
CCV 240-42622/12-A			14:41																					
CCB 240-42622/11-A			14:43																					
ZZZZZZ			14:45																					
ZZZZZZ			14:47																					
ZZZZZZ			14:49																					
ZZZZZZ			14:51																					
ZZZZZZ			14:53																					
ZZZZZZ			14:55																					
ZZZZZZ			14:57																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			14:59	
ZZZZZZ			15:01	
ZZZZZZ			15:03	
CCV 240-42622/12-A			15:05	
CCB 240-42622/11-A			15:07	
ZZZZZZ			15:09	
ZZZZZZ			15:11	
CCV 240-42622/12-A			15:13	
CRA 240-42622/9-A			15:15	
CCB 240-42622/11-A			15:18	
ZZZZZZ			15:20	
ZZZZZZ			15:22	
ZZZZZZ			15:24	
ZZZZZZ			15:26	
ZZZZZZ			15:28	
ZZZZZZ			15:30	
ZZZZZZ			15:33	
ZZZZZZ			15:34	
ZZZZZZ			15:36	
ZZZZZZ			15:39	
CCV 240-42622/12-A			15:40	
CCB 240-42622/11-A			15:42	
ZZZZZZ			15:44	
ZZZZZZ			15:46	
ZZZZZZ			15:48	
ZZZZZZ			15:50	
ZZZZZZ			15:52	
ZZZZZZ			15:54	
ZZZZZZ			15:57	
ZZZZZZ			15:58	
ZZZZZZ			16:01	
ZZZZZZ			16:04	
CCV 240-42622/12-A			16:06	
CCB 240-42622/11-A			16:08	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:14	
ZZZZZZ			16:16	
ZZZZZZ			16:18	
ZZZZZZ			16:19	
ZZZZZZ			16:21	
ZZZZZZ			16:23	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			16:25	
ZZZZZZ			16:27	
CCV 240-42622/12-A			16:29	
CCB 240-42622/11-A			16:31	
ZZZZZZ			16:33	
ZZZZZZ			16:35	
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:41	
ZZZZZZ			16:43	
CCV 240-42622/12-A			16:46	
CRA 240-42622/9-A			16:48	
CCB 240-42622/11-A			16:50	
ZZZZZZ			16:52	
ZZZZZZ			16:54	
ZZZZZZ			16:56	
ZZZZZZ			16:58	
ZZZZZZ			17:00	
ZZZZZZ			17:02	
ZZZZZZ			17:04	
ZZZZZZ			17:07	
ZZZZZZ			17:10	
ZZZZZZ			17:12	
CCV 240-42622/12-A			17:14	
CCB 240-42622/11-A			17:17	
ZZZZZZ			17:20	
ZZZZZZ			17:22	
ZZZZZZ			17:24	
ZZZZZZ			17:25	
ZZZZZZ			17:27	
ZZZZZZ			17:29	
ZZZZZZ			17:31	
ZZZZZZ			17:33	
ZZZZZZ			17:35	
ZZZZZZ			17:38	
CCV 240-42622/12-A			17:40	
CCB 240-42622/11-A			17:42	
ZZZZZZ			17:44	
ZZZZZZ			17:46	
ZZZZZZ			17:48	
ZZZZZZ			17:49	
ZZZZZZ			17:52	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10770-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes																			
				Hg																			
ZZZZZZ			17:54																				
ZZZZZZ			17:56																				
ZZZZZZ			17:58																				
ZZZZZZ			18:00																				
ZZZZZZ			18:03																				
CCV 240-42622/12-A			18:05																				
CCB 240-42622/11-A			18:07																				
ZZZZZZ			18:09																				
ZZZZZZ			18:11																				
ZZZZZZ			18:13																				
ZZZZZZ			18:15																				
ZZZZZZ			18:17																				
ZZZZZZ			18:20																				
ZZZZZZ			18:21																				
ZZZZZZ			18:25																				
ZZZZZZ			18:27																				
ZZZZZZ			18:29																				
CCV 240-42622/12-A			18:31																				
CCB 240-42622/11-A			18:33																				
ZZZZZZ			18:35																				
ZZZZZZ			18:37																				
CCV 240-42622/12-A			18:39																				
CRA 240-42622/9-A			18:41																				
CCB 240-42622/11-A			18:44																				

Prep Types
D = Dissolved
T = Total/NA

Sample GSP-MW7-042712 total arsenic result 1.4091L

240-10770-h-2-a, 5/3/2012 08:41:26 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		95.138%	0.215	47.650
%RSD		4.706	2.012	5.747
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		T 35510.000	4923.000	309.100
%RSD		T 1.500	1.897	1.244
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		T 0.000	T 4861.000	14060.000
%RSD		T 0.000	T 1.151	0.244
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		T 107.140%	94.743%	1.506
%RSD		T 2.809	0.513	6.344
Run	Time	51V	52Cr	53Cr O
		ppb	ppb	ppb
x		0.924	0.469	0.666
%RSD		25.890	12.570	137.600
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		T 200.700	258.000	6.361
%RSD		T 0.881	0.953	0.578
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		7.071	1.886	M 734.800
%RSD		6.517	2.103	M 0.752
Run	Time	72Ge	75As	77Ar Cl
		ppb	ppb	ppb
x		92.416%	1.350	0.375
%RSD		1.145	5.097	17.170
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		0.829	71.490	1.248
%RSD		23.240	0.513	10.500
Run	Time	105Pd	107Ag	108Mo O
		ppb	ppb	ppb
x		0.000	0.009	0.502
%RSD		0.000	89.730	291.200
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.091	92.122%	0.156
%RSD		29.000	0.344	6.583
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		0.411	43.540	0.000
%RSD		3.510	0.448	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		90.659%	1.003	0.823
%RSD		0.560	12.910	6.298
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		0.279	0.000	
%RSD		3.127	0.000	

Case Narrative

TestAmerica West Sacramento Project Number G2E010422

WATER, 6850, Perchlorate
Samples: 1, 2, 3
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTELA1AC
SMCS: MTELA1AD

There are no other anomalies associated with this project.

ANALYTICAL METHODS SUMMARY

G2E010422

PARAMETER	ANALYTICAL METHOD
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010422 Work Order #...: MTELA1AA Matrix.....: WATER
MB Lot-Sample #: G2E070000-058

Prep Date.....: 05/07/12
Analysis Date..: 05/14/12 Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010422 Work Order #...: MTELA1AC Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	92	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010422 Work Order #...: MTELA1AC Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.62	ug/L	92	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010422 Work Order #...: MTELA1AD Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	97	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010422 Work Order #...: MTELA1AD Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.86	ug/L	97	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010422 Work Order #...: MTDHX1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E030450-004 MTDHX1AD-MSD
Date Sampled...: 05/01/12 Date Received..: 05/03/12
Prep Date.....: 05/07/12 Analysis Date..: 05/16/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	99	(80 - 120)			SW846 6850
	97	(80 - 120)	1.8	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E010422 Work Order #...: MTDHX1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E030450-004 MTDHX1AD-MSD
Date Sampled...: 05/01/12 Date Received..: 05/03/12
Prep Date.....: 05/07/12 Analysis Date..: 05/16/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.95	ug/L	99		SW846 6850
	ND	5.00	4.86	ug/L	97	1.8	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Tetra Tech, Inc. **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE:** **JUNE 21, 2012**

FROM: **MICHELLE L. ALLEN** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION – VOC/1,4-DIOXANE/DRO/GRO**
LOCKHEED MARTIN CORPORATION (LMC) – MARTIN STATE AIRPORT (MSA)
SDG 240-10808-1

SAMPLES: 4/Aqueous/VOC

GSP-MW5-043012 GSP-MW6-043012 MT-MW02S-043012
TB-043012

3/Aqueous/1,4-DIOXANE/DRO/GRO

GSP-MW5-043012 GSP-MW6-043012 MT-MW02S-043012

Overview

The sample set for LMC-MSA, SDG 240-10808-1 consisted of three (3) aqueous environmental samples and one (1) trip blank. All four (4) aqueous samples were analyzed for volatile organic compounds (VOC). The three (3) aqueous environmental samples were analyzed for the semi-volatile organic compound (SVOC), 1,4-dioxane, diesel range organics (DRO) and gasoline range organics (GRO). No field duplicate sample pair was included in this SDG.

The samples were collected by Tetra Tech, Inc. on April 30, 2012 and analyzed by Test America, Inc. All analyses were conducted in accordance with SW-846 Methods 8260C, 8270C, and 8015B analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, trip blank results, surrogate spike recoveries, blank spike results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major

- The initial and continuing calibrations performed on instrument A3UX16 in the VOC fraction had Relative Response Factors (RRFs) for tert-butyl alcohol and vinyl acetate below the 0.050 minimum response criterion. All samples were affected. The non-detected results reported for these compounds in the affected samples were qualified as rejected, (UR).

- Tentatively identified compounds (TICs) identified as silanol compounds were qualified as rejected (R), because these are indicative of column bleed.

Minor

- The following contaminants were detected in the laboratory method blanks at the following

maximum concentrations:

Compound	Maximum Concentration (µg/L)	Action Level (µg/L)
1,2,3-Trichlorobenzene [1]	0.372	1.86
1,2,4-Trichlorobenzene [1]	0.247	1.24
Hexachlorobutadiene [1]	0.462	2.31
GRO (C6-C10) [2]	28	140

[1] Maximum concentration detected in the laboratory method blank, MB 240-43549/5, affecting all samples.
[2] Maximum concentration detected in the laboratory method blank, MB 240-42995/7, affecting all samples.

An action level of 5X the maximum concentration was used to evaluate for blank contamination. Sample aliquot and dilution factor, if applicable, were taken into consideration when evaluating for blank contamination. Positive results for GRO reported below the established action level were qualified as non-detected, (B). No action was necessary for the remaining compounds because no positive results were reported for these compounds in the affected samples.

- Positive results reported below the Reporting Limit (RL) limit but above the Method Detection Limit (MDL) were qualified as estimated, (J).
- Tentatively identified compounds (TICs) were qualified as estimated presumptively present, (NJ).

Notes

The VOC compounds, 2-chloroethyl vinyl ether and 2-butanone, were not recovered in the Matrix Spike/Matrix Spike Duplicate (MS/MSD) analyses. No action was taken because the sample for the MS/MSD analyses was not from this SDG and the blank spike sample had acceptable %Rs for these compounds.

Sample MT-MW02S-043012 was diluted 5X prior to analysis in the VOC fraction. The RLs of the non-detected results were elevated.

Non-detected results were reported to the MDL.

Executive Summary

Laboratory Performance: Initial and continuing calibration RRFs for tert-butyl alcohol and vinyl acetate were below the quality control criterion resulting in the rejection of the non-detected results. Laboratory method blank contamination was noted in the VOC and GRO fractions.

Other Factors Affecting Data Quality: One sample required a dilution for the VOC fraction.

The data for these analyses were reviewed with reference to Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994) and SW-846 Methods 8260C, 8270C, and 8015B analytical and reporting protocols. The text of this report has been formulated to address only those problem areas affecting data quality.

for Tetra Tech, Inc.
Michelle L. Allen
Chemist/Data Validator

Tetra Tech, Inc.
Joseph A. Samchuck
Quality Assurance Manager

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012			TB-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4			240-10808-1		
FRACTION: OV	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		1.2	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		1.1	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.9	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		1.4	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.75	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.95	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.65	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.85	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		2.2	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		2.4	J	P	0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.75	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		9.2			0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		3.4	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		1.2	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		3.8	J	P	0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.9	U		0.18	U	
1,3,5-TRIMETHYLBENZENE								47					
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.7	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.8	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.65	U		0.13	U	
2,4-PENTANEDIONE, 3-METHYL-								7.8	NJ	Z1			
2-BUTANONE		0.57	U		0.57	U		2.9	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		5	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.55	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U		2.1	U		0.41	U	
3-PENTANOL, 2,2-DIMETHYL-								6.5	NJ	Z1			
3-PENTANONE, 2,4-DIMETHYL-								12	NJ	Z1			
4-CHLOROTOLUENE		0.18	U		0.18	U		0.9	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		1.6	J	P	0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		2.5	J	P	0.32	U	
ACETONE		1.1	U		1.1	U		90			1.1	U	
BENZENE		0.13	U		0.13	U		87			0.13	U	
BENZENE, 1-ETHYL-2-METHYL-								7.3	NJ	Z1			

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012			TB-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4			240-10808-1		
FRACTION: OV	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BENZENE, 1-ETHYL-3-METHYL-							10	NJ	Z1			
BROMOBENZENE	0.13	U		0.13	U		0.65	U		0.13	U	
BROMOCHLOROMETHANE	0.29	U		0.29	U		1.5	U		0.29	U	
BROMODICHLOROMETHANE	0.15	U		0.15	U		0.75	U		0.15	U	
BROMOFORM	0.64	U		0.64	U		3.2	U		0.64	U	
BROMOMETHANE	0.41	U		0.41	U		2.1	U		0.41	U	
CARBON DISULFIDE	0.13	J	P	0.13	U		0.65	U		0.13	U	
CARBON TETRACHLORIDE	1.9			0.13	U		0.65	U		0.13	U	
CHLOROBENZENE	0.15	U		0.15	U		0.75	U		0.15	U	
CHLORODIBROMOMETHANE	0.18	U		0.18	U		0.9	U		0.18	U	
CHLOROETHANE	0.29	U		0.29	U		1.5	U		0.29	U	
CHLOROFORM	0.68	J	P	0.16	U		0.8	U		0.16	U	
CHLOROMETHANE	0.3	U		0.3	U		1.5	U		0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U		0.17	U		4.8	J	P	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U		0.14	U		0.7	U		0.14	U	
CYCLOBUTANE, METHYL-							9.8	NJ	Z1			
CYCLOHEXANE							45					
CYCLOPENTANE, METHYL-							19	NJ	Z1			
DIBROMOMETHANE	0.28	U		0.28	U		1.4	U		0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U		0.31	U		1.6	U		0.31	U	
DIISOPROPYL ETHER	1.5	U		1.5	U		7.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U		0.11	U		0.55	U		0.11	U	
ETHYLBENZENE	0.17	U		0.17	U		180			0.17	U	
HEXACHLOROBUTADIENE	0.3	U		0.3	U		1.5	U		0.3	U	
INDANE							8.1	NJ	Z1			
ISOPROPYLBENZENE	0.13	U		0.13	U		31			0.13	U	
M+P-XYLENES	0.24	U		0.24	U		50			0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U		0.17	U		0.85	U		0.17	U	
METHYLENE CHLORIDE	0.33	U		0.33	U		1.7	U		0.33	U	
NAPHTHALENE	0.24	U		0.24	U		1.2	U		0.24	U	
N-BUTYLBENZENE	0.12	U		0.12	U		0.6	U		0.12	U	
N-PROPYLBENZENE	0.14	U		0.14	U		9.7			0.14	U	
O-XYLENE	0.14	U		0.14	U		22			0.14	U	
SEC-BUTYLBENZENE	0.13	U		0.13	U		0.75	J	P	0.13	U	
SILANOL, TRIMETHYL-	3.5	R	Z2	1.2	R	Z2				2.1	R	Z2

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012			TB-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4			240-10808-1		
FRACTION: OV	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
STYRENE		0.11	U		0.11	U		0.55	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.34	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.65	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	20	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		1.5	U		0.29	U	
TOLUENE		0.13	U		0.13	U		0.65	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U		72			0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.95	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.95	U		0.19	U	
TRICHLOROETHENE		0.17	U		0.17	U		0.85	U		0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		1.1	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.95	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		1.1	U		0.22	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4		
FRACTION: OS	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.47	U		0.47	U		0.49	U	

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4		
FRACTION: PET	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		37	B	A	41	B	A	1400		
TPH (C10-C32)		1200			490			3700		

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Matrix: Water Lab File ID: UXM5697.D

Analysis Method: 8260C Date Collected: 04/30/2012 10:30

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	0.13	J	1.0	0.13
56-23-5	Carbon tetrachloride	1.9		1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW5-043012 | Lab Sample ID: 240-10808-2

Matrix: Water | Lab File ID: UXM5697.D

Analysis Method: 8260C | Date Collected: 04/30/2012 10:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:47

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	0.68	J	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Matrix: Water Lab File ID: UXM5697.D

Analysis Method: 8260C Date Collected: 04/30/2012 10:30

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		63-129
460-00-4	4-Bromofluorobenzene (Surr)	98		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	102		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Matrix: Water Lab File ID: UXM5697.D

Analysis Method: 8260C Date Collected: 04/30/2012 10:30

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	3.5	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW6-043012 | Lab Sample ID: 240-10808-3

Matrix: Water | Lab File ID: UXM5698.D

Analysis Method: 8260C | Date Collected: 04/30/2012 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 13:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW6-043012 | Lab Sample ID: 240-10808-3

Matrix: Water | Lab File ID: UXM5698.D

Analysis Method: 8260C | Date Collected: 04/30/2012 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 13:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW6-043012 | Lab Sample ID: 240-10808-3

Matrix: Water | Lab File ID: UXM5698.D

Analysis Method: 8260C | Date Collected: 04/30/2012 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 13:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		63-129
460-00-4	4-Bromofluorobenzene (Surr)	100		66-117
2037-26-5	Toluene-d8 (Surr)	98		74-115
1868-53-7	Dibromofluoromethane (Surr)	95		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW6-043012 | Lab Sample ID: 240-10808-3

Matrix: Water | Lab File ID: UXM5698.D

Analysis Method: 8260C | Date Collected: 04/30/2012 11:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 13:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 1.2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.2	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: MT-MW02S-043012 | Lab Sample ID: 240-10808-4

Matrix: Water | Lab File ID: UXM5699.D

Analysis Method: 8260C | Date Collected: 04/30/2012 13:05

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 13:33

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	5.0	U	5.0	1.2
71-55-6	1,1,1-Trichloroethane	5.0	U	5.0	1.1
79-34-5	1,1,2,2-Tetrachloroethane	5.0	U	5.0	0.90
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	5.0	U	5.0	1.4
75-34-3	1,1-Dichloroethane	5.0	U	5.0	0.75
75-35-4	1,1-Dichloroethene	5.0	U	5.0	0.95
563-58-6	1,1-Dichloropropene	5.0	U	5.0	0.65
87-61-6	1,2,3-Trichlorobenzene	5.0	U	5.0	0.85
96-18-4	1,2,3-Trichloropropane	5.0	U	5.0	2.2
526-73-8	1,2,3-Trimethylbenzene	2.4	J	25	0.030
120-82-1	1,2,4-Trichlorobenzene	5.0	U	5.0	0.75
95-63-6	1,2,4-Trimethylbenzene	9.2		5.0	0.60
96-12-8	1,2-Dibromo-3-Chloropropane	10	U	10	3.4
95-50-1	1,2-Dichlorobenzene	5.0	U	5.0	0.65
107-06-2	1,2-Dichloroethane	3.8	J	5.0	1.1
78-87-5	1,2-Dichloropropane	5.0	U	5.0	0.90
541-73-1	1,3-Dichlorobenzene	5.0	U	5.0	0.70
142-28-9	1,3-Dichloropropane	5.0	U	5.0	0.80
106-46-7	1,4-Dichlorobenzene	5.0	U	5.0	0.65
594-20-7	2,2-Dichloropropane	5.0	U	5.0	0.65
110-75-8	2-Chloroethyl vinyl ether	50	U	50	5.0
95-49-8	2-Chlorotoluene	5.0	U	5.0	0.55
591-78-6	2-Hexanone	50	U	50	2.1
108-86-1	Bromobenzene	5.0	U	5.0	0.65
74-97-5	Bromochloromethane	5.0	U	5.0	1.5
106-43-4	4-Chlorotoluene	5.0	U	5.0	0.90
99-87-6	p-Isopropyltoluene	1.6	J	5.0	0.60
67-64-1	Acetone	90		50	5.5
71-43-2	Benzene	87		5.0	0.65
75-25-2	Bromoform	5.0	U	5.0	3.2
74-83-9	Bromomethane	5.0	U	5.0	2.1
75-15-0	Carbon disulfide	5.0	U	5.0	0.65
56-23-5	Carbon tetrachloride	5.0	U	5.0	0.65
108-90-7	Chlorobenzene	5.0	U	5.0	0.75
75-00-3	Chloroethane	5.0	U	5.0	1.5

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: MT-MW02S-043012 | Lab Sample ID: 240-10808-4

Matrix: Water | Lab File ID: UXM5699.D

Analysis Method: 8260C | Date Collected: 04/30/2012 13:05

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 13:33

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	5.0	U	5.0	0.80
74-87-3	Chloromethane	5.0	U	5.0	1.5
156-59-2	cis-1,2-Dichloroethene	4.8	J	5.0	0.85
10061-01-5	cis-1,3-Dichloropropene	5.0	U	5.0	0.70
87-68-3	Hexachlorobutadiene	5.0	U	5.0	1.5
74-95-3	Dibromomethane	5.0	U	5.0	1.4
75-27-4	Bromodichloromethane	5.0	U	5.0	0.75
75-71-8	Dichlorodifluoromethane	5.0	U	5.0	1.6
100-41-4	Ethylbenzene	180		5.0	0.85
106-93-4	1,2-Dibromoethane	5.0	U	5.0	1.2
108-20-3	Diisopropyl ether	50	U	50	7.5
91-20-3	Naphthalene	5.0	U	5.0	1.2
179601-23-1	m-Xylene & p-Xylene	50		10	1.2
104-51-8	n-Butylbenzene	5.0	U	5.0	0.60
98-82-8	Isopropylbenzene	31		5.0	0.65
103-65-1	n-Propylbenzene	9.7		5.0	0.70
78-93-3	2-Butanone	50	U	50	2.9
108-10-1	4-Methyl-2-pentanone	2.5	J	50	1.6
135-98-8	sec-Butylbenzene	0.75	J	5.0	0.65
1634-04-4	Methyl tert-butyl ether	25	U	25	0.85
994-05-8	Tert-amyl-methyl ether (TAME)	25	U	25	0.34
75-09-2	Methylene Chloride	5.0	U	5.0	1.7
95-47-6	o-Xylene	22		5.0	0.70
100-42-5	Styrene	5.0	U	5.0	0.55
637-92-3	Ethyl-t-butyl ether (ETBE)	25	U	25	0.55
98-06-6	tert-Butylbenzene	5.0	U	5.0	0.65
127-18-4	Tetrachloroethene	5.0	U	5.0	1.5
108-88-3	Toluene	5.0	U	5.0	0.65
156-60-5	trans-1,2-Dichloroethene	5.0	U	5.0	0.95
10061-02-6	trans-1,3-Dichloropropene	5.0	U	5.0	0.95
79-01-6	Trichloroethene	5.0	U	5.0	0.85
75-69-4	Trichlorofluoromethane	5.0	U	5.0	1.1
108-05-4	Vinyl acetate	10	U	10	0.95
75-01-4	Vinyl chloride	5.0	U	5.0	1.1
75-65-0	tert-Butyl alcohol	250	U	250	20
1330-20-7	Xylenes, Total	72		10	1.4

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: MT-MW02S-043012 Lab Sample ID: 240-10808-4

Matrix: Water Lab File ID: UXM5699.D

Analysis Method: 8260C Date Collected: 04/30/2012 13:05

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 13:33

Soil Aliquot Vol: Dilution Factor: 5

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	5.0	U	5.0	0.90

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
460-00-4	4-Bromofluorobenzene (Surr)	105		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	100		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: MT-MW02S-043012 | Lab Sample ID: 240-10808-4

Matrix: Water | Lab File ID: UXM5699.D

Analysis Method: 8260C | Date Collected: 04/30/2012 13:05

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 13:33

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

Number TICs Found: 10 | TIC Result Total: 172.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q
598-61-8	Cyclobutane, methyl-	3.67	9.8	T J N
96-37-7	Cyclopentane, methyl-	4.63	19	T J N
110-82-7	Cyclohexane	5.22	45	
565-80-0	3-Pentanone, 2,4-dimethyl-	7.67	12	T J N
3970-62-5	3-Pentanol, 2,2-dimethyl-	8.11	6.5	T J N
815-57-6	2,4-Pentanedione, 3-methyl-	8.23	7.8	T J N
620-14-4	Benzene, 1-ethyl-3-methyl-	9.84	10	T J N
108-67-8	1,3,5-Trimethylbenzene	9.92	47	
611-14-3	Benzene, 1-ethyl-2-methyl-	10.13	7.3	T J N
496-11-7	Indane	10.91	8.1	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: TB-043012 | Lab Sample ID: 240-10808-1

Matrix: Water | Lab File ID: UXM5696.D

Analysis Method: 8260C | Date Collected: 04/30/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: TB-043012 | Lab Sample ID: 240-10808-1

Matrix: Water | Lab File ID: UXM5696.D

Analysis Method: 8260C | Date Collected: 04/30/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: TB-043012 | Lab Sample ID: 240-10808-1

Matrix: Water | Lab File ID: UXM5696.D

Analysis Method: 8260C | Date Collected: 04/30/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	97		63-129
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	91		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: TB-043012 | Lab Sample ID: 240-10808-1

Matrix: Water | Lab File ID: UXM5696.D

Analysis Method: 8260C | Date Collected: 04/30/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:25

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 2.1

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	2.1	T J N

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW5-043012 | Lab Sample ID: 240-10808-2

Matrix: Water | Lab File ID: 20508035.D

Analysis Method: 8270C | Date Collected: 04/30/2012 10:30

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1050(mL) | Date Analyzed: 05/08/2012 19:16

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	57		28-110
367-12-4	2-Fluorophenol (Surr)	57		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	82		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	52		27-111
4165-62-2	Phenol-d5 (Surr)	60		10-110
1718-51-0	Terphenyl-d14 (Surr)	66		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW6-043012 | Lab Sample ID: 240-10808-3

Matrix: Water | Lab File ID: 20508036.D

Analysis Method: 8270C | Date Collected: 04/30/2012 11:45

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1050(mL) | Date Analyzed: 05/08/2012 19:35

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	56		28-110
367-12-4	2-Fluorophenol (Surr)	48		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	84		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	60		10-110
1718-51-0	Terphenyl-d14 (Surr)	64		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: MT-MW02S-043012 | Lab Sample ID: 240-10808-4

Matrix: Water | Lab File ID: 20508037.D

Analysis Method: 8270C | Date Collected: 04/30/2012 13:05

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1010(mL) | Date Analyzed: 05/08/2012 19:53

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.99	U	0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	56		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	77		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	64		27-111
4165-62-2	Phenol-d5 (Surr)	64		10-110
1718-51-0	Terphenyl-d14 (Surr)	59		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Matrix: Water Lab File ID: YF050708.D

Analysis Method: 8015B Date Collected: 04/30/2012 10:30

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2012 14:40

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42995 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	37	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	60		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW6-043012 Lab Sample ID: 240-10808-3

Matrix: Water Lab File ID: YF050711.D

Analysis Method: 8015B Date Collected: 04/30/2012 11:45

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2012 16:42

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42995 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	41	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	56		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: MT-MW02S-043012 | Lab Sample ID: 240-10808-4

Matrix: Water | Lab File ID: YF050712.D

Analysis Method: 8015B | Date Collected: 04/30/2012 13:05

Sample wt/vol: 5(mL) | Date Analyzed: 05/07/2012 17:23

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42995 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	1400	B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	94		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Matrix: Water Lab File ID: P5F05075.D

Analysis Method: 8015B Date Collected: 04/30/2012 10:30

Extraction Method: 3510C Date Extracted: 05/04/2012 12:16

Sample wt/vol: 1050(mL) Date Analyzed: 05/07/2012 10:16

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 42964 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	1200		480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	69		10-110

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: GSP-MW6-043012 Lab Sample ID: 240-10808-3

Matrix: Water Lab File ID: P5F05076.D

Analysis Method: 8015B Date Collected: 04/30/2012 11:45

Extraction Method: 3510C Date Extracted: 05/04/2012 12:16

Sample wt/vol: 1050(mL) Date Analyzed: 05/07/2012 10:46

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 42964 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	490		480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	67		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: MT-MW02S-043012 Lab Sample ID: 240-10808-4

Matrix: Water Lab File ID: P5F05077.D

Analysis Method: 8015B Date Collected: 04/30/2012 13:05

Extraction Method: 3510C Date Extracted: 05/04/2012 12:16

Sample wt/vol: 1050(mL) Date Analyzed: 05/07/2012 11:16

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 42964 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	3700		480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	57		10-110

Appendix C

Support Documentation

MARTIN STATE AIRPORT - GROUNDWATER
SDG 240-10808-1

SAMPLE IDENTIFICATION	MT-MW02S-043012
COMPOUND	ETHYLBENZENE
COMPOUND AREA	2379121
INTERNAL STANDARD AMOUNT (ng)	50
VOLUME WATER PURGED (ml)	5
DILUTION FACTOR	5
INTERNAL STANDARD AREA	1154735
AVERAGE RRF	0.5579
ml to µl	1000
ng to µg	1000

= 184.6 µg/L

2379121 x 50 ng x 5 x 1000ml x 1µg /1154735 x 0.5579 x 5ml x 1L x 1000ng

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120510-9837.b\UXM5699.D		
Lims ID:	240-10808-A-4	Client ID:	MT-MW02S-043012
Inject. Date:	10-May-2012 13:33:30	Dil. Factor:	5.0000
Sample Type:	Client		
Sample ID:	240-0009837-009		
Misc. Info.:	M20510A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	8
Lims Batch ID:	43549	Lims Sample ID:	9
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120510-9837.b\8260_16.m		
Last Update:	11-May-2012 10:46:30	Calib Date:	09-May-2012 18:43:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120509-9809.b\UXM5665.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-15		
First Level Reviewer: williamsla		Date:	10-May-2012 14:02:51

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1490431	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.393	0.0	89	1154735	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	657198	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.109	5.109	0.0	58	384323	10.2	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	477366	10.0	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1502646	9.67	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	89	639651	10.7	
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62		1.942					
15 Bromomethane	94		2.286					
16 Chloroethane	64		2.393					
18 Trichlorofluoromethane	101		2.654					
21 1,1-Dichloroethene	96		3.140					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.164					
22 Acetone	43	3.176	3.176	0.0	99	288453	17.9	
26 Carbon disulfide	76		3.354					
30 Methylene Chloride	84		3.579					
31 2-Methyl-2-propanol	59		3.674					
34 Methyl tert-butyl ether	73		3.840					
33 trans-1,2-Dichloroethene	96		3.840					
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87	4.267	4.267	0.0	93	10018	0.2422	
40 Tert-butyl ethyl ether	59		4.587					
41 2-Butanone (MEK)	43		4.706					
42 cis-1,2-Dichloroethene	96	4.705	4.706	-0.001	69	49677	0.9550	
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.907					
49 Chloroform	83		4.978					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
50 1,1,1-Trichloroethane	97		5.156					
52 1,1-Dichloropropene	75		5.287					
53 Carbon tetrachloride	117		5.298					
56 1,2-Dichloroethane	62	5.476	5.464	0.012	29	48692	0.7646	
55 Benzene	78	5.476	5.476	0.0	97	3022378	17.4	
57 Tert-amyl methyl ether	73		5.559					
60 Trichloroethene	130		6.022					
62 1,2-Dichloropropane	63		6.212					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43	6.947	6.947	0.0	70	21915	0.5062	
72 Toluene	91		7.137					
73 trans-1,3-Dichloropropene	75		7.314					
76 1,3-Dichloropropane	76		7.635					
77 Tetrachloroethene	164		7.646					
78 2-Hexanone	43		7.694					
79 Chlorodibromomethane	129		7.848					
123 Ethylene Dibromide	107		7.967					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106	8.524	8.524	0.0	98	2379121	36.9	
10 m-Xylene & p-Xylene	106	8.631	8.631	0.0	97	804959	9.94	
85 o-Xylene	106	9.010	9.010	0.0	98	350770	4.36	
86 Styrene	104		9.010					
87 Bromoform	173		9.188					
88 Isopropylbenzene	105	9.354	9.354	0.0	96	1180910	6.16	
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120	9.757	9.757	0.0	98	97182	1.94	
95 2-Chlorotoluene	126		9.840					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.243					
98 1,2,4-Trimethylbenzene	105	10.291	10.291	0.0	97	291669	1.83	
99 sec-Butylbenzene	105	10.457	10.457	0.0	60	25068	0.1499	
100 1,3-Dichlorobenzene	146		10.575					
101 4-Isopropyltoluene	119	10.599	10.599	0.0	86	44914	0.3130	
102 1,4-Dichlorobenzene	146		10.658					
103 1,2,3-Trimethylbenzene	105	10.706	10.706	0.0	87	95991	0.4898	
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
109 1,2,4-Trichlorobenzene	180		12.639					
110 Hexachlorobutadiene	225		12.817					
111 Naphthalene	128	12.888	12.888	0.0	62	19213	0.1981	
112 1,2,3-Trichlorobenzene	180		13.149					
S 114 Xylenes, Total	106				0		14.3	

RRF = 0.5579

TestAmerica Laboratories
Tentatively Identified Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120510-9837.b\UXM5699.D		
Lims ID:	240-10808-A-4	Client ID:	MT-MW02S-043012
Inject. Date:	10-May-2012 13:33:30	Dil. Factor:	5.0000
Sample Type:	Client		
Sample ID:	240-0009837-009		
Misc. Info.:	M20510A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	8
Lims Batch ID:	43549	Lims Sample ID:	9
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120510-9837.b\8260_16.m		
Last Update:	11-May-2012 10:46:30	Calib Date:	09-May-2012 18:43:30
Tic RT Window:	1.600 -0.000	Response:	area
Quant By:	Nearest ISTD	Quant LOD:	10.00000
MS Library:	\\Ncchrom\ChromData\Database\NIST98.L		
Min. Match:	10		
Process Host:	CORP-CTX-15		
First Level Reviewer: williamsla		Date:	10-May-2012 14:02:51

Calibrated Tentative Identified Compound Results

Compound	RT	Response	Amount ug/l	Flags
Cyclohexane	5.215	878136	9.07	
1,3,5-Trimethylbenzene	9.923	1420029	9.31	

Tentative Identified Compound Results

RT	Response	Amount ug/l	Quant Cpnd	Qual	Lib Entry	Flags
598-61-8 Cyclobutane, methyl-						
3.674	644408	1.96	1	87	3261	
96-37-7 Cyclopentane, methyl-						
4.634	1220604	3.71	1	91	111861	
565-80-0 3-Pentanone, 2,4-dimethyl-						
7.670	996824	2.48	2	86	109868	
3970-62-5 3-Pentanol, 2,2-dimethyl-						
8.109	521792	1.30	2	64	113266	
815-57-6 2,4-Pentanedione, 3-methyl-						
8.227	622105	1.55	2	59	109965	
620-14-4 Benzene, 1-ethyl-3-methyl-						
9.840	877628	2.08	3	87	119287	
611-14-3 Benzene, 1-ethyl-2-methyl-						
10.125	611361	1.45	3	91	119281	
496-11-7 Indane						
10.907	677947	1.61	3	87	120526	

Report Date: 11-May-2012 10:46:33 Chrom Revision: 2.0 08-Feb-2012 11:07:54
Data File: \\Ncchrom\ChromData\A3UX16\20120510-9837.b\UXM5699.D
Quantitation Compounds

Compound	RT	Response	Amount ug/l
* 1 Fluorobenzene	5.702	3288690	10.0
* 2 Chlorobenzene-d5	8.393	4011431	10.0
* 3 1,4-Dichlorobenzene-d4	10.635	4220751	10.0

QC Flag Legend

Processing Flags

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A2HP5F\20120507-9715.b\P5F05077.D		
Lims ID:	240-10808-J-4-A	Client ID:	MT-MW02S-043012
Inject. Date:	07-May-2012 11:16:05	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009715-007		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP5F
Vol. Injected:	1.0000	ALS Bottle#:	7
Lims Batch ID:	42964	Lims Sample ID:	7
Detector:	GC FID1A		
Method:	\\Ncchrom\ChromData\A2HP5F\20120507-9715.b\TPH5F.m		
Last Update:	08-May-2012 07:46:28	Calib Date:	13-Apr-2012 15:06:59
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP5F\20120413-9029.b\P5F04144.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
3.799	3.796	0.003	12262811	56.6	
A 15 Diesel					
9.247	4.909 -	13.585	139437375	740.6	
A 17 C10-C32					
9.946	4.909 -	14.983	144521858	767.6	

$\overline{CF} = 189272.909$

extraction = 1050ml / 5ml

$$\frac{144521858\ ng/\mu l}{189272.909} \times \frac{5ml}{1050ml} \times \frac{1\ mg}{1000ng} \times \frac{1000000\ \mu l}{1L}$$

$= 3655.3\ mg/L$

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact					
Company Name: Tetra Tech	Client Project Manager: Tony Aparicio	Site Contact: Stu Cameron	Lab Contact:	COC No: 006079
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5553	Telephone: (703)342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD, 20874	Email: Tony.Aparicio@tetratech.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only: Walk-in Client ☐ Lab Sampling ☐ Job/SDG No.
Phone: (301) 528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MSA GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04021	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C/Grab G	VOCs	Total Metals	Dissolved Metals	Perchlorate	1,4-Dioxane	TPH-GRO	TPH-DRO	Sample Specific Notes / Special Instructions:
TB-043012	—	—		X						2							X							
GSP-MW5-043012	4/30/12	1030		X					2	5			5			G	X	X	X	X	X	X	X	
GSP-MW6-043012	↓	1145		X					2	5			5			G	X	X	X	X	X	X	X	
MT-MW02S-043012	↓	1305		X					2	5			5			G	X	X	X	X	X	X	X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by: Stu Cameron	Company: Tetra Tech	Date/Time: 4-30-12/1445	Received by: Paul Gaylord	Company: TestAmerica	Date/Time: 4/30/12 1446
Relinquished by:	Company: TestAmerica	Date/Time: 4-30-2012/1530	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time: 5-1-12 930

Page 688 of 991

05/29/2012

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CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10808-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/01/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.9 and 3.2 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-043012 (240-10808-1), GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/10/2012.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43549/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2-Butanone and 2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10837-5 in batch 240-43549. Refer to the QC report for details.

Sample MT-MW02S-043012 (240-10808-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/05/2012 and analyzed on 05/08/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

1,4-Dioxane failed the recovery criteria high for the MSD of sample 240-10837-5 in batch 240-43126.

1,4-Dioxane failed the recovery criteria low for the MSD of sample 240-10842-8 in batch 240-43665. 1,4-Dioxane exceeded the rpd limit.

Refer to the QC report for details.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/07/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42995/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/04/2012 and analyzed on 05/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

Several analytes were detected in method blank MB 240-42485/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)
Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/03/2012 and 05/07/2012 and analyzed on 05/04/2012 and 05/08/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/03/2012 and 05/07/2012 and analyzed on 05/04/2012 and 05/08/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10808-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10808-1TB	TB-043012	Water	04/30/2012 0000	05/01/2012 0930
240-10808-2	GSP-MW5-043012	Water	04/30/2012 1030	05/01/2012 0930
240-10808-3	GSP-MW6-043012	Water	04/30/2012 1145	05/01/2012 0930
240-10808-4	MT-MW02S-043012	Water	04/30/2012 1305	05/01/2012 0930

DATA REPORTING QUALIFIERS

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10808-1

Lab Section	Qualifier	Description
GC/MS VOA		
	J	Indicates an Estimated Value for TICs
	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
	E	Result exceeded calibration range.
	T	Result is a tentatively identified compound (TIC) and an estimated value.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
	N	This flag indicates the presumptive evidence of a compound.
GC/MS Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.
	F	MS or MSD exceeds the control limits
	F	RPD of the MS and MSD exceeds the control limits
GC VOA		
	B	Compound was found in the blank and sample.
	J	Result is less than the RL but greater than or equal to the MDL and the concentration is an approximate value.
GC Semi VOA		
	U	Indicates the analyte was analyzed for but not detected.

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-043012	240-10808-1	91	97	96	97
GSP-MW5-043012	240-10808-2	102	102	95	98
GSP-MW6-043012	240-10808-3	95	96	98	100
MT-MW02S-043012	240-10808-4	100	98	95	105
	MB 240-43549/5	91	98	97	97
	LCS 240-43549/4	92	95	101	102
	240-10837-D-5 MS	97	100	101	102
	240-10837-E-5 MSD	94	93	95	96

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: STD8260 240-43409/4 Date Analyzed: 05/09/2012 17:35

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5662.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1744720	5.70	1311107	8.39	771411	10.64
UPPER LIMIT		3489440	6.20	2622214	8.89	1542822	11.14
LOWER LIMIT		872360	5.20	655554	7.89	385706	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43409/8		1716805	5.70	1288543	8.39	755167	10.64
CCVIS 240-43549/2		1685929	5.70	1198706	8.39	696224	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: CCVIS 240-43549/2 Date Analyzed: 05/10/2012 10:53

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5692.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1685929	5.70	1198706	8.39	696224	10.64
UPPER LIMIT		3371858	6.20	2397412	8.89	1392448	11.14
LOWER LIMIT		842965	5.20	599353	7.89	348112	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-43549/3		1693016	5.70	1283426	8.39	677855	10.64
LCS 240-43549/4		1679901	5.70	1201426	8.39	713156	10.64
MB 240-43549/5		1644585	5.70	1222754	8.39	644299	10.64
240-10808-1	TB-043012	1646516	5.70	1246377	8.39	643038	10.64
240-10808-2	GSP-MW5-043012	1572318	5.70	1192812	8.39	652627	10.64
240-10808-3	GSP-MW6-043012	1587946	5.70	1173345	8.39	631759	10.64
240-10808-4	MT-MW02S-043012	1490431	5.70	1154735	8.39	657198	10.64
240-10837-D-5 MS		1587604	5.70	1149469	8.39	664336	10.64
240-10837-E-5 MSD		1579177	5.70	1228432	8.39	675357	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: BFB2951.D BFB Injection Date: 05/09/2012

Instrument ID: A3UX16 BFB Injection Time: 16:26

Analysis Batch No.: 43409

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.5	
75	30.0 - 60.0 % of mass 95	47.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	79.3	
175	5.0 - 9.0 % of mass 174	5.7	(7.2)1
176	95.0 - 101.0 % of mass 174	78.8	(99.5)1
177	5.0 - 9.0 % of mass 176	4.7	(5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-43409/2	UXM5660.D	05/09/2012	16:50
	STD8260 240-43409/3	UXM5661.D	05/09/2012	17:12
	STD8260 240-43409/4	UXM5662.D	05/09/2012	17:35
	STD8260 240-43409/5	UXM5663.D	05/09/2012	17:58
	STD8260 240-43409/6	UXM5664.D	05/09/2012	18:20
	STD8260 240-43409/7	UXM5665.D	05/09/2012	18:43
	ICV 240-43409/8	UXM5666.D	05/09/2012	19:06

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-43409/7	UXM5665.D
Level 2	STD8260 240-43409/6	UXM5664.D
Level 3	STD8260 240-43409/5	UXM5663.D
Level 4	STD8260 240-43409/4	UXM5662.D
Level 5	STD8260 240-43409/3	UXM5661.D
Level 6	STD8260 240-43409/2	UXM5660.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3032 0.3143	0.2539	0.2973	0.2657	0.3062	Ave		0.2901			0.1000	8.4		15.0			
Chloromethane	0.6852 0.6205	0.6371	0.6849	0.6156	0.6587	Ave		0.6503			0.1000	4.7		15.0			
Vinyl chloride	0.4547 0.4560	0.4270	0.4657	0.4279	0.4758	Ave		0.4512			0.1000	4.4		15.0			
Bromomethane	0.2084 0.1529	0.1821	0.1851	0.1563	0.1804	Ave		0.1775			0.0500	12.0		15.0			
Chloroethane	0.2573 0.2377	0.2580	0.2693	0.2344	0.2581	Ave		0.2524				5.4		15.0			
Trichlorofluoromethane	0.3101 0.3295	0.3079	0.3225	0.2997	0.3473	Ave		0.3195			0.1000	5.4		15.0			
Acrolein	0.0620 0.0594	0.0566	0.0598	0.0605	0.0630	Ave		0.0602				3.7		15.0			
1,1-Dichloroethene	0.2593 0.2847	0.2457	0.2768	0.2781	0.2948	Ave		0.2733			0.1000	6.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1558 0.2077	0.1678	0.1758	0.1970	0.2009	Ave		0.1842			0.0500	11.0		15.0			
Acetone	0.1950 0.0973	0.1448	0.1189	0.1063	0.1066	Lin1	0.1992	0.0970			0.0500				0.9990		0.9950
Iodomethane	0.4877 0.4873	0.4523	0.4923	0.4807	0.4978	Ave		0.4830				3.3		15.0			
Carbon disulfide	0.8203 0.9849	0.8078	0.8789	0.8856	0.9660	Ave		0.8906			0.1000	8.2		15.0			
Acetonitrile	0.0521 0.0408	0.0448	0.0457	0.0427	0.0442	Ave		0.0451				8.6		15.0			
Methyl acetate	0.2743 0.2474	0.2522	0.2631	0.2590	0.2628	Ave		0.2598			0.1000	3.6		15.0			
Methylene Chloride	0.5939 0.3427	0.4564	0.4050	0.3631	0.3666	Lin1	0.2534	0.3421			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.2834 0.4163	0.2994	0.3340	0.3600	0.3897	Ave		0.3471			0.1000	15.0		15.0			
1,2-Dichloropropane	0.3163 0.3393	0.3026	0.3214	0.3206	0.3464	Ave		0.3244			0.1000	4.9		15.0			
Dibromomethane	0.1317 0.1397	0.1303	0.1368	0.1366	0.1460	Ave		0.1369				4.1		15.0			
1,4-Dioxane	0.0019 0.0018	0.0020	0.0021	0.0020	0.0021	Ave		0.0020				7.2		15.0			
Bromodichloromethane	0.2564 0.3265	0.2419	0.2713	0.2771	0.3245	Ave		0.2830			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1506 0.1609	0.1383	0.1637	0.1582	0.1703	Ave		0.1570				7.1		15.0			
cis-1,3-Dichloropropene	0.2551 0.3710	0.2499	0.2985	0.3081	0.3650	Lin1	-0.188	0.3666			0.1500				0.9960		0.9950
4-Methyl-2-pentanone	0.2837 0.2990	0.2651	0.2929	0.2909	0.3111	Ave		0.2905			0.0500	5.3		15.0			
Toluene	1.6482 1.7043	1.5200	1.5382	1.5720	1.7039	Ave		1.6145			0.4000	5.1		15.0			
trans-1,3-Dichloropropene	0.2583 0.4170	0.2712	0.3095	0.3332	0.4003	Qua	-0.269	0.3783	0.0012		0.1000				0.9990		0.9900
Ethyl methacrylate	0.3360 0.4227	0.3466	0.3745	0.3996	0.4375	Ave		0.3861				11.0		15.0			
1,1,2-Trichloroethane	0.2835 0.2793	0.2694	0.2686	0.2750	0.2894	Ave		0.2775			0.1000	2.9		15.0			
1,3-Dichloropropane	0.5297 0.5095	0.5041	0.4977	0.5018	0.5376	Ave		0.5134				3.2		15.0			
Tetrachloroethene	0.2829 0.3018	0.2688	0.2694	0.2845	0.3065	Ave		0.2856			0.2000	5.5		15.0			
2-Hexanone	0.2570 0.2616	0.2458	0.2583	0.2602	0.2737	Ave		0.2594			0.0500	3.5		15.0			
Dibromochloromethane	0.1998 0.2905	0.1878	0.2173	0.2406	0.2828	Lin1	-0.158	0.2858							0.9950		0.9950
1,2-Dibromoethane	0.2771 0.2885	0.2414	0.2810	0.2689	0.2989	Ave		0.2760				7.2		15.0			
Chlorobenzene	1.0779 1.0958	1.0292	1.0419	1.0268	1.0997	Ave		1.0619			0.3000	3.1		15.0			
1,1,1,2-Tetrachloroethane	0.2890 0.3687	0.2701	0.3001	0.3244	0.3603	Ave		0.3188				12.0		15.0			
Ethylbenzene	0.5370 0.5872	0.5263	0.5398	0.5618	0.5955	Ave		0.5579				5.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6927 0.7473	0.6545	0.6868	0.6838	0.7439	Ave		0.7015				5.2		15.0			
o-Xylene	0.6585 0.7303	0.6697	0.6826	0.7022	0.7337	Ave		0.6962				4.5		15.0			
Styrene	1.0101 1.2393	1.0332	1.0826	1.1410	1.2330	Ave		1.1232			0.3000	8.8		15.0			
Bromoform	0.0997 0.1652	0.1002	0.1141	0.1314	0.1520	Qua	-0.092	0.1394	0.0007		0.1000				1.0000		0.9900
Isopropylbenzene	1.5686 1.8453	1.5081	1.5792	1.6843	1.7759	Ave		1.6603			0.1000	7.9		15.0			
1,1,2,2-Tetrachloroethane	0.6421 0.6392	0.5897	0.6508	0.6293	0.6884	Ave		0.6399			0.3000	5.0		15.0			
Bromobenzene	0.7124 0.8007	0.7229	0.7655	0.7154	0.8316	Ave		0.7581				6.6		15.0			
1,2,3-Trichloropropane	0.2331 0.2050	0.1899	0.2018	0.2064	0.2197	Ave		0.2093				7.2		15.0			
trans-1,4-Dichloro-2-butene	0.0972 0.1779	0.1139	0.1228	0.1331	0.1671	Qua	-0.117	0.1526	0.0007						0.9990		0.9900
n-Propylbenzene	0.7268 0.8204	0.6778	0.7587	0.7438	0.8378	Ave		0.7609				7.8		15.0			
2-Chlorotoluene	0.6703 0.7397	0.6758	0.6924	0.6931	0.7657	Ave		0.7061				5.4		15.0			
1,3,5-Trimethylbenzene	2.0828 2.5958	2.0405	2.3124	2.3306	2.5681	Ave		2.3217				10.0		15.0			
4-Chlorotoluene	0.7205 0.7747	0.6930	0.7396	0.7189	0.7965	Ave		0.7405				5.2		15.0			
tert-Butylbenzene	1.9330 2.3935	1.9972	1.9127	2.1455	2.3504	Ave		2.1221				9.9		15.0			
1,2,4-Trimethylbenzene	2.2784 2.6594	2.2133	2.3747	2.3863	2.6735	Ave		2.4310				8.0		15.0			
sec-Butylbenzene	2.3140 2.8409	2.3222	2.4938	2.5429	2.7579	Ave		2.5453				8.6		15.0			
1,3-Dichlorobenzene	1.3846 1.4804	1.3348	1.4061	1.3608	1.4933	Ave		1.4100			0.6000	4.6		15.0			
p-Isopropyltoluene	1.8496 2.5189	1.9566	2.1436	2.2002	2.4336	Ave		2.1837				12.0		15.0			
1,4-Dichlorobenzene	1.5343 1.5331	1.3976	1.4633	1.4252	1.5585	Ave		1.4853			0.5000	4.5		15.0			
n-Butylbenzene	1.5207 2.0613	1.5638	1.6967	1.7858	1.9861	Ave		1.7691				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3844 1.4205	1.3540	1.3870	1.3472	1.4582	Ave		1.3919			0.4000	3.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0794 0.0870	0.0683	0.0814	0.0746	0.0883	Ave		0.0798			0.0500	9.5		15.0			
1,3,5-Trichlorobenzene	0.7539 0.8344	0.7656	0.7991	0.8104	0.8665	Ave		0.8050				5.2		15.0			
1,2,4-Trichlorobenzene	0.6479 0.6976	0.6519	0.6850	0.7123	0.7408	Ave		0.6892			0.2000	5.2		15.0			
Hexachlorobutadiene	0.2984 0.2880	0.3131	0.3156	0.3236	0.3074	Ave		0.3077				4.2		15.0			
Naphthalene	1.3167 1.5171	1.2964	1.5138	1.5269	1.6839	Ave		1.4758				9.9		15.0			
1,2,3-Trichlorobenzene	0.6093 0.5088	0.5775	0.5956	0.5994	0.6006	Ave		0.5819				6.4		15.0			
Dibromofluoromethane (Surr)	0.2449 0.2557	0.2414	0.2613	0.2511	0.2697	Ave		0.2540				4.1		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3352 0.3180	0.3022	0.3162	0.3092	0.3364	Ave		0.3195				4.3		15.0			
Toluene-d8 (Surr)	1.3399 1.4228	1.2843	1.2848	1.3063	1.4382	Ave		1.3460				5.1		15.0			
4-Bromofluorobenzene (Surr)	0.5239 0.5294	0.5089	0.5007	0.5033	0.5393	Ave		0.5176				3.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3514		11.0	10.0	10.4	20.0
Diisopropyl ether	Ave	0.2775	0.2746		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0089		517	500	3.5	20.0
Cyclohexanone	Lin1		0.0196		41.7	200	-79.2*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.571		8.62	10.0	-13.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2045	0.1000	7.05	10.0	-29.5*	20.0
Chloromethane	Ave	0.6503	0.5741	0.1000	8.83	10.0	-11.7	20.0
Vinyl chloride	Ave	0.4512	0.4382	0.1000	9.71	10.0	-2.9	20.0
Bromomethane	Ave	0.1775	0.1621	0.0500	9.13	10.0	-8.7	20.0
Chloroethane	Ave	0.2524	0.2375	0.0500	9.41	10.0	-5.9	20.0
Trichlorofluoromethane	Ave	0.3195	0.3224	0.1000	10.1	10.0	0.9	20.0
Acrolein	Ave	0.0602	0.0316		15.7	30.0	-47.6*	20.0
1,1-Dichloroethene	Ave	0.2733	0.2968	0.1000	10.9	10.0	8.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2129	0.0500	11.6	10.0	15.6	20.0
Acetone	Lin1		0.1000	0.0500	18.6	20.0	-7.0	20.0
Iodomethane	Ave	0.4830	0.4930		10.2	10.0	2.1	20.0
Carbon disulfide	Ave	0.8906	0.9121	0.1000	10.2	10.0	2.4	20.0
Acetonitrile	Ave	0.0451	0.0442		29.4	30.0	-2.0	20.0
Methyl acetate	Ave	0.2598	0.2961	0.1000	11.4	10.0	14.0	20.0
Methylene Chloride	Lin1		0.3698	0.1000	10.1	10.0	1.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0177		198	200	-1.0	20.0
Acrylonitrile	Ave	0.1429	0.1377		28.9	30.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.7047	0.1000	9.91	10.0	-0.9	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3422	0.1000	10.3	10.0	3.4	20.0
Hexane	Ave	0.0431	0.0478		11.1	10.0	10.8	20.0
1,1-Dichloroethane	Ave	0.6504	0.6789	0.1000	10.4	10.0	4.4	20.0
Vinyl acetate	Ave	0.0379	0.0349		9.19	10.0	-8.1	20.0
2-Butanone	Ave	0.1434	0.1319	0.0500	18.4	20.0	-8.1	20.0
2,2-Dichloropropane	Ave	0.2584	0.2680		10.4	10.0	3.7	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3544	0.1000	10.2	10.0	1.5	20.0
Bromochloromethane	Ave	0.1454	0.1487		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5335	0.2000	10.2	10.0	2.0	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4102	0.1000	10.4	10.0	4.2	20.0
Cyclohexane	Ave	0.6493	0.6633	0.1000	10.2	10.0	2.2	20.0
1,1-Dichloropropene	Ave	0.3618	0.3695		10.2	10.0	2.1	20.0
Carbon tetrachloride	Lin1		0.3100	0.1000	9.41	10.0	-5.9	20.0
1,2-Dichloroethane	Ave	0.4273	0.4347	0.1000	10.2	10.0	1.7	20.0
Benzene	Ave	1.162	1.177	0.5000	10.1	10.0	1.2	20.0
Trichloroethene	Ave	0.2745	0.2806	0.2000	10.2	10.0	2.2	20.0
1,2-Dichloropropane	Ave	0.3244	0.3251	0.1000	10.0	10.0	0.2	20.0
Methylcyclohexane	Ave	0.3471	0.3473	0.1000	10.0	10.0	0.0	20.0
Dibromomethane	Ave	0.1369	0.1442		10.5	10.0	5.4	20.0
Bromodichloromethane	Ave	0.2830	0.2938	0.1000	10.4	10.0	3.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1570	0.1413		9.00	10.0	-10.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Linl		0.3014	0.1500	8.73	10.0	-12.7	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2896	0.0500	19.9	20.0	-0.3	20.0
Toluene	Ave	1.614	1.572	0.4000	9.74	10.0	-2.6	20.0
trans-1,3-Dichloropropene	Qua		0.3327	0.1000	9.24	10.0	-7.6	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2762	0.1000	9.95	10.0	-0.5	20.0
1,3-Dichloropropane	Ave	0.5134	0.4975		9.69	10.0	-3.1	20.0
Tetrachloroethene	Ave	0.2856	0.2813	0.2000	9.85	10.0	-1.5	20.0
2-Hexanone	Ave	0.2594	0.2452	0.0500	18.9	20.0	-5.5	20.0
Dibromochloromethane	Linl		0.2350		8.77	10.0	-12.3	20.0
1,2-Dibromoethane	Ave	0.2760	0.2737		9.92	10.0	-0.8	20.0
Chlorobenzene	Ave	1.062	1.051	0.3000	9.90	10.0	-1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3286		10.3	10.0	3.1	20.0
Ethylbenzene	Ave	0.5579	0.5654		10.1	10.0	1.3	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.6978		19.9	20.0	-0.5	20.0
o-Xylene	Ave	0.6962	0.7046		10.1	10.0	1.2	20.0
Styrene	Ave	1.123	1.167	0.3000	10.4	10.0	3.9	20.0
Bromoform	Qua		0.1291	0.1000	9.47	10.0	-5.3	20.0
Isopropylbenzene	Ave	1.660	1.692	0.1000	10.2	10.0	1.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6196	0.3000	9.68	10.0	-3.2	20.0
Bromobenzene	Ave	0.7581	0.7479		9.87	10.0	-1.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.1984		9.48	10.0	-5.2	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1324		16.8	20.0	-16.0	20.0
n-Propylbenzene	Ave	0.7609	0.7738		10.2	10.0	1.7	20.0
2-Chlorotoluene	Ave	0.7061	0.7155		10.1	10.0	1.3	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.338		10.1	10.0	0.7	20.0
4-Chlorotoluene	Ave	0.7405	0.7420		10.0	10.0	0.2	20.0
tert-Butylbenzene	Ave	2.122	2.147		10.1	10.0	1.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.470		10.2	10.0	1.6	20.0
sec-Butylbenzene	Ave	2.545	2.467		9.69	10.0	-3.1	20.0
1,3-Dichlorobenzene	Ave	1.410	1.419	0.6000	10.1	10.0	0.6	20.0
p-Isopropyltoluene	Ave	2.184	2.305		10.6	10.0	5.5	20.0
1,4-Dichlorobenzene	Ave	1.485	1.439	0.5000	9.69	10.0	-3.1	20.0
n-Butylbenzene	Ave	1.769	1.800		10.2	10.0	1.7	20.0
1,2-Dichlorobenzene	Ave	1.392	1.345	0.4000	9.66	10.0	-3.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0779	0.0500	9.76	10.0	-2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6576	0.2000	9.54	10.0	-4.6	20.0
Hexachlorobutadiene	Ave	0.3077	0.2672		8.69	10.0	-13.1	20.0
Naphthalene	Ave	1.476	1.471		9.97	10.0	-0.3	20.0
1,2,3-Trichlorobenzene	Ave	0.5819	0.5595		9.61	10.0	-3.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2365		9.50	10.2	-6.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2929		9.36	10.2	-8.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.346	1.233		9.35	10.2	-8.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4948		9.76	10.2	-4.4	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: BFB2952.D BFB Injection Date: 05/10/2012

Instrument ID: A3UX16 BFB Injection Time: 10:23

Analysis Batch No.: 43549

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.4	
75	30.0 - 60.0 % of mass 95	47.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	4.8	(6.1)1
176	95.0 - 101.0 % of mass 174	77.5	(98.6)1
177	5.0 - 9.0 % of mass 176	5.0	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-43549/2	UXM5692.D	05/10/2012	10:53
	CCV 240-43549/3	UXM5693.D	05/10/2012	11:16
	LCS 240-43549/4	UXM5694.D	05/10/2012	11:39
	MB 240-43549/5	UXM5695.D	05/10/2012	12:02
TB-043012	240-10808-1	UXM5696.D	05/10/2012	12:25
GSP-MW5-043012	240-10808-2	UXM5697.D	05/10/2012	12:47
GSP-MW6-043012	240-10808-3	UXM5698.D	05/10/2012	13:10
MT-MW02S-043012	240-10808-4	UXM5699.D	05/10/2012	13:33
	240-10837-D-5 MS	UXM5716.D	05/10/2012	19:58
	240-10837-E-5 MSD	UXM5717.D	05/10/2012	20:21

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2790	0.1000	9.62	10.0	-3.8	20.0
Chloromethane	Ave	0.6503	0.6113	0.1000	9.40	10.0	-6.0	20.0
Vinyl chloride	Ave	0.4512	0.4262	0.1000	9.45	10.0	-5.5	20.0
Bromomethane	Ave	0.1775	0.1770	0.0500	9.97	10.0	-0.3	20.0
Chloroethane	Ave	0.2524	0.2504	0.0500	9.92	10.0	-0.8	20.0
Trichlorofluoromethane	Ave	0.3195	0.3217	0.1000	10.1	10.0	0.7	20.0
Acrolein	Ave	0.0602	0.0539		89.5	100	-10.5	20.0
1,1-Dichloroethene	Ave	0.2733	0.2791	0.1000	10.2	10.0	2.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2017	0.0500	11.0	10.0	9.5	20.0
Acetone	Lin1		0.0988	0.0500	18.3	20.0	-8.5	20.0
Iodomethane	Ave	0.4830	0.4722		9.78	10.0	-2.2	20.0
Carbon disulfide	Ave	0.8906	0.9826	0.1000	11.0	10.0	10.3	20.0
Acetonitrile	Ave	0.0451	0.0445		98.8	100	-1.2	20.0
Methyl acetate	Ave	0.2598	0.2519	0.1000	19.4	20.0	-3.0	20.0
Methylene Chloride	Lin1		0.3834	0.1000	10.5	10.0	5.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0166		186	200	-7.1	20.0
Acrylonitrile	Ave	0.1429	0.1377		19.3	20.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.6763	0.1000	9.52	10.0	-4.8	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3410	0.1000	10.3	10.0	3.1	20.0
Hexane	Ave	0.0431	0.0483	N.F.C.	11.2	10.0	12.1	20.0
1,1-Dichloroethane	Ave	0.6504	0.6517	0.1000	10.0	10.0	0.2	20.0
Vinyl acetate	Ave	0.0379	0.0403		10.6	10.0	6.2	20.0
2-Butanone	Ave	0.1434	0.1404	0.0500	19.6	20.0	-2.1	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3372	0.1000	9.66	10.0	-3.4	20.0
2,2-Dichloropropane	Ave	0.2584	0.2768		10.7	10.0	7.1	20.0
Bromochloromethane	Ave	0.1454	0.1447		9.95	10.0	-0.5	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5315	0.2000	10.2	10.0	1.7	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4191	0.1000	10.6	10.0	6.4	20.0
Cyclohexane	Ave	0.6493	0.6985	0.1000	10.8	10.0	7.6	20.0
1,1-Dichloropropene	Ave	0.3618	0.3859		10.7	10.0	6.6	20.0
Carbon tetrachloride	Lin1		0.3255	0.1000	9.86	10.0	-1.4	20.0
1,2-Dichloroethane	Ave	0.4273	0.4578	0.1000	10.7	10.0	7.1	20.0
Benzene	Ave	1.162	1.187	0.5000	10.2	10.0	2.2	20.0
Trichloroethene	Ave	0.2745	0.2912	0.2000	10.6	10.0	6.1	20.0
Methylcyclohexane	Ave	0.3471	0.3832	0.1000	11.0	10.0	10.4	20.0
1,2-Dichloropropane	Ave	0.3244	0.3319	0.1000	10.2	10.0	2.3	20.0
Dibromomethane	Ave	0.1369	0.1455		10.6	10.0	6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0018		457	500	-8.7	20.0
Bromodichloromethane	Ave	0.2830	0.3185	0.1000	11.3	10.0	12.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1570	0.1558		19.9	20.0	-0.7	20.0
cis-1,3-Dichloropropene	Lin1		0.3284	0.1500	9.47	10.0	-5.3	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2951	0.0500	20.3	20.0	1.6	20.0
Toluene	Ave	1.614	1.737	0.4000	10.8	10.0	7.6	20.0
trans-1,3-Dichloropropene	Qua		0.3546	0.1000	9.79	10.0	-2.1	20.0
Ethyl methacrylate	Ave	0.3861	0.4404		11.4	10.0	14.1	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2924	0.1000	10.5	10.0	5.3	20.0
1,3-Dichloropropane	Ave	0.5134	0.5380		10.5	10.0	4.8	20.0
Tetrachloroethene	Ave	0.2856	0.3170	0.2000	11.1	10.0	11.0	20.0
2-Hexanone	Ave	0.2594	0.2762	0.0500	21.3	20.0	6.5	20.0
Dibromochloromethane	Lin1		0.2723		10.1	10.0	1.0	20.0
1,2-Dibromoethane	Ave	0.2760	0.2994		10.9	10.0	8.5	20.0
Chlorobenzene	Ave	1.062	1.117	0.3000	10.5	10.0	5.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3682		11.5	10.0	15.5	20.0
Ethylbenzene	Ave	0.5579	0.6165		11.0	10.0	10.5	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7510		21.4	20.0	7.1	20.0
o-Xylene	Ave	0.6962	0.7534		10.8	10.0	8.2	20.0
Styrene	Ave	1.123	1.258	0.3000	11.2	10.0	12.0	20.0
Bromoform	Qua		0.1388	0.1000	10.1	10.0	1.0	20.0
Isopropylbenzene	Ave	1.660	1.794	0.1000	10.8	10.0	8.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6643	0.3000	10.4	10.0	3.8	20.0
Bromobenzene	Ave	0.7581	0.7834		10.3	10.0	3.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2152		10.3	10.0	2.8	20.0
trans-1,4-Dichloro-2-butene	Qua		0.0543		4.24	10.0	-57.6*	20.0
n-Propylbenzene	Ave	0.7609	0.8162		10.7	10.0	7.3	20.0
2-Chlorotoluene	Ave	0.7061	0.7430		10.5	10.0	5.2	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.504		10.8	10.0	7.9	20.0
4-Chlorotoluene	Ave	0.7405	0.8068		10.9	10.0	8.9	20.0
tert-Butylbenzene	Ave	2.122	2.300		10.8	10.0	8.4	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.614		10.8	10.0	7.5	20.0
sec-Butylbenzene	Ave	2.545	2.730		10.7	10.0	7.3	20.0
1,3-Dichlorobenzene	Ave	1.410	1.472	0.6000	10.4	10.0	4.4	20.0
p-Isopropyltoluene	Ave	2.184	2.381		10.9	10.0	9.0	20.0
1,4-Dichlorobenzene	Ave	1.485	1.576	0.5000	10.6	10.0	6.1	20.0
n-Butylbenzene	Ave	1.769	1.900		10.7	10.0	7.4	20.0
1,2-Dichlorobenzene	Ave	1.392	1.409	0.4000	10.1	10.0	1.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0780	0.0500	9.77	10.0	-2.3	20.0
1,3,5-Trichlorobenzene	Ave	0.8050	0.8184		10.2	10.0	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6691	0.2000	9.71	10.0	-2.9	20.0
Hexachlorobutadiene	Ave	0.3077	0.3034		9.86	10.0	-1.4	20.0
Naphthalene	Ave	1.476	1.368		9.27	10.0	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5819	0.5411		9.30	10.0	-7.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2445		9.83	10.2	-3.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3043		9.72	10.2	-4.8	20.0
Toluene-d8 (Surr)	Ave	1.346	1.370		10.4	10.2	1.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5247		10.3	10.2	1.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCV 240-43549/3 Calibration Date: 05/10/2012 11:16

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5693.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4896		9.25	10.0	-7.5	20.0
Ethyl ether	Ave	0.3182	0.3276		10.3	10.0	2.9	20.0
3-Chloro-1-propene	Ave	0.1408	0.1484		10.5	10.0	5.4	20.0
Diisopropyl ether	Ave	0.2775	0.2850		51.4	50.0	2.7	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.6754		13.1	10.0	31.0*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	1.041		11.7	10.0	16.9	20.0
Propionitrile	Ave	0.0386	0.0464		24.0	20.0	20.1*	20.0
Ethyl acetate	Ave	0.2719	0.2669		19.6	20.0	-1.8	20.0
Methacrylonitrile	Ave	0.1921	0.1929		10.0	10.0	0.4	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		210	200	5.0	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6111		8.54	10.0	-14.6	20.0
n-Heptane	Ave	0.0406	0.0423		10.4	10.0	4.1	20.0
n-Butanol	Lin1		0.0066		197	200	-1.7	20.0
2-Nitropropane	Qua		0.0411		19.9	20.0	-0.5	20.0
Cyclohexanone	Lin1		0.0552		56.6	100	-43.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.606		8.74	10.0	-12.6	20.0
2-Methylnaphthalene	Qua		0.3582		8.10	20.0	-59.5*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCV 240-43549/3 Calibration Date: 05/10/2012 11:16

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5693.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2276		9.15	10.2	-10.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2873		9.18	10.2	-10.1	20.0
Toluene-d8 (Surr)	Ave	1.346	1.243		9.43	10.2	-7.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4929		9.72	10.2	-4.8	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: UXM5695.D Lab Sample ID: MB 240-43549/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/10/2012 12:02

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-43549/4	UXM5694.D	05/10/2012 11:39
TB-043012	240-10808-1	UXM5696.D	05/10/2012 12:25
GSP-MW5-043012	240-10808-2	UXM5697.D	05/10/2012 12:47
GSP-MW6-043012	240-10808-3	UXM5698.D	05/10/2012 13:10
MT-MW02S-043012	240-10808-4	UXM5699.D	05/10/2012 13:33
	240-10837-D-5 MS	UXM5716.D	05/10/2012 19:58
	240-10837-E-5 MSD	UXM5717.D	05/10/2012 20:21

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.372	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	0.247	J	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	0.462	J	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43549/5

Matrix: Water | Lab File ID: UXM5695.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
2037-26-5	Toluene-d8 (Surr)	97		74-115
1868-53-7	Dibromofluoromethane (Surr)	91		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5694.D

Lab ID: LCS 240-43549/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	10.8	108	72-116	
1,1,1-Trichloroethane	10.0	10.1	101	74-118	
1,1,2,2-Tetrachloroethane	10.0	9.44	94	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.7	117	74-151	
1,1-Dichloroethane	10.0	10.1	101	82-115	
1,1-Dichloroethene	10.0	10.8	108	78-131	
1,1-Dichloropropene	10.0	10.1	101	83-114	
1,2,3-Trichlorobenzene	10.0	8.98	90	54-126	
1,2,3-Trichloropropane	10.0	9.86	99	73-129	
1,2,3-Trimethylbenzene	10.0	8.55	86	70-130	
1,2,4-Trichlorobenzene	10.0	9.37	94	48-135	
1,2,4-Trimethylbenzene	10.0	10.2	102	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.58	96	42-136	
1,2-Dichlorobenzene	10.0	9.69	97	81-110	
1,2-Dichloroethane	10.0	10.4	104	71-127	
1,2-Dichloropropane	10.0	10.4	104	81-115	
1,3-Dichlorobenzene	10.0	9.93	99	80-110	
1,3-Dichloropropane	10.0	10.2	102	79-116	
1,4-Dichlorobenzene	10.0	9.91	99	82-110	
2,2-Dichloropropane	10.0	10.7	107	50-129	
2-Chloroethyl vinyl ether	10.0	9.48 J	95	52-131	
2-Chlorotoluene	10.0	9.87	99	76-116	
2-Hexanone	20.0	21.0	105	55-133	
Bromobenzene	10.0	10.1	101	76-115	
Bromochloromethane	10.0	9.77	98	77-120	
4-Chlorotoluene	10.0	10.1	101	77-115	
p-Isopropyltoluene	10.0	10.6	106	74-120	
Acetone	20.0	17.1	86	43-136	
Benzene	10.0	10.1	101	83-112	
Bromoform	10.0	8.83	88	40-131	
Bromomethane	10.0	8.94	89	11-185	
Carbon disulfide	10.0	10.4	104	62-142	
Carbon tetrachloride	10.0	9.42	94	66-128	
Chlorobenzene	10.0	10.1	101	85-110	
Chloroethane	10.0	8.97	90	25-153	
Chloroform	10.0	9.45	95	79-117	
Chloromethane	10.0	7.85	79	44-126	
cis-1,2-Dichloroethene	10.0	9.56	96	80-113	
cis-1,3-Dichloropropene	10.0	8.48	85	61-115	
Hexachlorobutadiene	10.0	9.10	91	36-134	
Dibromomethane	10.0	11.0	110	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5694.D

Lab ID: LCS 240-43549/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.9	109	72-121	
Dichlorodifluoromethane	10.0	6.12	61	19-129	
Ethylbenzene	10.0	10.5	105	83-112	
1,2-Dibromoethane	10.0	10.0	100	79-113	
Diisopropyl ether	10.0	9.77 J	98	77-118	
Naphthalene	10.0	9.33	93	32-141	
m-Xylene & p-Xylene	20.0	20.7	104	83-113	
n-Butylbenzene	10.0	10.4	104	66-125	
Isopropylbenzene	10.0	10.6	106	75-114	
n-Propylbenzene	10.0	10.3	103	74-121	
2-Butanone	20.0	18.8	94	60-126	
4-Methyl-2-pentanone	20.0	20.3	102	63-128	
sec-Butylbenzene	10.0	10.2	102	70-117	
Methyl tert-butyl ether	10.0	9.74	97	52-144	
Methylene Chloride	10.0	10.0	100	66-131	
o-Xylene	10.0	10.6	106	83-113	
Styrene	10.0	10.7	107	79-114	
tert-Butylbenzene	10.0	10.3	103	71-115	
Tetrachloroethene	10.0	10.6	106	79-114	
Toluene	10.0	10.4	104	84-111	
trans-1,2-Dichloroethene	10.0	9.89	99	83-117	
trans-1,3-Dichloropropene	10.0	9.26	93	58-117	
Trichloroethene	10.0	10.5	105	76-117	
Trichlorofluoromethane	10.0	10.5	105	49-157	
Vinyl acetate	10.0	9.55	96	46-161	
Vinyl chloride	10.0	8.64	86	53-127	
tert-Butyl alcohol	200	192	96	70-130	
Xylenes, Total	30.0	31.3	104	83-112	
Dibromochloromethane	10.0	9.32	93	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5716.D

Lab ID: 240-10837-D-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	400	40 U	416	104	64-118	
1,1,1-Trichloroethane	400	40 U	399	100	68-121	
1,1,2,2-Tetrachloroethane	400	40 U	394	99	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	400	40 U	412	103	70-152	
1,1-Dichloroethane	400	40 U	412	103	79-116	
1,1-Dichloroethene	400	16 J	428	103	74-135	
1,1-Dichloropropene	400	40 U	412	103	80-114	
1,2,3-Trichlorobenzene	400	40 U	363	91	45-129	
1,2,3-Trichloropropane	400	40 U	397	99	67-132	
1,2,3-Trimethylbenzene	400	200 U	333	83	70-130	
1,2,4-Trichlorobenzene	400	40 U	354	89	38-138	
1,2,4-Trimethylbenzene	400	40 U	388	97	67-124	
1,2-Dibromo-3-Chloropropane	400	80 U	381	95	32-139	
1,2-Dichlorobenzene	400	40 U	380	95	75-111	
1,2-Dichloroethane	400	40 U	432	108	68-129	
1,2-Dichloropropane	400	40 U	404	101	78-115	
1,3-Dichlorobenzene	400	40 U	387	97	73-110	
1,3-Dichloropropane	400	40 U	400	100	74-118	
1,4-Dichlorobenzene	400	40 U	379	95	75-110	
2,2-Dichloropropane	400	40 U	368	92	38-127	
2-Chloroethyl vinyl ether	400	400 U	400 U	0	10-150	F
2-Chlorotoluene	400	40 U	386	97	69-117	
2-Hexanone	800	400 U	828	104	47-139	
Bromobenzene	400	40 U	397	99	71-116	
Bromochloromethane	400	40 U	395	99	73-121	
4-Chlorotoluene	400	40 U	393	98	71-116	
p-Isopropyltoluene	400	40 U	393	98	64-122	
Acetone	800	400 U	756	95	33-145	
Benzene	400	12 J	416	101	72-121	
Bromoform	400	40 U	368	92	32-128	
Bromomethane	400	40 U	334	83	10-186	
Carbon disulfide	400	40 U	391	98	57-147	
Carbon tetrachloride	400	40 U	366	91	59-129	
Chlorobenzene	400	240	648	103	80-110	
Chloroethane	400	40 U	345	86	21-165	
Chloroform	400	40 U	397	99	76-118	
Chloromethane	400	40 U	306	77	33-132	
cis-1,2-Dichloroethene	400	1400	1820	108	70-120	E
cis-1,3-Dichloropropene	400	40 U	320	80	51-110	
Hexachlorobutadiene	400	40 U	311	78	27-132	
Dibromomethane	400	40 U	432	108	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5716.D

Lab ID: 240-10837-D-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	400	40 U	424	106	67-120	
Dichlorodifluoromethane	400	40 U	219	55	17-128	
Ethylbenzene	400	40 U	388	97	75-116	
1,2-Dibromoethane	400	40 U	399	100	74-113	
Diisopropyl ether	400	400 U	385 J	96	73-118	
Naphthalene	400	40 U	369	92	15-158	
m-Xylene & p-Xylene	800	80 U	788	99	75-117	
n-Butylbenzene	400	40 U	374	94	56-127	
Isopropylbenzene	400	40 U	384	96	68-116	
n-Propylbenzene	400	40 U	393	98	64-124	
2-Butanone	800	400 U	400 U	0	54-129	F
4-Methyl-2-pentanone	800	400 U	820	103	56-131	
sec-Butylbenzene	400	40 U	368	92	60-119	
Methyl tert-butyl ether	400	200 U	375	94	46-144	
Methylene Chloride	400	40 U	386	97	63-128	
o-Xylene	400	40 U	398	100	76-116	
Styrene	400	40 U	408	102	71-117	
tert-Butylbenzene	400	40 U	382	95	61-119	
Tetrachloroethene	400	40 U	389	97	70-117	
Toluene	400	6.0 J	404	100	78-114	
trans-1,2-Dichloroethene	400	14 J	404	98	80-119	
trans-1,3-Dichloropropene	400	40 U	355	89	46-116	
Trichloroethene	400	50	460	103	66-120	
Trichlorofluoromethane	400	40 U	384	96	46-157	
Vinyl acetate	400	80 U	376	94	43-157	
Vinyl chloride	400	910	1240	83	49-130	
tert-Butyl alcohol	8000	2000 U	7820	98	70-130	
Xylenes, Total	1200	80 U	1190	99	76-116	
Dibromochloromethane	400	40 U	359	90	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5717.D

Lab ID: 240-10837-E-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	400	391	98	6	30	64-118	
1,1,1-Trichloroethane	400	412	103	3	30	68-121	
1,1,2,2-Tetrachloroethane	400	408	102	3	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	400	424	106	3	30	70-152	
1,1-Dichloroethane	400	420	105	2	30	79-116	
1,1-Dichloroethene	400	440	106	3	30	74-135	
1,1-Dichloropropene	400	404	101	2	30	80-114	
1,2,3-Trichlorobenzene	400	386	97	6	30	45-129	
1,2,3-Trichloropropane	400	412	103	4	30	67-132	
1,2,3-Trimethylbenzene	400	345	86	4	30	70-130	
1,2,4-Trichlorobenzene	400	368	92	4	30	38-138	
1,2,4-Trimethylbenzene	400	408	102	5	30	67-124	
1,2-Dibromo-3-Chloropropane	400	362	91	5	30	32-139	
1,2-Dichlorobenzene	400	391	98	3	30	75-111	
1,2-Dichloroethane	400	424	106	2	30	68-129	
1,2-Dichloropropane	400	416	104	3	30	78-115	
1,3-Dichlorobenzene	400	392	98	1	30	73-110	
1,3-Dichloropropane	400	408	102	2	30	74-118	
1,4-Dichlorobenzene	400	389	97	3	30	75-110	
2,2-Dichloropropane	400	390	98	6	30	38-127	
2-Chloroethyl vinyl ether	400	400 U	0	NC	30	10-150	F
2-Chlorotoluene	400	400	100	4	30	69-117	
2-Hexanone	800	804	101	3	30	47-139	
Bromobenzene	400	408	102	3	30	71-116	
Bromochloromethane	400	412	103	4	30	73-121	
4-Chlorotoluene	400	404	101	3	30	71-116	
p-Isopropyltoluene	400	408	102	4	30	64-122	
Acetone	800	780	98	3	30	33-145	
Benzene	400	416	101	0	30	72-121	
Bromoform	400	363	91	1	30	32-128	
Bromomethane	400	350	88	5	30	10-186	
Carbon disulfide	400	398	100	2	30	57-147	
Carbon tetrachloride	400	378	95	3	30	59-129	
Chlorobenzene	400	640	101	1	30	80-110	
Chloroethane	400	364	91	5	30	21-165	
Chloroform	400	404	101	2	30	76-118	
Chloromethane	400	315	79	3	30	33-132	
cis-1,2-Dichloroethene	400	1790	102	1	30	70-120	E
cis-1,3-Dichloropropene	400	350	88	9	30	51-110	
Hexachlorobutadiene	400	338	85	8	30	27-132	
Dibromomethane	400	432	108	0	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5717.D

Lab ID: 240-10837-E-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	400	420	105	1	30	67-120	
Dichlorodifluoromethane	400	214	54	2	30	17-128	
Ethylbenzene	400	400	100	3	30	75-116	
1,2-Dibromoethane	400	397	99	1	30	74-113	
Diisopropyl ether	400	395 J	99	2	30	73-118	
Naphthalene	400	392	98	6	30	15-158	
m-Xylene & p-Xylene	800	784	98	1	30	75-117	
n-Butylbenzene	400	388	97	4	30	56-127	
Isopropylbenzene	400	383	96	0	30	68-116	
n-Propylbenzene	400	408	102	4	30	64-124	
2-Butanone	800	400 U	0	NC	30	54-129	F
4-Methyl-2-pentanone	800	856	107	4	30	56-131	
sec-Butylbenzene	400	384	96	4	30	60-119	
Methyl tert-butyl ether	400	395	99	5	30	46-144	
Methylene Chloride	400	393	98	2	30	63-128	
o-Xylene	400	396	99	1	30	76-116	
Styrene	400	400	100	2	30	71-117	
tert-Butylbenzene	400	398	100	4	30	61-119	
Tetrachloroethene	400	381	95	2	30	70-117	
Toluene	400	397	98	2	30	78-114	
trans-1,2-Dichloroethene	400	416	101	3	30	80-119	
trans-1,3-Dichloropropene	400	363	91	2	30	46-116	
Trichloroethene	400	460	103	0	30	66-120	
Trichlorofluoromethane	400	400	100	4	30	46-157	
Vinyl acetate	400	390	98	4	30	43-157	
Vinyl chloride	400	1240	82	0	30	49-130	
tert-Butyl alcohol	8000	8060	101	3	30	70-130	
Xylenes, Total	1200	1180	98	1	30	76-116	
Dibromochloromethane	400	362	91	1	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
GSP-MW5-043012	240-10808-2	57	60	52	57	82	66
GSP-MW6-043012	240-10808-3	48	60	50	56	84	64
MT-MW02S-043012	240-10808-4	56	64	64	51	77	59
	MB 240-42901/22-A	66	67	62	59	76	79
	LCS 240-42901/23-A	69	71	65	67	95	78
	240-10842-O-8-A MS	62	66	58	56	83	64
	240-10837-Q-5-A MSD	69	71	65	66	95	77
	240-10842-R-8-A MSD	56	67	53	51	63	70

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		203831	3.51	750748	4.40	449631	5.66
UPPER LIMIT		407662	4.01	1501496	4.90	899262	6.16
LOWER LIMIT		101916	3.01	375374	3.90	224816	5.16
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		219450	3.51	793338	4.40	481824	5.66
CCV 240-43126/2 CCVIS		203268	3.39	807358	4.28	443644	5.54

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		701859	6.74	609578	8.73	444154	10.12
UPPER LIMIT		1403718	7.24	1219156	9.23	888308	10.62
LOWER LIMIT		350930	6.24	304789	8.23	222077	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		750463	6.74	697064	8.71	502891	10.10
CCV 240-43126/2 CCVIS		728055	6.61	667024	8.58	498151	9.89

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: CCV 240-43126/2 Date Analyzed: 05/08/2012 09:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20508002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		203268	3.39	807358	4.28	443644	5.54
UPPER LIMIT		406536	3.89	1614716	4.78	887288	6.04
LOWER LIMIT		101634	2.89	403679	3.78	221822	5.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42901/22-A		215470	3.39	837951	4.28	473321	5.53
LCS 240-42901/23-A		211516	3.39	825101	4.28	475505	5.54
240-10837-Q-5-A MSD		209412	3.40	839319	4.28	485920	5.54
240-10808-2	GSP-MW5-043012	222949	3.39	924223	4.28	533114	5.54
240-10808-3	GSP-MW6-043012	219954	3.39	911722	4.28	536229	5.54
240-10808-4	MT-MW02S-043012	206091	3.39	873183	4.28	565534	5.55
240-10842-O-8-A MS		209225	3.40	835519	4.28	543280	5.54

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: CCV 240-43126/2 Date Analyzed: 05/08/2012 09:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20508002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		728055	6.61	667024	8.58	498151	9.89
UPPER LIMIT		1456110	7.11	1334048	9.08	996302	10.39
LOWER LIMIT		364028	6.11	333512	8.08	249076	9.39
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42901/22-A		751385	6.61	713440	8.57	527924	9.87
LCS 240-42901/23-A		771734	6.61	721036	8.57	536929	9.87
240-10837-Q-5-A MSD		752567	6.61	706606	8.57	555213	9.87
240-10808-2	GSP-MW5-043012	853317	6.61	820134	8.57	633850	9.87
240-10808-3	GSP-MW6-043012	850410	6.61	804885	8.57	627018	9.87
240-10808-4	MT-MW02S-043012	805307	6.61	785402	8.57	599972	9.87
240-10842-O-8-A MS		811563	6.62	773792	8.57	591505	9.88

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: STD6 240-43665/10 Date Analyzed: 05/11/2012 11:47

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20511010.D Heated Purge: (Y/N) N

Calibration ID: 8680

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		437336	3.45	1550128	4.35	857737	5.61
UPPER LIMIT		874672	3.95	3100256	4.85	1715474	6.11
LOWER LIMIT		218668	2.95	775064	3.85	428869	5.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43665/11		440902	3.45	1545336	4.35	858847	5.61
240-10842-R-8-A MSD		295486	3.45	1133322	4.35	755877	5.61

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: STD6 240-43665/10 Date Analyzed: 05/11/2012 11:47

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20511010.D Heated Purge: (Y/N) N

Calibration ID: 8680

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1328211	6.69	1262099	8.67	1119020	10.02
UPPER LIMIT		2656422	7.19	2524198	9.17	2238040	10.52
LOWER LIMIT		664106	6.19	631050	8.17	559510	9.52
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43665/11		1301262	6.69	1208547	8.67	1044058	10.03
240-10842-R-8-A MSD		1034466	6.69	952330	8.66	891660	10.02

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: 20508011.D Lab Sample ID: MB 240-42901/22-A

Matrix: Water Date Extracted: 05/05/2012 09:23

Instrument ID: A4HP7 Date Analyzed: 05/08/2012 11:52

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42901/23-A	20508012.D	05/08/2012 12:11
	240-10837-Q-5-A MSD	20508028.D	05/08/2012 17:06
GSP-MW5-043012	240-10808-2	20508035.D	05/08/2012 19:16
GSP-MW6-043012	240-10808-3	20508036.D	05/08/2012 19:35
MT-MW02S-043012	240-10808-4	20508037.D	05/08/2012 19:53
	240-10842-O-8-A MS	20508039.D	05/08/2012 20:30
	240-10842-R-8-A MSD	20511021.D	05/11/2012 15:14

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10808-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42901/22-A

Matrix: Water | Lab File ID: 20508011.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1000(mL) | Date Analyzed: 05/08/2012 11:52

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		28-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	76		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	62		27-111
4165-62-2	Phenol-d5 (Surr)	67		10-110
1718-51-0	Terphenyl-d14 (Surr)	79		37-119

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508012.D

Lab ID: LCS 240-42901/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	11.1	56	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508039.D

Lab ID: 240-10842-O-8-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.0	14	22.9	44	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508028.D

Lab ID: 240-10837-Q-5-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	82.3	112	7	30	10-110	F

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20511021.D

Lab ID: 240-10842-R-8-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	15.0	3	41	30	10-110	F

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: 20502001.D DFTPP Injection Date: 05/02/2012

Instrument ID: A4HP7 DFTPP Injection Time: 10:03

Analysis Batch No.: 42463

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	60.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	45.5	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	50.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.2	
365	Greater than 0.75% of mass 198	2.0	
441	Present, but less than mass 443	7.0	
442	40.0 - 110.0% of mass 198	44.8	
443	15.0 - 24.0% of mass 442	8.8	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-42463/2	20502002.D	05/02/2012	10:23
	STD4 240-42463/3	20502003.D	05/02/2012	10:42
	STD3 240-42463/4	20502004.D	05/02/2012	11:01
	STD2 240-42463/5	20502005.D	05/02/2012	11:19
	STD1 240-42463/6	20502006.D	05/02/2012	11:38
	STD9 240-42463/7	20502007.D	05/02/2012	11:57
	STD8 240-42463/8	20502008.D	05/02/2012	12:16
	STD7 240-42463/9	20502009.D	05/02/2012	12:35
	STD6 240-42463/10	20502010.D	05/02/2012	12:54
	ICV 240-42463/11	20502011.D	05/02/2012	13:13

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 42463

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2012 10:23 Calibration End Date: 05/02/2012 12:54 Calibration ID: 8490

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42463/6	20502006.D
Level 2	STD2 240-42463/5	20502005.D
Level 3	STD3 240-42463/4	20502004.D
Level 4	STD4 240-42463/3	20502003.D
Level 5	STD5 240-42463/2	20502002.D
Level 6	STD6 240-42463/10	20502010.D
Level 7	STD7 240-42463/9	20502009.D
Level 8	STD8 240-42463/8	20502008.D
Level 9	STD9 240-42463/7	20502007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5797	0.7266 0.5728	0.4617 0.6094	0.5087 0.5684	0.4851	Ave		0.5640				15.0		15.0			
N-Nitrosodimethylamine	0.8841	0.7933 0.8811	0.7168 0.9316	0.7448 0.9112	0.7452	Ave		0.8260				10.0		15.0			
Pyridine	1.5075	1.3258 1.5146	1.1707 1.6776	1.1870 1.6034	1.1707	Ave		1.3947				15.0		15.0			
Ethyl methacrylate	1.1731	0.9728 1.1757	1.0484 1.2864	1.0037 1.2062	1.0290	Ave		1.1119				10.0		15.0			
Benzaldehyde	1.3735 0.7433	1.0441 +++++	1.0548 +++++	1.0867 +++++	0.9578	Ave		1.0434				20.0	*	15.0			
3-Chloropropionitrile	1.0012	0.9519 1.0222	0.9033 1.1093	0.8667 1.0492	0.8718	Ave		0.9719				9.1		15.0			
Malononitrile	1.5032	1.4102 1.2671	1.3756 1.2102	1.4463 1.0266	1.4564	Ave		1.3370				12.0		15.0			
Benzoic acid	0.2334	+++++ 0.2441	+++++ 0.2610	0.1647 0.2825	0.2322	Qua	0.0075	0.1951	0.0017						0.9990		0.9900
Phenol	1.7085	1.5885 1.7359	1.4815 1.9095	1.5782 1.8649	1.5731	Ave		1.6800				9.0		15.0			
Aniline	2.1278	1.9210 2.1146	1.8743 2.3821	2.0349 2.3349	1.9327	Ave		2.0903				9.0		15.0			
Bis(2-chloroethyl)ether	1.2927	1.2120 1.4453	1.3088 1.4464	1.1722 1.4211	1.1887	Ave		1.3109				8.8		15.0			
2-Chlorophenol	1.5020	1.3476 1.5269	1.3800 1.6760	1.4496 1.6251	1.4098	Ave		1.4896				7.8		15.0			
1,3-Dichlorobenzene	1.6350	1.3701 1.6113	1.5553 1.7820	1.5792 1.6988	1.5113	Ave		1.5929				7.8		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-42463/11 Calibration Date: 05/02/2012 13:13

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20502011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5264		9.33	10.0	-6.7	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.8251		9.99	10.0	-0.1	50.0
Pyridine	Ave	1.395	1.479		10.6	10.0	6.0	50.0
Ethyl methacrylate	Ave	1.112	1.109		9.97	10.0	-0.3	50.0
3-Chloropropionitrile	Ave	0.9719	0.9803		10.1	10.0	0.9	50.0
Malononitrile	Ave	1.337	1.496		11.2	10.0	11.9	50.0
Benzaldehyde	Ave	1.043	0.6145		5.89	10.0	-41.1	50.0
Phenol	Ave	1.680	1.722		10.2	10.0	2.5	20.0
Aniline	Ave	2.090	2.144		10.3	10.0	2.6	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.327		10.1	10.0	1.2	50.0
2-Chlorophenol	Ave	1.490	1.506		10.1	10.0	1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.567		9.84	10.0	-1.6	50.0
1,4-Dichlorobenzene	Ave	1.646	1.623		9.86	10.0	-1.4	20.0
Benzyl alcohol	Ave	0.8859	0.8898		10.0	10.0	0.4	50.0
1,2-Dichlorobenzene	Ave	1.544	1.517		9.83	10.0	-1.7	50.0
2-Methylphenol	Ave	1.290	1.293		10.0	10.0	0.2	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.616		9.29	10.0	-7.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.366		10.3	10.0	3.2	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.8701	0.0500	9.68	10.0	-3.2	50.0
Acetophenone	Ave	1.873	1.869		9.98	10.0	-0.2	50.0
Hexachloroethane	Ave	0.5453	0.5299		9.72	10.0	-2.8	50.0
Nitrobenzene	Ave	0.3636	0.3573		9.83	10.0	-1.7	50.0
Isophorone	Ave	0.6461	0.6605		10.2	10.0	2.2	50.0
2,4-Dimethylphenol	Ave	0.3785	0.3876		10.2	10.0	2.4	50.0
2-Nitrophenol	Ave	0.2067	0.2181		10.5	10.0	5.5	20.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3733		10.3	10.0	2.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3789		10.1	10.0	1.3	50.0
Benzoic acid	Qua		0.2340		20.3	20.0	1.5	50.0
2,4-Dichlorophenol	Ave	0.3173	0.3295		10.4	10.0	3.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3617		10.4	10.0	3.9	50.0
Naphthalene	Ave	1.144	1.159		10.1	10.0	1.3	50.0
4-Chloroaniline	Ave	0.4747	0.4591		9.67	10.0	-3.3	50.0
Hexachlorobutadiene	Ave	0.1832	0.1824		9.96	10.0	-0.4	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.3260		9.86	10.0	-1.4	50.0
Caprolactam	Qua		0.1203		10.5	10.0	5.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3207		10.6	10.0	6.1	20.0
2-Methylnaphthalene	Ave	0.7358	0.7408		10.1	10.0	0.7	50.0
1-Methylnaphthalene	Ave	0.7008	0.7068		10.1	10.0	0.8	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5505		9.87	10.0	-1.3	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3366	0.0500	10.3	10.0	3.3	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: 20508001.D DFTPP Injection Date: 05/08/2012

Instrument ID: A4HP7 DFTPP Injection Time: 08:46

Analysis Batch No.: 43126

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	61.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	58.2	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	25.0 - 75.0% of mass 198	61.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	26.3	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	11.9	
442	40.0 - 110.0% of mass 198	74.4	
443	15.0 - 24.0% of mass 442	14.6	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43126/2	20508002.D	05/08/2012	09:05
	MB 240-42901/22-A	20508011.D	05/08/2012	11:52
	LCS 240-42901/23-A	20508012.D	05/08/2012	12:11
	240-10837-Q-5-A MSD	20508028.D	05/08/2012	17:06
GSP-MW5-043012	240-10808-2	20508035.D	05/08/2012	19:16
GSP-MW6-043012	240-10808-3	20508036.D	05/08/2012	19:35
MT-MW02S-043012	240-10808-4	20508037.D	05/08/2012	19:53
	240-10842-O-8-A MS	20508039.D	05/08/2012	20:30

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCV 240-43126/2 Calibration Date: 05/08/2012 09:05

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5272		9.35	10.0	-6.5	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.7907		9.57	10.0	-4.3	50.0
Pyridine	Ave	1.395	1.390		9.97	10.0	-0.3	50.0
Ethyl methacrylate	Ave	1.112	1.104		9.92	10.0	-0.8	50.0
3-Chloropropionitrile	Ave	0.9719	0.8004		8.24	10.0	-17.6	50.0
Malononitrile	Ave	1.337	1.340		10.0	10.0	0.2	50.0
Benzaldehyde	Ave	1.043	0.7144		6.85	10.0	-31.5	50.0
Phenol	Ave	1.680	1.721		10.2	10.0	2.4	20.0
Aniline	Ave	2.090	2.189		10.5	10.0	4.7	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.311		10.0	10.0	0.0	50.0
2-Chlorophenol	Ave	1.490	1.473		9.89	10.0	-1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.599		10.0	10.0	0.4	50.0
1,4-Dichlorobenzene	Ave	1.646	1.662		10.1	10.0	1.0	50.0
Benzyl alcohol	Ave	0.8859	0.8606		9.71	10.0	-2.9	50.0
1,2-Dichlorobenzene	Ave	1.544	1.529		9.91	10.0	-0.9	50.0
2-Methylphenol	Ave	1.290	1.300		10.1	10.0	0.7	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.634		9.39	10.0	-6.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.360		10.3	10.0	2.7	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.9308	0.0500	10.4	10.0	3.6	50.0
Acetophenone	Ave	1.873	1.935		10.3	10.0	3.3	50.0
Hexachloroethane	Ave	0.5453	0.5619		10.3	10.0	3.0	50.0
Nitrobenzene	Ave	0.3636	0.3688		10.1	10.0	1.4	50.0
Isophorone	Ave	0.6461	0.6574		10.2	10.0	1.7	50.0
2-Nitrophenol	Ave	0.2067	0.2114		10.2	10.0	2.3	20.0
2,4-Dimethylphenol	Ave	0.3785	0.3801		10.0	10.0	0.4	50.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3290		9.06	10.0	-9.4	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3772		10.1	10.0	0.9	50.0
Benzoic acid	Qua		0.1909		17.0	20.0	-15.0	50.0
2,4-Dichlorophenol	Ave	0.3173	0.2887		9.10	10.0	-9.0	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3214		9.23	10.0	-7.7	50.0
Naphthalene	Ave	1.144	1.081		9.45	10.0	-5.5	50.0
4-Chloroaniline	Ave	0.4747	0.4497		9.48	10.0	-5.2	50.0
Hexachlorobutadiene	Ave	0.1832	0.1595		8.71	10.0	-12.9	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.2901		8.78	10.0	-12.2	50.0
Caprolactam	Qua		0.1216		10.6	10.0	6.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3096		10.2	10.0	2.4	20.0
2-Methylnaphthalene	Ave	0.7358	0.7177		9.75	10.0	-2.5	50.0
1-Methylnaphthalene	Ave	0.7008	0.6679		9.53	10.0	-4.7	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5324		9.54	10.0	-4.6	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3328	0.0500	10.2	10.0	2.1	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab File ID: 20511001.D DFTPP Injection Date: 05/11/2012

Instrument ID: A4HP7 DFTPP Injection Time: 08:59

Analysis Batch No.: 43665

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	47.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	36.2	
70	Less than 2.0% of mass 69	0.1	(0.4)1
127	25.0 - 75.0% of mass 198	47.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	24.5	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	6.8	
442	40.0 - 110.0% of mass 198	85.6	
443	15.0 - 24.0% of mass 442	16.2	(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-43665/2	20511002.D	05/11/2012	09:17
	STD4 240-43665/3	20511003.D	05/11/2012	09:36
	STD3 240-43665/4	20511004.D	05/11/2012	09:54
	STD2 240-43665/5	20511005.D	05/11/2012	10:13
	STD1 240-43665/6	20511006.D	05/11/2012	10:32
	STD9 240-43665/7	20511007.D	05/11/2012	10:50
	STD8 240-43665/8	20511008.D	05/11/2012	11:09
	STD7 240-43665/9	20511009.D	05/11/2012	11:28
	STD6 240-43665/10	20511010.D	05/11/2012	11:47
	ICV 240-43665/11	20511011.D	05/11/2012	12:06
	240-10842-R-8-A MSD	20511021.D	05/11/2012	15:14

ND samples

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 43665

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2012 09:17 Calibration End Date: 05/11/2012 11:47 Calibration ID: 8680

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-43665/6	20511006.D
Level 2	STD2 240-43665/5	20511005.D
Level 3	STD3 240-43665/4	20511004.D
Level 4	STD4 240-43665/3	20511003.D
Level 5	STD5 240-43665/2	20511002.D
Level 6	STD6 240-43665/10	20511010.D
Level 7	STD7 240-43665/9	20511009.D
Level 8	STD8 240-43665/8	20511008.D
Level 9	STD9 240-43665/7	20511007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.8214	0.7424 0.8345	0.8429 0.7791	0.7470 0.8123	0.6817	Ave		0.7827				7.1		15.0			
N-Nitrosodimethylamine	1.3517	1.1966 1.3430	1.1696 1.3633	1.2470 1.2652	1.0985	Ave		1.2544				7.6		15.0			
Pyridine	2.2974	1.9328 2.3707	1.9078 2.3286	1.9502 2.3534	1.8306	Ave		2.1214				11.0		15.0			
Ethyl methacrylate	1.6866	1.3892 1.6940	1.4486 1.6548	1.5423 1.6320	1.3388	Ave		1.5483				9.1		15.0			
Benzaldehyde	1.5333 0.8741	1.2294 +++++	1.1836 +++++	1.2281 +++++	1.1826	Ave		1.2052				17.0	*	15.0			
3-Chloropropionitrile	1.4897	1.2595 1.4622	1.3006 1.4937	1.3044 1.3859	1.2124	Ave		1.3636				8.0		15.0			
Malononitrile	2.2448	1.9935 1.8577	2.0845 1.6532	2.1475 1.3326	2.0596	Qua	-0.921	2.8087	-0.057						0.9970		0.9900
Phenol	1.8841	1.8281 1.8717	1.6617 1.9458	1.8052 1.8512	1.7580	Ave		1.8257				4.7		15.0			
Aniline	2.4151	2.2639 2.3911	2.0794 2.6720	2.3016 2.4648	2.2573	Ave		2.3556				7.4		15.0			
Bis(2-chloroethyl)ether	1.6894	1.5295 1.6002	1.6300 1.6117	1.5935 1.5697	1.4387	Ave		1.5829				4.7		15.0			
2-Chlorophenol	1.5079	1.4241 1.4922	1.3577 1.5327	1.4941 1.4601	1.4438	Ave		1.4641				3.8		15.0			
1,3-Dichlorobenzene	1.5599	1.5840 1.5209	1.5347 1.5599	1.5653 1.5199	1.4890	Ave		1.5417				2.0		15.0			
1,4-Dichlorobenzene	1.5862	1.5357 1.5490	1.5652 1.6083	1.5720 1.5963	1.5055	Ave		1.5648				2.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

ICV

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-43665/11 Calibration Date: 05/11/2012 12:06

Instrument ID: A4HP7 Calib Start Date: 05/11/2012 09:17

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/11/2012 11:47

Lab File ID: 20511011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.7827	1.792		22.9	10.0	128.9*	50.0
N-Nitrosodimethylamine	Ave	1.254	1.385		11.0	10.0	10.4	50.0
Pyridine	Ave	2.121	2.312		10.9	10.0	9.0	50.0
Ethyl methacrylate	Ave	1.548	1.663		10.7	10.0	7.4	50.0
3-Chloropropionitrile	Ave	1.364	1.513		11.1	10.0	11.0	50.0
Malononitrile	Qua		2.271		10.8	10.0	8.0	50.0
Benzaldehyde	Ave	1.205	0.7368		6.11	10.0	-38.9	50.0
Phenol	Ave	1.826	1.912		10.5	10.0	4.7	20.0
Aniline	Ave	2.356	2.457		10.4	10.0	4.3	50.0
Bis(2-chloroethyl)ether	Ave	1.583	1.667		10.5	10.0	5.3	50.0
2-Chlorophenol	Ave	1.464	1.525		10.4	10.0	4.2	50.0
1,3-Dichlorobenzene	Ave	1.542	1.553		10.1	10.0	0.7	50.0
1,4-Dichlorobenzene	Ave	1.565	1.585		10.1	10.0	1.3	20.0
Benzyl alcohol	Ave	0.9081	0.9464		10.4	10.0	4.2	50.0
1,2-Dichlorobenzene	Ave	1.430	1.443		10.1	10.0	0.9	50.0
2-Methylphenol	Ave	1.285	1.318		10.3	10.0	2.6	50.0
bis (2-chloroisopropyl) ether	Ave	2.393	2.451		10.2	10.0	2.4	50.0
3 & 4 Methylphenol	Ave	1.345	1.375		10.2	10.0	2.3	50.0
N-Nitrosodi-n-propylamine	Ave	0.9738	1.018	0.0500	10.5	10.0	4.6	50.0
Acetophenone	Ave	1.885	1.946		10.3	10.0	3.2	50.0
Hexachloroethane	Ave	0.5545	0.5753		10.4	10.0	3.7	50.0
Nitrobenzene	Ave	0.4062	0.4273		10.5	10.0	5.2	50.0
Isophorone	Ave	0.7209	0.7540		10.5	10.0	4.6	50.0
2,4-Dimethylphenol	Ave	0.3697	0.3794		10.3	10.0	2.6	50.0
2-Nitrophenol	Ave	0.1894	0.1968		10.4	10.0	3.9	20.0
1,3,5-Trichlorobenzene	Ave	0.3433	0.3404		9.92	10.0	-0.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.4323	0.4458		10.3	10.0	3.1	50.0
Benzoic acid	Qua		0.2483		21.0	20.0	5.0	50.0
2,4-Dichlorophenol	Ave	0.3052	0.3155		10.3	10.0	3.4	20.0
1,2,4-Trichlorobenzene	Ave	0.3316	0.3285		9.91	10.0	-0.9	50.0
Naphthalene	Ave	1.108	1.114		10.1	10.0	0.5	50.0
4-Chloroaniline	Ave	0.4507	0.4746		10.5	10.0	5.3	50.0
Hexachlorobutadiene	Ave	0.1695	0.1692		9.98	10.0	-0.2	20.0
1,2,3-Trichlorobenzene	Ave	0.3021	0.3048		10.1	10.0	0.9	50.0
Caprolactam	Ave	0.1145	0.1256		11.0	10.0	9.6	50.0
4-Chloro-3-methylphenol	Ave	0.2919	0.3026		10.4	10.0	3.7	20.0
2-Methylnaphthalene	Ave	0.6841	0.6838		10.0	10.0	-0.0	50.0
1-Methylnaphthalene	Ave	0.6531	0.6428		9.84	10.0	-1.6	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5500	0.5470		9.94	10.0	-0.6	50.0
Hexachlorocyclopentadiene	Ave	0.3241	0.3370	0.0500	10.4	10.0	4.0	50.0

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
GSP-MW5-043012	240-10808-2	60
GSP-MW6-043012	240-10808-3	56
MT-MW02S-043012	240-10808-4	94
	MB 240-42995/6	58
	LCS 240-42995/7	70
GSP-MW5-043012 MS	240-10808-2 MS	73
GSP-MW5-043012 MSD	240-10808-2 MSD	71

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: MB 240-42995/6

Matrix: Water Date Extracted: 05/07/2012 13:20

Lab File ID:(1) YF050706.D Lab File ID:(2)

Date Analyzed:(1) 05/07/2012 13:20 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-42995/7	05/07/2012 14:00	
GSP-MW5-043012	240-10808-2	05/07/2012 14:40	
GSP-MW5-043012 MS	240-10808-2 MS	05/07/2012 15:20	
GSP-MW5-043012 MSD	240-10808-2 MSD	05/07/2012 16:00	
GSP-MW6-043012	240-10808-3	05/07/2012 16:42	
MT-MW02S-043012	240-10808-4	05/07/2012 17:23	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42995/6

Matrix: Water Lab File ID: YF050706.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2012 13:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42995 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	28.0	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	58		10-150

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050707.D

Lab ID: LCS 240-42995/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	942	118	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050709.D

Lab ID: 240-10808-2 MS Client ID: GSP-MW5-043012 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	37 J	962	116	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050710.D

Lab ID: 240-10808-2 MSD Client ID: GSP-MW5-043012 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	953	115	1	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: CCV 240-42995/5 Date Analyzed: 05/07/2012 12:40

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF050705.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.76		
UPPER LIMIT				9.86		
LOWER LIMIT				9.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-42995/5 CCVRT		05/07/2012 12:40	YF050705.D	9.76		
MB 240-42995/6		05/07/2012 13:20	YF050706.D	9.75		
LCS 240-42995/7		05/07/2012 14:00	YF050707.D	9.75		
240-10808-2	GSP-MW5-043012	05/07/2012 14:40	YF050708.D	9.76		
240-10808-2 MS	GSP-MW5-043012 MS	05/07/2012 15:20	YF050709.D	9.76		
240-10808-2 MSD	GSP-MW5-043012 MSD	05/07/2012 16:00	YF050710.D	9.76		
240-10808-3	GSP-MW6-043012	05/07/2012 16:42	YF050711.D	9.75		
240-10808-4	MT-MW02S-043012	05/07/2012 17:23	YF050712.D	9.76		
CCV 240-42995/16		05/07/2012 20:05	YF050716.D	9.76		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Total Petroleum Hydrocarbons (C6-C10)	11.810	11.810	11.810	11.810	11.810	11.810					4.817 - 18.802	11.810
C6-C12	13.469	13.469	13.469	13.469	13.469	13.469					4.917 - 22.022	13.469
Trifluorotoluene (Surr)	9.768	9.772	9.769	9.772	9.771	9.774					9.522 - 10.022	9.771

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: YPID Start Date: 05/07/2012 11:20

Analysis Batch Number: 42995 End Date: 05/07/2012 21:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/07/2012 11:20	1		RTX-VRX 0.45(mm)
CCV 240-42995/5 CCVRT		05/07/2012 12:40	1	YF050705.D	RTX-VRX 0.45(mm)
MB 240-42995/6		05/07/2012 13:20	1	YF050706.D	RTX-VRX 0.45(mm)
LCS 240-42995/7		05/07/2012 14:00	1	YF050707.D	RTX-VRX 0.45(mm)
240-10808-2	GSP-MW5-043012	05/07/2012 14:40	1	YF050708.D	RTX-VRX 0.45(mm)
240-10808-2 MS	GSP-MW5-043012 MS	05/07/2012 15:20	1	YF050709.D	RTX-VRX 0.45(mm)
240-10808-2 MSD	GSP-MW5-043012 MSD	05/07/2012 16:00	1	YF050710.D	RTX-VRX 0.45(mm)
240-10808-3	GSP-MW6-043012	05/07/2012 16:42	1	YF050711.D	RTX-VRX 0.45(mm)
240-10808-4	MT-MW02S-043012	05/07/2012 17:23	1	YF050712.D	RTX-VRX 0.45(mm)
ZZZZZ		05/07/2012 18:04	1		RTX-VRX 0.45(mm)
ZZZZZ		05/07/2012 18:45	1		RTX-VRX 0.45(mm)
ZZZZZ		05/07/2012 19:26	1		RTX-VRX 0.45(mm)
CCV 240-42995/16		05/07/2012 20:05	1	YF050716.D	RTX-VRX 0.45(mm)
ZZZZZ		05/07/2012 20:45	1		RTX-VRX 0.45(mm)
CCV 240-42995/18		05/07/2012 21:23	1		RTX-VRX 0.45(mm)

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCV 240-42995/5 Calibration Date: 05/07/2012 12:40

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050705.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	319991		854	800	6.7	15.0
C6-C12	Ave	336931	352680		837	800	4.7	15.0
Trifluorotoluene (Surr)	Ave	420494	308604		7.34	10.0	-26.6*	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCV 240-42995/16 Calibration Date: 05/07/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050716.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	325536		869	800	8.6	15.0
C6-C12	Ave	336931	359447		854	800	6.7	15.0
Trifluorotoluene (Surr)	Ave	420494	291877		6.94	10.0	-30.6*	15.0

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C91 #
GSP-MW5-043012	240-10808-2	69
GSP-MW6-043012	240-10808-3	67
MT-MW02S-043012	240-10808-4	57
	MB 240-42831/9-A	64
	LCS 240-42831/10-A	74

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: MB 240-42831/9-A

Matrix: Water Date Extracted: 05/04/2012 12:16

Lab File ID:(1) P5F05083.D Lab File ID:(2)

Date Analyzed:(1) 05/07/2012 14:15 Date Analyzed:(2)

Instrument ID:(1) A2HP5F Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
GSP-MW5-043012	240-10808-2	05/07/2012 10:16	
GSP-MW6-043012	240-10808-3	05/07/2012 10:46	
MT-MW02S-043012	240-10808-4	05/07/2012 11:16	
	LCS 240-42831/10-A	05/07/2012 14:45	

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-42831/9-A

Matrix: Water Lab File ID: P5F05083.D

Analysis Method: 8015B Date Collected:

Extraction Method: 3510C Date Extracted: 05/04/2012 12:16

Sample wt/vol: 1000(mL) Date Analyzed: 05/07/2012 14:15

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: ID:

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 42964 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	64		10-110

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P5F05084.D

Lab ID: LCS 240-42831/10-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	2230	89	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Sample No.: CCVRT 240-42964/4 Date Analyzed: 05/07/2012 09:46

Instrument ID: A2HP5F GC Column: ID: ()

Lab File ID (Standard): P5F05074.D Heated Purge: (Y/N) N

Calibration ID: 8059

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				3.80		
UPPER LIMIT				3.90		
LOWER LIMIT				3.70		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-42964/4		05/07/2012 09:46	P5F05074.D	3.80		
240-10808-2	GSP-MW5-043012	05/07/2012 10:16	P5F05075.D	3.80		
240-10808-3	GSP-MW6-043012	05/07/2012 10:46	P5F05076.D	3.80		
240-10808-4	MT-MW02S-043012	05/07/2012 11:16	P5F05077.D	3.80		
MB 240-42831/9-A		05/07/2012 14:15	P5F05083.D	3.80		
LCS 240-42831/10-A		05/07/2012 14:45	P5F05084.D	3.80		
CCV 240-42964/15		05/07/2012 15:15	P5F05085.D	3.80		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: A2HP5F Start Date: 04/13/2012 10:08

Analysis Batch Number: 40180 End Date: 04/13/2012 15:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-40180/4 IC		04/13/2012 10:08	1	P5F04134.D	
STD2 240-40180/5 IC		04/13/2012 10:38	1	P5F04135.D	
STD3 240-40180/6 IC		04/13/2012 11:08	1	P5F04136.D	
STD4 240-40180/7 IC		04/13/2012 11:38	1	P5F04137.D	
STD5 240-40180/8 IC		04/13/2012 12:08	1	P5F04138.D	
ICV 240-40180/9		04/13/2012 12:38	1	P5F04139.D	
STD1 240-40180/10 IC		04/13/2012 13:08	1		
STD2 240-40180/11 IC		04/13/2012 13:38	1		
STD3 240-40180/12 IC		04/13/2012 14:08	1		
STD4 240-40180/13 IC		04/13/2012 14:37	1		
STD5 240-40180/14 IC		04/13/2012 15:06	1		
ICV 240-40180/15		04/13/2012 15:36	1		

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Diesel	9.179	9.179	9.179	9.179	9.179						4.893 - 13.468	9.179
n-Nonane	3.798	3.796	3.795	3.799	3.802						3.728 - 3.868	3.798

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10808-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	197527 183497	194334	179644	186362	Ave		188272.909				4.0		20.0			
n-Nonane	222434 217668	222225	205767	214296	Ave		216478.041				3.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICV 240-40180/9 Calibration Date: 04/13/2012 12:38

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04139.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	191992		510	500	2.0	20.0

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: A2HP5F Start Date: 05/07/2012 09:46

Analysis Batch Number: 42964 End Date: 05/07/2012 15:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-42964/4		05/07/2012 09:46	1	P5F05074.D	
240-10808-2	GSP-MW5-043012	05/07/2012 10:16	1	P5F05075.D	
240-10808-3	GSP-MW6-043012	05/07/2012 10:46	1	P5F05076.D	
240-10808-4	MT-MW02S-043012	05/07/2012 11:16	1	P5F05077.D	
ZZZZZ		05/07/2012 11:45	1		
ZZZZZ		05/07/2012 12:15	1		
ZZZZZ		05/07/2012 12:45	1		
ZZZZZ		05/07/2012 13:15	1		
ZZZZZ		05/07/2012 13:45	1		
MB 240-42831/9-A		05/07/2012 14:15	1	P5F05083.D	
LCS 240-42831/10-A		05/07/2012 14:45	1	P5F05084.D	
CCV 240-42964/15		05/07/2012 15:15	1	P5F05085.D	

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCVRT 240-42964/4 Calibration Date: 05/07/2012 09:46

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F05074.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	195069		518	500	3.6	15.0
n-Nonane	Ave	216478	235449		54.4	50.0	8.8	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: CCV 240-42964/15 Calibration Date: 05/07/2012 15:15

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F05085.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	207212		550	500	10.1	15.0
n-Nonane	Ave	216478	240161		55.5	50.0	10.9	15.0

HOLDTIME

SDG 240-10808-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/3/2012	5/4/2012	3	1	4
HG	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
HG	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
M	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
M	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
M	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
HGF	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
HGF	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/3/2012	5/4/2012	3	1	4
HGF	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
MF	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
MF	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
MF	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
PCL	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/7/2012	5/15/2012	7	8	15
PCL	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/7/2012	5/15/2012	7	8	15
PCL	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/7/2012	5/15/2012	7	8	15

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/5/2012	5/8/2012	5	3	8
OS	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/5/2012	5/8/2012	5	3	8
OS	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/5/2012	5/8/2012	5	3	8
OV	UG/L	TB-043012	240-10808-1	NM	4/30/2012	5/10/2012	5/10/2012	10	0	10
OV	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/10/2012	5/10/2012	10	0	10
OV	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/10/2012	5/10/2012	10	0	10
OV	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/10/2012	5/10/2012	10	0	10
OV	UG/L	TB-043012	240-10808-1	TB	4/30/2012	5/10/2012	5/10/2012	10	0	10
DRO	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/4/2012	5/7/2012	4	3	7
DRO	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/4/2012	5/7/2012	4	3	7
DRO	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/4/2012	5/7/2012	4	3	7
GRO	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/7/2012	5/7/2012	7	0	7
GRO	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/7/2012	5/7/2012	7	0	7
GRO	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/7/2012	5/7/2012	7	0	7

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE: JUNE 29, 2012**

FROM: **TERRI L. SOLOMON** **COPIES: DV FILE**

SUBJECT: **ORGANIC / INORGANIC DATA VALIDATION – SELECT METALS, PERCHLORATE**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-10808-1

SAMPLES: 3/Aqueous/

GSP-MW5-043012 GSP-MW6-043012
MT-MW02S-043012

Overview

The sample set for Martin State Airport - Groundwater, SDG 240-10808-1, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for perchlorate and select total and dissolved metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, tungsten, vanadium and zinc. The samples were collected by Tetra Tech on April 30, 2012 and analyzed by TestAmerica. Metals analyses were conducted using SW-846 method 6020. Mercury analyses were conducted using SW-846 method 7470A. Perchlorate analyses were conducted using SW-846 method 6850.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, laboratory control sample recoveries, matrix spike/matrix spike duplicate recoveries, ICP serial dilution results, internal standard recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The contract required detection limit (CRDL) percent recoveries for cadmium, cobalt, lead and nickel were > 110% quality control limit affecting all samples. Positive results < 2X CRDL for cadmium, cobalt, lead and nickel were qualified as either biased high, "K" or estimated, "J", as a result of conflicting noncompliances.

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Antimony[1]	0.138 ug/L	0.69 ug/L
Cobalt[1]	0.0610 ug/L	0.305 ug/L
Molybdenum[1]	0.678 ug/L	3.39 ug/L
Thallium[1]	0.554 ug/L	2.77 ug/L
Tungsten[1]	0.868 ug/L	4.34 ug/L
Barium[2]	0.541 ug/L	2.705 ug/L
Copper[2]	0.388 ug/L	1.94 ug/L
Zinc[2]	4.57 ug/L	22.85 ug/L

[1] Maximum concentration present in a method blank affecting all samples.
[2] Maximum concentration present in a preparation blank affecting all samples.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. The positive results less than the blank action level reported for copper, molybdenum and thallium were qualified "B" as a result of laboratory blank contamination.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

Nondetected results are reported to the method detection limits.

The contract required detection limit (CRDL) percent recoveries for barium, copper, silver and thallium were > 110% quality control limit affecting all samples. However, no validation actions were required as all sample results were either > 2X CRDL, nondetects or were qualified as a result of blank contamination.

Executive Summary

Laboratory Performance: Several contaminants were present in the laboratory method / preparation blanks. The CRDL percent recovery for several analytes was > 110% quality control limit affecting all samples.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993 and the Region III modifications to U.S. EPA National Functional Guidelines for Organic Data Validation (Sept. 1994).

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4		
FRACTION: M	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.92	J	P	0.13	U	
ARSENIC		3.4	J	P	4	J	P	2.3	J	P
BARIUM		21			42			120		
BERYLLIUM		1.3			0.2	U		0.74	J	P
CADMIUM		0.32	J	CP	0.13	U		0.13	U	
CHROMIUM		2.2			0.71	U		0.71	U	
COBALT		26			0.56	J	CP	30		
COPPER		4.9			5			1.4	B	A
LEAD		0.39	J	CP	0.18	U		1.3	K	C
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.34	B	A	2.7	B	A	0.093	U	
NICKEL		17			1.3	J	CP	48		
SELENIUM		2.2	J	P	14			0.57	U	
SILVER		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.25	B	A	0.15	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U	
VANADIUM		4.4	J	P	8.5	J	P	0.44	U	
ZINC		28			530			100		

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4		
FRACTION: MF	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.76	J	P	0.13	U	
ARSENIC		3.5	J	P	2.1	J	P	1.7	J	P
BARIUM		21			40			110		
BERYLLIUM		1.4			0.2	U		0.68	J	P
CADMIUM		0.31	J	CP	0.13	U		0.13	U	
CHROMIUM		0.78	J	P	0.71	U		0.71	U	
COBALT		29			0.45	J	CP	23		
COPPER		0.34	B	A	4.1			0.62	B	A
LEAD		0.18	U		0.18	U		1	K	C
MERCURY		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.35	B	A	2.2	B	A	0.093	U	
NICKEL		19			1.2	J	CP	39		
SELENIUM		2.7	J	P	13			0.57	U	
SILVER		0.08	U		0.08	U		0.08	U	
THALLIUM		0.26	B	A	0.2	B	A	0.14	U	
TUNGSTEN		0.37	U		0.37	U		0.37	U	
VANADIUM		1.8	J	P	6.5	J	P	0.44	U	
ZINC		25			460			57		

PROJ_NO: 04021	NSAMPLE	GSP-MW5-043012			GSP-MW6-043012			MT-MW02S-043012		
SDG: 240-10808-1	LAB_ID	240-10808-2			240-10808-3			240-10808-4		
FRACTION: MISC	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.16	J	P	0.082	U		0.082	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 10:30

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	3.4	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	21	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.3	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.32	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.2	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	26	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	4.9	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.39	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.34	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	17	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	2.2	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	4.4	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	28	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 10:30

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: GSP-MW6-043012 Lab Sample ID: 240-10808-3

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 11:45

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.92	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	4.0	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	42	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	0.56	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	5.0	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	2.7	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.3	2.0	0.20	ug/L	J	^	1	6020
7782-49-2	Selenium	14	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.25	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	8.5	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	530	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: GSP-MW6-043012 Lab Sample ID: 240-10808-3

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 11:45

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MT-MW02S-043012 Lab Sample ID: 240-10808-4

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 13:05

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	2.3	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	120	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.74	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	30	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.4	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.3	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	48	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.15	2.0	0.14	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	100	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MT-MW02S-043012 Lab Sample ID: 240-10808-4

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 13:05

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW5-043012 Lab Sample ID: 240-10808-2

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 10:30

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	3.5	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	21	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.4	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	0.31	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	0.78	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	29	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.34	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.35	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	19	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	2.7	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.26	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	1.8	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	25	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: GSP-MW6-043012 Lab Sample ID: 240-10808-3

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 11:45

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.76	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	2.1	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	40	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	0.45	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	4.1	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	2.2	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.2	2.0	0.20	ug/L	J	^	1	6020
7782-49-2	Selenium	13	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.20	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	6.5	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	460	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MT-MW02S-043012 Lab Sample ID: 240-10808-4

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG ID.:

Matrix: Water Date Sampled: 04/30/2012 13:05

Reporting Basis: WET Date Received: 05/01/2012 09:30

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.7	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	110	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.68	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	23	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.62	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	39	2.0	0.20	ug/L		^	1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	57	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

TestAmerica Canton

Client Sample ID: GSP-MW5-043012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E030413-001	Work Order #...:	MTC2Q1AA	Matrix.....:	WATER
Date Sampled...:	04/30/12	Date Received..:	05/02/12		
Prep Date.....:	05/07/12	Analysis Date..:	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.16 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

TestAmerica Canton

Client Sample ID: GSP-MW6-043012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E030413-002	Work Order #...: MTC2R1AA		Matrix.....: WATER	
Date Sampled...: 04/30/12	Date Received..: 05/02/12			
Prep Date.....: 05/07/12	Analysis Date..: 05/15/12			
Prep Batch #...: 2128058				
Dilution Factor: 1	Method.....: SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MT-MW02S-043012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E030413-003	**Work Order #...:**	MTC2T1AA	**Matrix.....:**	WATER
Date Sampled...:	04/30/12	**Date Received..:**	05/02/12		
Prep Date.....:	05/07/12	**Analysis Date..:**	05/15/12		
Prep Batch #...:	2128058				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10808-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/01/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.9 and 3.2 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-043012 (240-10808-1), GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/10/2012.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43549/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2-Butanone and 2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10837-5 in batch 240-43549. Refer to the QC report for details.

Sample MT-MW02S-043012 (240-10808-4)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/05/2012 and analyzed on 05/08/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

1,4-Dioxane failed the recovery criteria high for the MSD of sample 240-10837-5 in batch 240-43126.

1,4-Dioxane failed the recovery criteria low for the MSD of sample 240-10842-8 in batch 240-43665. 1,4-Dioxane exceeded the rpd limit.

Refer to the QC report for details.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/07/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42995/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/04/2012 and analyzed on 05/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/02/2012 and analyzed on 05/03/2012.

Several analytes were detected in method blank MB 240-42485/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY (CVAA)

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/03/2012 and 05/07/2012 and analyzed on 05/04/2012 and 05/08/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples GSP-MW5-043012 (240-10808-2), GSP-MW6-043012 (240-10808-3) and MT-MW02S-043012 (240-10808-4) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/03/2012 and 05/07/2012 and analyzed on 05/04/2012 and 05/08/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Aparicio	Site Contact: Stu Cameron	Lab Contact:	COC No: 006079
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5553	Telephone: (703)341-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD, 20874	Email: Tony.Aparicio@tetratech.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only: Walk-in client: ☐ Lab pickup: ☐ Lab sampling: ☐ Job/SDG No.:
Phone: (301) 528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MSA GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04021	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (C) / Grab (G)	VOCs	Total Metals	Dissolved Metals	Perchlorate	1,4-Dioxane	TPH-GRO	TPH-DRO	Sample Specific Notes / Special Instructions:
TB-043012	—	—		X						2							X							
GSP-MW5-043012	4/30/12	1030		X					2	5			5			G	X	X	X	X	X	X	X	
GSP-MW6-043012	↓	1145		X					2	5			5			G	X	X	X	X	X	X	X	
MT-MW02S-043012	↓	1305		X					2	5			5			G	X	X	X	X	X	X	X	

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Stu Cameron	Tetra Tech	4-30-12/1445	Paul Gaylord	TestAmerica	4/30/12 1446
[signature]	TestAmerica	4-30-2012/1530			
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
			[signature]	TAL	5-1-12 930

05/29/2012

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HOLDTIME

SDG 240-10808-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/3/2012	5/4/2012	3	1	4
HG	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
HG	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
M	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
M	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
M	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
HGF	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
HGF	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/3/2012	5/4/2012	3	1	4
HGF	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/7/2012	5/8/2012	7	1	8
MF	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
MF	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
MF	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/2/2012	5/3/2012	2	1	3
PCL	UG/L	MT-MW02S-043012	240-10808-4	NM	4/30/2012	5/7/2012	5/15/2012	7	8	15
PCL	UG/L	GSP-MW6-043012	240-10808-3	NM	4/30/2012	5/7/2012	5/15/2012	7	8	15
PCL	UG/L	GSP-MW5-043012	240-10808-2	NM	4/30/2012	5/7/2012	5/15/2012	7	8	15

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10808-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10808-1TB	TB-043012	Water	04/30/2012 0000	05/01/2012 0930
240-10808-2	GSP-MW5-043012	Water	04/30/2012 1030	05/01/2012 0930
240-10808-3	GSP-MW6-043012	Water	04/30/2012 1145	05/01/2012 0930
240-10808-4	MT-MW02S-043012	Water	04/30/2012 1305	05/01/2012 0930

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	ICV 240-42666/5 05/03/2012 06:17				CCV 240-42666/22 05/03/2012 07:54				CCV 240-42666/34 05/03/2012 09:03			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.2		80.0	103	98.3		100	98	96.3		100	96
Arsenic	80.9		80.0	101	98.9		100	99	98.8		100	99
Barium	80.9		80.0	101	97.7		100	98	97.5		100	98
Beryllium	81.5		80.0	102	97.5		100	97	97.4		100	97
Cadmium	80.4		80.0	101	99.6		100	100	98.7		100	99
Chromium	79.7		80.0	100	96.9		100	97	98.0		100	98
Cobalt	81.2		80.0	102	99.0		100	99	100		100	100
Copper	83.2		80.0	104	101		100	101	101		100	101
Lead	82.4		80.0	103	99.3		100	99	96.7		100	97
Molybdenum	83.6		80.0	105	103		100	103	101		100	101
Nickel	83.1		80.0	104	101		100	101	102		100	102
Selenium	80.7		80.0	101	101		100	101	99.9		100	100
Silver	82.7		80.0	103	101		100	101	98.9		100	99
Thallium	81.3		80.0	102	100		100	100	100		100	100
Tungsten	80.4		80.0	101	98.4		100	98	97.0		100	97
Vanadium	79.7		80.0	100	96.7		100	97	96.8		100	97
Zinc	81.5		80.0	102	99.8		100	100	99.5		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00039

Analyte	CCV 240-42666/46 05/03/2012 10:08				CCV 240-42666/53 05/03/2012 10:45							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	96.7		100	97	95.8		100	96				
Arsenic	99.6		100	100	99.1		100	99				
Barium	97.3		100	97	97.5		100	97				
Beryllium	98.3		100	98	96.9		100	97				
Cadmium	97.6		100	98	96.9		100	97				
Chromium	98.7		100	99	96.9		100	97				
Cobalt	99.6		100	100	100		100	100				
Copper	102		100	102	101		100	101				
Lead	94.3		100	94	94.2		100	94				
Molybdenum	101		100	101	99.5		100	100				
Nickel	101		100	101	101		100	101				
Selenium	101		100	101	101		100	101				
Silver	99.1		100	99	98.9		100	99				
Thallium	101		100	101	101		100	101				
Tungsten	96.5		100	96	96.7		100	97				
Vanadium	98.7		100	99	97.5		100	98				
Zinc	101		100	101	101		100	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	ICV 240-42622/7-A 05/04/2012 10:43				CCVL 240-42622/10-A 05/04/2012 10:53				CCV 240-42622/12-A 05/04/2012 12:07			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.29		2.50	92	5.09		5.00	102	5.15		5.00	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICV Source: MTHGICVW_00289 Concentration Units: ug/L

CCV Source: MTHGCALW_00189

Analyte	CCV 240-42622/12-A 05/04/2012 12:34											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.12		5.00	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICV Source: MTHGICVW_00292 Concentration Units: ug/L

CCV Source: MTHGCALW_00190

Analyte	ICV 240-43145/7-A 05/08/2012 14:43				CCVL 240-43145/10-A 05/08/2012 14:49				CCV 240-43145/12-A 05/08/2012 15:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.43		2.50	97	5.20		5.00	104	5.32		5.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICV Source: MTHGICVW_00292 Concentration Units: ug/L

CCV Source: MTHGCALW_00190

Analyte	CCV 240-43145/12-A 05/08/2012 16:04				CCV 240-43145/12-A 05/08/2012 16:29				CCV 240-43145/12-A 05/08/2012 16:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.31		5.00	106	5.11		5.00	102	5.12		5.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-42666/8 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00016

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.96	J	98	50-150
Arsenic	2.00	2.19	J	110	50-150
Barium	1.00	1.33	J	133	50-150
Beryllium	1.00	1.08		108	50-150
Cadmium	0.500	0.658	J	132	50-150
Chromium	2.00	2.08		104	50-150
Cobalt	1.00	1.20		120	50-150
Copper	2.00	2.72		136	50-150
Lead	1.00	1.22		122	50-150
Molybdenum	10.0	9.90	J	99	50-150
Nickel	2.00	3.13	^	156	50-150
Selenium	2.00	2.16	J	108	50-150
Silver	0.500	0.603	J	121	50-150
Thallium	1.00	1.20	J	120	50-150
Vanadium	5.00	4.78	J	96	50-150
Tungsten	10.0	9.47	J	95	50-150
Zinc	10.0	10.6	J	106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-42622/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00189

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.186	J	93	50-150

Lab Sample ID: CRA 240-43145/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00190

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.224		112	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42666/6 05/03/2012 06:22		CCB 240-42666/23 05/03/2012 08:00		CCB 240-42666/35 05/03/2012 09:08		CCB 240-42666/47 05/03/2012 10:13	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.149	J	0.322	J	0.131	J	0.138	J
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	0.239	J	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	0.172	J	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	0.0800	J	0.169	J	0.0610	J	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	0.191	J	1.0	U	1.0	U
Molybdenum	10	0.858	J	0.854	J	0.632	J	0.678	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.496	J	0.686	J	0.554	J	0.489	J
Tungsten	10	1.07	J	0.956	J	0.868	J	0.833	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-42666/54 05/03/2012 10:51							
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.133	J						
Arsenic	5.0	5.0	U						
Barium	5.0	5.0	U						
Beryllium	1.0	1.0	U						
Cadmium	1.0	1.0	U						
Chromium	2.0	2.0	U						
Cobalt	1.0	1.0	U						
Copper	2.0	2.0	U						
Lead	1.0	1.0	U						
Molybdenum	10	0.662	J						
Nickel	2.0	2.0	U						
Selenium	5.0	5.0	U						
Silver	1.0	1.0	U						
Thallium	2.0	0.476	J						
Tungsten	10	0.810	J						
Vanadium	20	20	U						
Zinc	20	20	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-42622/8-A 05/04/2012 10:45		CCB 240-42622/11-A 05/04/2012 12:09		CCB 240-42622/11-A 05/04/2012 12:35			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-43145/8-A 05/08/2012 14:45		CCB 240-43145/11-A 05/08/2012 15:40		CCB 240-43145/11-A 05/08/2012 16:06		CCB 240-43145/11-A 05/08/2012 16:31	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-43145/11-A 05/08/2012 16:57							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42485/1-A

Instrument Code: I8 Batch No.: 42666

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.541	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.388	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.312	J		6020
7440-02-0	Nickel	2.0	U	^	6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.332	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	4.57	J		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-42671/1-A

Instrument Code: H4 Batch No.: 42975

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43054/1-A

Instrument Code: H4 Batch No.: 43362

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICSA 240-42666/9 Instrument ID: I8

Lab File ID: I8050312A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.163**	
Arsenic		**0.572**	
Barium		**0.131**	
Beryllium		**0.0050**	
Cadmium		**-0.414**	
Chromium		**0.479**	
Cobalt		**0.118**	
Copper		**0.523**	
Lead		**0.0560**	
Molybdenum	**1000**	**1018**	**102**
Nickel		**0.562**	
Selenium		**0.0360**	
Silver		**0.0380**	
Thallium		**0.111**	
Tungsten		**0.347**	
Vanadium		**0.0780**	
Zinc		**1.08**	
Aluminum	*50000*	*48650*	*97*
Boron		*0.397*	
Calcium	*50000*	*50780*	*102*
Iron	*50000*	*50610*	*101*
Magnesium	*50000*	*50890*	*102*
Manganese		*0.237*	
Potassium	*50000*	*50870*	*102*
Sodium	*50000*	*51340*	*103*
Strontium		*0.331*	
Tin		*0.0580*	
Titanium	*1000*	*1045*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Lab Sample ID: ICSAB 240-42666/10 Instrument ID: I8

Lab File ID: I8050312A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**100**	**100**
Arsenic	**100**	**98.6**	**99**
Barium	**100**	**101**	**101**
Beryllium	**100**	**104**	**104**
Cadmium	**100**	**98.5**	**98**
Chromium	**100**	**105**	**105**
Cobalt	**100**	**100**	**100**
Copper	**100**	**101**	**101**
Lead	**100**	**106**	**106**
Molybdenum	**1100**	**1138**	**103**
Nickel	**100**	**107**	**107**
Selenium	**100**	**101**	**101**
Silver	**100**	**101**	**101**
Thallium	**100**	**104**	**104**
Tungsten	**100**	**99.6**	**100**
Vanadium	**100**	**99.2**	**99**
Zinc	**100**	**103**	**103**
Aluminum	*50000*	*48390*	*97*
Boron	*100*	*99.3*	*99*
Calcium	*50000*	*51380*	*103*
Iron	*50000*	*50960*	*102*
Magnesium	*50000*	*50690*	*101*
Manganese	*100*	*107*	*107*
Potassium	*50000*	*50370*	*101*
Sodium	*50000*	*51610*	*103*
Strontium	*100*	*95.2*	*95*
Tin	*100*	*98.8*	*99*
Titanium	*1100*	*1153*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

NOT IN SDG

Client ID: _____ Lab ID: 240-10807-B-5-B MS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	95.7		0.42	J	100	95	44-153		6020
Arsenic	959		2.7	J	1000	96	82-123		6020
Barium	1360		370		1000	99	45-144		6020
Beryllium	980		1.0	U	1000	98	77-124		6020
Cadmium	933		0.14	J	1000	93	78-117		6020
Chromium	974		2.6		1000	97	72-110		6020
Cobalt	968		2.6		1000	97	67-114		6020
Copper	931		0.63	J	1000	93	60-123		6020
Lead	984		0.19	J	1000	98	73-115		6020
Molybdenum	104		0.87	J	100	103	80-110		6020
Nickel	962		10		1000	95	72-111	^	6020
Selenium	948		0.87	J	1000	95	72-148		6020
Silver	92.5		1.0	U	100	92	10-139		6020
Thallium	244		0.66	J	250	97	69-117		6020
Vanadium	978		20	U	1000	98	70-112		6020
Tungsten	96.9		2.2	J	100	95	43-133		6020
Zinc	921		3.7	J	1000	92	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

NOT IN SDG

Client ID: _____ Lab ID: 240-10770-H-3-C MS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.913		0.20	U	1.00	91	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

POT ID SDG

Client ID: _____ Lab ID: 240-10837-N-5-C MS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.04		0.20	U	1.00	104	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

PUT IN SDG

Client ID: _____ Lab ID: 240-10837-M-5-C MS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.921		0.12	J	1.00	92	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Not in SDG

Client ID: _____ Lab ID: 240-10807-B-5-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	95.8		100	95	44-153	0	20		6020
Arsenic	958		1000	96	82-123	0	20		6020
Barium	1350		1000	98	45-144	1	20		6020
Beryllium	964		1000	96	77-124	2	20		6020
Cadmium	918		1000	92	78-117	2	20		6020
Chromium	973		1000	97	72-110	0	20		6020
Cobalt	963		1000	96	67-114	1	20		6020
Copper	932		1000	93	60-123	0	20		6020
Lead	981		1000	98	73-115	0	20		6020
Molybdenum	103		100	103	80-110	0	20		6020
Nickel	957		1000	95	72-111	1	20	^	6020
Selenium	947		1000	95	72-148	0	20		6020
Silver	92.4		100	92	10-139	0	20		6020
Thallium	247		250	98	69-117	1	20		6020
Vanadium	979		1000	98	70-112	0	20		6020
Tungsten	97.8		100	96	43-133	1	20		6020
Zinc	920		1000	92	49-156	0	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

NOT IN SDG

Client ID: _____ Lab ID: 240-10770-H-3-D MSD

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.918		1.00	92	69-134	1	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: _____ Lab ID: 240-10837-N-5-B DU

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATES
METALS - DISSOLVED

POT IP SOG

Client ID: _____ Lab ID: 240-10837-M-5-B DU

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.12	J	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-42485/2-A

Lab Name: TestAmerica Canton Job No.: 240-10808-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	92.0		92	80	120		6020
Arsenic	1000	918		92	80	120		6020
Barium	1000	918		92	80	120		6020
Beryllium	1000	905		91	80	120		6020
Cadmium	1000	934		93	80	120		6020
Chromium	1000	943		94	80	120		6020
Cobalt	1000	951		95	80	120		6020
Copper	1000	975		98	80	120		6020
Lead	1000	1010		101	80	120		6020
Molybdenum	100	92.2		92	80	120		6020
Nickel	1000	979		98	80	120	^	6020
Selenium	1000	939		94	80	120		6020
Silver	100	97.5		98	80	120		6020
Thallium	250	242		97	80	120		6020
Vanadium	1000	921		92	80	120		6020
Tungsten	100	88.0		88	80	120		6020
Zinc	1000	962		96	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-42671/2-A

Lab Name: TestAmerica Canton Job No.: 240-10808-1

Sample Matrix: Water LCS Source: MTHGICVW_00289

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.45		89	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-43054/2-A

Lab Name: TestAmerica Canton Job No.: 240-10808-1

Sample Matrix: Water LCS Source: MTHGICVW_00291

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.81		96	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

POT IP SDG

Lab ID: 240-10807-B-5-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10808-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.42	J	0.670	J	NC		6020
Arsenic	2.7	J	3.93	J	NC		6020
Barium	370		371		NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	0.14	J	5.0	U	NC		6020
Chromium	2.6		10	U	NC		6020
Cobalt	2.6		2.89	J	NC		6020
Copper	0.63	J	10	U	NC		6020
Lead	0.19	J	5.0	U	NC		6020
Molybdenum	0.87	J	1.34	J	NC		6020
Nickel	10		11.6		NC	^	6020
Selenium	0.87	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.66	J	1.64	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	2.2	J	3.01	J	NC		6020
Zinc	3.7	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10808-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10808-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10808-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10808-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42485/1-A	05/02/2012 10:01	42485		50	50
LCS 240-42485/2-A	05/02/2012 10:01	42485		50	50
240-10807-B-5-B MS	05/02/2012 10:01	42485		50	50
240-10807-B-5-C MSD	05/02/2012 10:01	42485		50	50
240-10808-2	05/02/2012 10:01	42485		50	50
240-10808-2	05/02/2012 10:01	42485		50	50
240-10808-3	05/02/2012 10:01	42485		50	50
240-10808-3	05/02/2012 10:01	42485		50	50
240-10808-4	05/02/2012 10:01	42485		50	50
240-10808-4	05/02/2012 10:01	42485		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-42671/1-A	05/03/2012 15:55	42671		100	100
LCS 240-42671/2-A	05/03/2012 15:55	42671		100	100
240-10770-H-3-C MS	05/03/2012 15:55	42671		100	100
240-10770-H-3-D MSD	05/03/2012 15:55	42671		100	100
240-10808-2	05/03/2012 15:55	42671		100	100
240-10808-2	05/03/2012 15:55	42671		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43054/1-A	05/07/2012 14:15	43054		100	100
LCS 240-43054/2-A	05/07/2012 14:15	43054		100	100
240-10837-N-5-B DU	05/07/2012 14:15	43054		100	100
240-10837-N-5-C MS	05/07/2012 14:15	43054		100	100
240-10837-M-5-B DU	05/07/2012 14:15	43054		100	100
240-10837-M-5-C MS	05/07/2012 14:15	43054		100	100
240-10808-3	05/07/2012 14:15	43054		100	100
240-10808-4	05/07/2012 14:15	43054		100	100
240-10808-3	05/07/2012 14:15	43054		100	100
240-10808-4	05/07/2012 14:15	43054		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/03/2012 End Date: 05/03/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-42666/2 IC	06:00	95		94		97		94		95	
STD3 240-42666/3 IC	06:05	94		93		92		88		91	
STD4 240-42666/4 IC	06:12	102		112		104		106		104	
ICV 240-42666/5	06:17	98		102		99		97		97	
ICB 240-42666/6	06:22	104		113		105		103		103	
CRI 240-42666/8	06:33	104		112		103		102		102	
ICSA 240-42666/9	06:39	86		92		87		88		91	
ICSAB 240-42666/10	06:44	70		84		84		85		89	
CCV 240-42666/22	07:54	83		93		90		87		89	
CCB 240-42666/23	08:00	93		105		95		95		95	
MB 240-42485/1-A	08:05	95		106		98		96		95	
LCS 240-42485/2-A	08:11	92		101		94		92		94	
240-10807-B-5-A SD	08:23	89		102		93		90		90	
240-10807-B-5-B MS	08:28	75		82		77		73		76	
240-10807-B-5-C MSD	08:34	75		83		77		72		77	
CCV 240-42666/34	09:03	85		96		89		86		86	
CCB 240-42666/35	09:08	95		107		97		94		94	
240-10808-2	10:02	89		103		92		89		88	
CCV 240-42666/46	10:08	85		97		86		83		83	
CCB 240-42666/47	10:13	93		107		94		92		90	
240-10808-2	10:19	91		103		92		88		86	
240-10808-3	10:24	87		98		86		82		82	
240-10808-3	10:29	85		96		85		81		81	
240-10808-4	10:35	87		100		91		89		88	
240-10808-4	10:40	85		99		90		88		88	
CCV 240-42666/53	10:45	80		92		85		80		80	
CCB 240-42666/54	10:51	89		101		90		89		87	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/03/2012 End Date: 05/03/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-42666/2 IC	06:00			98							
STD3 240-42666/3 IC	06:05			94							
STD4 240-42666/4 IC	06:12			103							
ICV 240-42666/5	06:17			99							
ICB 240-42666/6	06:22			101							
CRI 240-42666/8	06:33			102							
ICSA 240-42666/9	06:39			91							
ICSAB 240-42666/10	06:44			91							
CCV 240-42666/22	07:54			90							
CCB 240-42666/23	08:00			94							
MB 240-42485/1-A	08:05			95							
LCS 240-42485/2-A	08:11			95							
240-10807-B-5-A SD	08:23			91							
240-10807-B-5-B MS	08:28			80							
240-10807-B-5-C MSD	08:34			79							
CCV 240-42666/34	09:03			86							
CCB 240-42666/35	09:08			90							
240-10808-2	10:02			91							
CCV 240-42666/46	10:08			81							
CCB 240-42666/47	10:13			86							
240-10808-2	10:19			91							
240-10808-3	10:24			82							
240-10808-3	10:29			80							
240-10808-4	10:35			86							
240-10808-4	10:40			86							
CCV 240-42666/53	10:45			80							
CCB 240-42666/54	10:51			83							

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/03/2012 05:54 End Date: 05/03/2012 10:51

Lab Sample ID	D/F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-42666/1			05:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-42666/2 IC	1		06:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-42666/3 IC	1		06:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-42666/4 IC	1		06:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-42666/5	1		06:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-42666/6	1		06:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-42666/7			06:28																				
CRI 240-42666/8	1		06:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-42666/9	1		06:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-42666/10	1		06:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-42666/11			06:50																				
CCB 240-42666/12			06:55																				
CCV 240-42666/13			07:04																				
CCB 240-42666/14			07:10																				
ZZZZZZ			07:15																				
ZZZZZZ			07:21																				
ZZZZZZ			07:26																				
ZZZZZZ			07:31																				
ZZZZZZ			07:37																				
ZZZZZZ			07:42																				
ZZZZZZ			07:49																				
CCV 240-42666/22	1		07:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42666/23	1		08:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-42485/1-A	1	R	08:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-42485/2-A	1	R	08:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:17																				
240-10807-B-5-A SD ^5	5	R	08:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10807-B-5-B MS	1	R	08:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10807-B-5-C MSD	1	R	08:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:41																				
ZZZZZZ			08:46																				
ZZZZZZ			08:52																				
ZZZZZZ			08:57																				
CCV 240-42666/34	1		09:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-42666/35	1		09:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			09:14																				
ZZZZZZ			09:19																				
ZZZZZZ			09:24																				
ZZZZZZ			09:30																				
ZZZZZZ			09:35																				
ZZZZZZ			09:41																				
ZZZZZZ			09:46																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/03/2012 05:54 End Date: 05/03/2012 10:51

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			09:52																			
ZZZZZZ			09:57																			
240-10808-2	1	R	10:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCV 240-42666/46	1		10:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-42666/47	1		10:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10808-2	1	D	10:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10808-3	1	R	10:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10808-3	1	D	10:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10808-4	1	R	10:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10808-4	1	D	10:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCV 240-42666/53	1		10:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-42666/54	1		10:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Prep Types
D = Dissolved
R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-42622/1-A			10:31	X																				
IC 240-42622/2-A			10:33	X																				
IC 240-42622/3-A			10:35	X																				
IC 240-42622/4-A			10:37	X																				
IC 240-42622/5-A			10:39	X																				
IC 240-42622/6-A			10:41	X																				
ICV 240-42622/7-A	1		10:43	X																				
ICB 240-42622/8-A	1		10:45	X																				
CRA 240-42622/9-A	1		10:48	X																				
CCVL 240-42622/10-A	1		10:53	X																				
CCB 240-42622/11-A			10:55																					
ZZZZZZ			10:56																					
ZZZZZZ			10:58																					
ZZZZZZ			11:00																					
ZZZZZZ			11:02																					
ZZZZZZ			11:04																					
ZZZZZZ			11:06																					
ZZZZZZ			11:09																					
ZZZZZZ			11:11																					
ZZZZZZ			11:13																					
ZZZZZZ			11:15																					
CCV 240-42622/12-A			11:17																					
CCB 240-42622/11-A			11:19																					
ZZZZZZ			11:21																					
ZZZZZZ			11:24																					
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
ZZZZZZ			11:30																					
ZZZZZZ			11:32																					
ZZZZZZ			11:34																					
ZZZZZZ			11:36																					
ZZZZZZ			11:38																					
ZZZZZZ			11:40																					
CCV 240-42622/12-A			11:42																					
CCB 240-42622/11-A			11:44																					
ZZZZZZ			11:46																					
ZZZZZZ			11:48																					
ZZZZZZ			11:50																					
ZZZZZZ			11:53																					
ZZZZZZ			11:55																					
ZZZZZZ			11:57																					
ZZZZZZ			11:59																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			12:00																					
ZZZZZZ			12:03																					
ZZZZZZ			12:05																					
CCV 240-42622/12-A	1		12:07	X																				
CCB 240-42622/11-A	1		12:09	X																				
MB 240-42671/1-A	1	T	12:12	X																				
LCS 240-42671/2-A	1	T	12:14	X																				
ZZZZZZ			12:16																					
240-10770-H-3-C MS	1	T	12:18	X																				
240-10770-H-3-D MSD	1	T	12:20	X																				
ZZZZZZ			12:22																					
ZZZZZZ			12:25																					
ZZZZZZ			12:27																					
240-10808-2	1	T	12:29	X																				
240-10808-2	1	D	12:31	X																				
CCV 240-42622/12-A	1		12:34	X																				
CCB 240-42622/11-A	1		12:35	X																				
ZZZZZZ			12:37																					
ZZZZZZ			12:39																					
ZZZZZZ			12:41																					
ZZZZZZ			12:43																					
ZZZZZZ			12:46																					
ZZZZZZ			12:47																					
ZZZZZZ			12:49																					
ZZZZZZ			12:51																					
ZZZZZZ			12:53																					
ZZZZZZ			12:55																					
CCV 240-42622/12-A			12:59																					
CCB 240-42622/11-A			13:00																					
ZZZZZZ			13:03																					
ZZZZZZ			13:06																					
CCV 240-42622/12-A			13:09																					
CCB 240-42622/11-A			13:11																					
CCV 240-42622/12-A			14:41																					
CCB 240-42622/11-A			14:43																					
ZZZZZZ			14:45																					
ZZZZZZ			14:47																					
ZZZZZZ			14:49																					
ZZZZZZ			14:51																					
ZZZZZZ			14:53																					
ZZZZZZ			14:55																					
ZZZZZZ			14:57																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			14:59																					
ZZZZZZ			15:01																					
ZZZZZZ			15:03																					
CCV 240-42622/12-A			15:05																					
CCB 240-42622/11-A			15:07																					
ZZZZZZ			15:09																					
ZZZZZZ			15:11																					
CCV 240-42622/12-A			15:13																					
CRA 240-42622/9-A			15:15																					
CCB 240-42622/11-A			15:18																					
ZZZZZZ			15:20																					
ZZZZZZ			15:22																					
ZZZZZZ			15:24																					
ZZZZZZ			15:26																					
ZZZZZZ			15:28																					
ZZZZZZ			15:30																					
ZZZZZZ			15:33																					
ZZZZZZ			15:34																					
ZZZZZZ			15:36																					
ZZZZZZ			15:39																					
CCV 240-42622/12-A			15:40																					
CCB 240-42622/11-A			15:42																					
ZZZZZZ			15:44																					
ZZZZZZ			15:46																					
ZZZZZZ			15:48																					
ZZZZZZ			15:50																					
ZZZZZZ			15:52																					
ZZZZZZ			15:54																					
ZZZZZZ			15:57																					
ZZZZZZ			15:58																					
ZZZZZZ			16:01																					
ZZZZZZ			16:04																					
CCV 240-42622/12-A			16:06																					
CCB 240-42622/11-A			16:08																					
ZZZZZZ			16:10																					
ZZZZZZ			16:12																					
ZZZZZZ			16:14																					
ZZZZZZ			16:16																					
ZZZZZZ			16:18																					
ZZZZZZ			16:19																					
ZZZZZZ			16:21																					
ZZZZZZ			16:23																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			16:25	
ZZZZZZ			16:27	
CCV 240-42622/12-A			16:29	
CCB 240-42622/11-A			16:31	
ZZZZZZ			16:33	
ZZZZZZ			16:35	
ZZZZZZ			16:37	
ZZZZZZ			16:39	
ZZZZZZ			16:41	
ZZZZZZ			16:43	
CCV 240-42622/12-A			16:46	
CRA 240-42622/9-A			16:48	
CCB 240-42622/11-A			16:50	
ZZZZZZ			16:52	
ZZZZZZ			16:54	
ZZZZZZ			16:56	
ZZZZZZ			16:58	
ZZZZZZ			17:00	
ZZZZZZ			17:02	
ZZZZZZ			17:04	
ZZZZZZ			17:07	
ZZZZZZ			17:10	
ZZZZZZ			17:12	
CCV 240-42622/12-A			17:14	
CCB 240-42622/11-A			17:17	
ZZZZZZ			17:20	
ZZZZZZ			17:22	
ZZZZZZ			17:24	
ZZZZZZ			17:25	
ZZZZZZ			17:27	
ZZZZZZ			17:29	
ZZZZZZ			17:31	
ZZZZZZ			17:33	
ZZZZZZ			17:35	
ZZZZZZ			17:38	
CCV 240-42622/12-A			17:40	
CCB 240-42622/11-A			17:42	
ZZZZZZ			17:44	
ZZZZZZ			17:46	
ZZZZZZ			17:48	
ZZZZZZ			17:49	
ZZZZZZ			17:52	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/04/2012 10:31 End Date: 05/04/2012 18:44

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			17:54																					
ZZZZZZ			17:56																					
ZZZZZZ			17:58																					
ZZZZZZ			18:00																					
ZZZZZZ			18:03																					
CCV 240-42622/12-A			18:05																					
CCB 240-42622/11-A			18:07																					
ZZZZZZ			18:09																					
ZZZZZZ			18:11																					
ZZZZZZ			18:13																					
ZZZZZZ			18:15																					
ZZZZZZ			18:17																					
ZZZZZZ			18:20																					
ZZZZZZ			18:21																					
ZZZZZZ			18:25																					
ZZZZZZ			18:27																					
ZZZZZZ			18:29																					
CCV 240-42622/12-A			18:31																					
CCB 240-42622/11-A			18:33																					
ZZZZZZ			18:35																					
ZZZZZZ			18:37																					
CCV 240-42622/12-A			18:39																					
CRA 240-42622/9-A			18:41																					
CCB 240-42622/11-A			18:44																					

Prep Types
D = Dissolved
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/08/2012 14:30 End Date: 05/08/2012 17:03

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-43145/1-A			14:30	X																				
IC 240-43145/2-A			14:33	X																				
IC 240-43145/3-A			14:35	X																				
IC 240-43145/4-A			14:37	X																				
IC 240-43145/5-A			14:39	X																				
IC 240-43145/6-A			14:41	X																				
ICV 240-43145/7-A	1		14:43	X																				
ICB 240-43145/8-A	1		14:45	X																				
CRA 240-43145/9-A	1		14:47	X																				
CCVL 240-43145/10-A	1		14:49	X																				
CCB 240-43145/11-A			14:51																					
ZZZZZZ			14:53																					
ZZZZZZ			14:55																					
ZZZZZZ			14:57																					
ZZZZZZ			15:00																					
ZZZZZZ			15:01																					
ZZZZZZ			15:04																					
ZZZZZZ			15:06																					
ZZZZZZ			15:08																					
ZZZZZZ			15:09																					
ZZZZZZ			15:12																					
CCV 240-43145/12-A			15:13																					
CCB 240-43145/11-A			15:15																					
ZZZZZZ			15:18																					
ZZZZZZ			15:20																					
ZZZZZZ			15:22																					
ZZZZZZ			15:23																					
ZZZZZZ			15:25																					
ZZZZZZ			15:28																					
ZZZZZZ			15:30																					
ZZZZZZ			15:32																					
ZZZZZZ			15:34																					
ZZZZZZ			15:36																					
CCV 240-43145/12-A	1		15:39	X																				
CCB 240-43145/11-A	1		15:40	X																				
ZZZZZZ			15:42																					
ZZZZZZ			15:45																					
ZZZZZZ			15:47																					
ZZZZZZ			15:49																					
MB 240-43054/1-A	1	T	15:51	X																				
LCS 240-43054/2-A	1	T	15:54	X																				
ZZZZZZ			15:56																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10808-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/08/2012 14:30 End Date: 05/08/2012 17:03

Lab Sample ID	D / F	Type	Time	Analytes																			
				Hg																			
240-10837-N-5-B DU	1	T	15:58	X																			
240-10837-N-5-C MS	1	T	16:00	X																			
ZZZZZZ			16:02																				
CCV 240-43145/12-A	1		16:04	X																			
CCB 240-43145/11-A	1		16:06	X																			
240-10837-M-5-B DU	1	D	16:08	X																			
240-10837-M-5-C MS	1	D	16:10	X																			
240-10808-3	1	T	16:13	X																			
240-10808-4	1	T	16:15	X																			
ZZZZZZ			16:16																				
ZZZZZZ			16:19																				
ZZZZZZ			16:21																				
ZZZZZZ			16:23																				
ZZZZZZ			16:25																				
ZZZZZZ			16:27																				
CCV 240-43145/12-A	1		16:29	X																			
CCB 240-43145/11-A	1		16:31	X																			
ZZZZZZ			16:33																				
240-10808-3	1	D	16:35	X																			
240-10808-4	1	D	16:37	X																			
ZZZZZZ			16:39																				
ZZZZZZ			16:41																				
ZZZZZZ			16:43																				
ZZZZZZ			16:45																				
ZZZZZZ			16:48																				
ZZZZZZ			16:50																				
ZZZZZZ			16:52																				
CCV 240-43145/12-A	1		16:55	X																			
CCB 240-43145/11-A	1		16:57	X																			
CRA 240-43145/9-A			16:59																				
CCV 240-43145/12-A			17:01																				
CCB 240-43145/11-A			17:03																				

Prep Types
D = Dissolved
T = Total/NA

Sample GSP-MW5-043012

Arsenic rep result 3.4 ug/L

240-10808-h-2-a, 5/3/2012 10:02:46 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		88.899%	1.291	145.100
%RSD		3.358	3.521	4.185
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		T 22910.000	29720.000	M 1882.000
%RSD		T 0.610	1.116	M 1.593
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		T 0.000	T 7130.000	39970.000
%RSD		T 0.000	T 1.338	0.963
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		T 102.927%	91.766%	9.978
%RSD		T 3.285	0.615	87.350
Run	Time	51V	52Cr	53Cl O
		ppb	ppb	ppb
x		4.422	2.158	-1.078
%RSD		2.924	1.423	63.520
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		T 724.000	3085.000	26.260
%RSD		T 0.118	0.626	0.579
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		17.070	4.879	27.900
%RSD		3.691	2.414	1.032
Run	Time	72Ge	75As	77Ar Cl
		ppb	ppb	ppb
x		89.055%	3.427	0.410
%RSD		0.656	5.055	8.212
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		2.237	180.500	0.337
%RSD		12.880	0.921	25.110
Run	Time	105Pd	107Ag	108Mo O
		ppb	ppb	ppb
x		0.000	0.011	-25.870
%RSD		0.000	28.770	14.450
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.323	87.649%	0.103
%RSD		20.830	0.703	21.390
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		0.090	20.820	0.000
%RSD		19.370	0.871	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		91.414%	0.027	0.114
%RSD		1.992	10.410	13.610
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		0.388	0.000	
%RSD		11.960	0.000	

Case Narrative

TestAmerica West Sacramento Project Number G2E030413

WATER, 6850, Perchlorate
Samples: 1, 2, 3
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTELA1AC
SMCS: MTELA1AD

There are no other anomalies associated with this project.

ANALYTICAL METHODS SUMMARY

G2E030413

PARAMETER	ANALYTICAL METHOD
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E030413 Work Order #...: MTELA1AA Matrix.....: WATER
MB Lot-Sample #: G2E070000-058

Prep Date.....: 05/07/12
Analysis Date..: 05/14/12 Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E030413 Work Order #...: MTELA1AC Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	92	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E030413 Work Order #...: MTELA1AC Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.62	ug/L	92	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E030413 Work Order #...: MTELA1AD Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	97	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E030413 Work Order #...: MTELA1AD Matrix.....: WATER
LCS Lot-Sample#: G2E070000-058
Prep Date.....: 05/07/12 Analysis Date..: 05/15/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.86	ug/L	97	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E030413 Work Order #...: MTDHX1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E030450-004 MTDHX1AD-MSD
Date Sampled...: 05/01/12 Date Received..: 05/03/12
Prep Date.....: 05/07/12 Analysis Date..: 05/16/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	99	(80 - 120)			SW846 6850
	97	(80 - 120)	1.8	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E030413 Work Order #...: MTDHX1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E030450-004 MTDHX1AD-MSD
Date Sampled...: 05/01/12 Date Received..: 05/03/12
Prep Date.....: 05/07/12 Analysis Date..: 05/16/12
Prep Batch #...: 2128058
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.95	ug/L	99		SW846 6850
	ND	5.00	4.86	ug/L	97	1.8	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

Tetra Tech INC **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **JULY 9, 2012**

FROM: **J. KALINYAK** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION - VOC / 1,4-DIOXANE / GRO / DRO / PERCHLORATE**
LOCKHEED - MSA
SAMPLE DELIVERY GROUP (SDG) 240-10925-1

SAMPLES: 6 / Aqueous / VOC

MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW8D-050212
MSA-DMW8I-050212	MSA-DMW8S-050212	TB-050212

6 / Aqueous / 1,4-Dioxane / Perchlorate

MSA-DMW1A-050212	MSA-DMW1B-050212	MSA-DMW8D-050212
MSA-DMW8I-050212	MSA-DMW8S-050212	MSA-MW32S-050212

2 / Aqueous / GRO / DRO

MSA-DMW8S-050212	MSA-MW32S-050212

Overview

The sample set for Lockheed - MSA, SDG 240-10925-1, consisted of seven (7) aqueous samples including one (1) aqueous trip blank sample. Six (6) aqueous samples were analyzed for volatile organic compounds (VOC) as listed above. Six (6) aqueous samples were analyzed for 1,4-dioxane and perchlorate as listed above. Two (2) aqueous samples were analyzed for gasoline range organics (GRO), and diesel range organics (DRO) as listed above. No field duplicate sample pairs were included in the sample delivery group (SDG).

The samples were collected by Tetra Tech on May 2, 2012 and analyzed by TestAmerica Laboratories, Inc., Canton for all analyses with the exception of the perchlorate analyses which were subcontracted to TestAmerica Laboratories Inc, West Sacramento. All analyses were conducted in accordance with EPA SW-846 Methods 8260C for VOCs, 8270C for 1,4-dioxane, 8015B for GRO, 8015B for DRO, and 6850 for perchlorates, analytical and reporting protocols.

The data contained in this SDG were validated with regard to the following parameters: data completeness, holding times, GC/MS tuning, initial/continuing calibrations, laboratory method blank results, surrogate spike recoveries, blank spike/blank spike duplicate results, matrix spike/matrix spike duplicate results, internal standard recoveries, chromatographic resolution, compound identification, compound quantitation, and detection limits. Areas of concern are listed below.

Major Problems

- The VOC initial calibration average relative response factor (RRF) was less than the 0.05 criteria for vinyl acetate and tert-butyl alcohol on instrument A3UX16 on 05/09/12. The continuing calibration verification (CCV) RRFs for tert-butyl alcohol and vinyl acetate were also less than the 0.05 criteria for instrument A3UX16 on 05/10/12 @ 10:53 and on 05/11/12 @ 10:56.
  Affected Samples: All samples
  Action: The sample non-detected results for tert-butyl alcohol and vinyl acetate were qualified rejected, (UR).

- Trimethyl-silanol was detected as a tentatively identified compound (TIC) by the laboratory for samples MSA-DMW8S-050212 and TB-050212, respectively.

  Action: Trimethyl-silanol is considered present due to column bleed on the laboratory instrument. The positive TIC trimethyl-silanol results for these samples were qualified rejected, (R).

Minor Problems

- The GRO was detected in the method blank at the following maximum concentration affecting all samples.

Analytes	Maximum Conc. µg/L	Action Level µg/L
GRO [1]	28.0	140.0

[1] Method blank MB 240-42995/6 affecting samples MSA-DMW8S-050212 and MSA-MW32S-050212.

An action level of five times the maximum level for GRO has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Sample GRO results if less than the action level were qualified (B), for method blank contamination.

- Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J).

- Samples MSA-DMW1B-050212 and MSA-DMW8D-050212 had positive methylcylcohexane results reported as TICs. The instrument was calibrated for methylcyclohexane and the CCV %Ds were compliant. The sample positive methylcyclohexane results were qualified as estimated, (J), presumptively present, as a TIC analyte.

Notes

The following laboratory VOC contaminants were detected in the method blanks at the following maximum concentrations affecting samples as listed.

Analytes	Maximum Conc. µg/l	Action Level µg/l
1,2,3-Trichlorobenzene [1]	0.322	1.610
1,2,4-Trichlorobenzene [1]	0.192	0.960
Hexachlorobutadiene [1]	0.479	2.395
1,2,3-Trichlorobenzene [2]	0.372	1.860
1,2,4-Trichlorobenzene [2]	0.247	1.235
Hexachlorobutadiene [2]	0.462	2.310

[1] Method blank MB 240-43737/5 affecting sample MSA-DMW1B-050212.
[2] Method blank MB 240-43549/5 affecting samples MSA-DMW1A-050212, MSA-DMW8D-050212, MSA-DMW8I-050212, MSA-DMW8S-050212, and TB-050212.

An action level of five times the maximum level for the contaminants has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. No samples were qualified for method blank contamination.

The samples listed on the Chain of Custody (COC) stated that seven (7) samples were to be analyzed VOCs. Sample MSA-MW32S-050212 was not analyzed for VOCs.

The VOC MS and the MSD for a spiked sample from another SDG (240-10837-D-5) had %Rs for 2-chloroethyl vinyl ether and 2-butanone less than the quality control limit (0%). No validation action was necessary as the sample was not from this SDG.

The VOC MS and the MSD for a spiked sample from another SDG (240-11065-F-2) had %Rs for 2-chloroethyl vinyl ether less than the quality control limit (0%). No validation action was necessary as the sample was not from this SDG.

The 1,4-dioxane MSD for a spiked sample from another SDG (240-10842-O-8-A) had a %R for 1,4-dioxane less than the quality control limit and the MS/MSD %Rs relative percent difference (RPD) was greater than the quality control limit. No validation action was necessary as the sample was not from this SDG.

The sample MSA-DMW1A-050212 1,4-dioxane analysis surrogate 2,4,6-tribromophenol %R was greater than the quality control limit the acid fraction SVOC analytes. As 1,4-dioxane is associated with base/neutral surrogates no validation action was necessary for the sample 1,4-dioxane result.

The sample were diluted for the VOC analyses as listed below resulting in elevated minimum detection limits reported for the non-detected analytes.

Samples	Dilution
MSA-DMW1A-050212	100X
MSA-DMW1B-050212	76.92X
MSA-DMW8D-050212	16.67X
MSA-DMW8I-050212	16.67X

The sample MSA-DMW1A-050212 was diluted 2X for the 1,4-dioxane analysis.

The laboratory reported non-detected sample results to the Method Detection Limit (MDL).

EXECUTIVE SUMMARY

Laboratory Performance Issues: VOC non-detected tert-butyl alcohol and vinyl acetate sample results were rejected due to calibration and CCV RRF criteria non-compliances. Sample GRO results were qualified for method blank contamination.

Other Factors Affecting Data Quality: Positive results reported below the quantitation limit but above the method detection limit were qualified as estimated, (J). VOC TIC methylcyclohexane results were qualified estimated presumptively present.

The data for these analyses were reviewed with reference to EPA SW-846 Methods 8260C, 8270C, 8015B, and 6850, and the Region III EPA Functional Guidelines for Organic Data Validation (9/94).

Tetra Tech
Joseph Kalinyak
Data Validator/Environmental Scientist

TetraTech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

DATA QUALIFICATION CODE (QUAL CODE)

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: 240-10925-1	LAB_ID	240-10925-5			240-10925-6			240-10925-3			240-10925-2		
FRACTION: OV	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	23	U		18	U		3.8	U		3.8	U	
1,1,1-TRICHLOROETHANE	22	U		17	U		3.7	U		3.7	U	
1,1,2,2-TETRACHLOROETHANE	18	U		14	U		3	U		3	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	28	U		22	U		4.7	U		4.7	U	
1,1-DICHLOROETHANE	15	U		12	U		2.5	U		2.5	U	
1,1-DICHLOROETHENE	19	U		15	U		3.2	U		3.2	U	
1,1-DICHLOROPROPENE	13	U		10	U		2.2	U		2.2	U	
1,2,3-TRICHLOROBENZENE	17	U		13	U		2.8	U		2.8	U	
1,2,3-TRICHLOROPROPANE	43	U		33	U		7.2	U		7.2	U	
1,2,3-TRIMETHYLBENZENE	0.59	U		0.45	U		0.098	U		0.098	U	
1,2,4-TRICHLOROBENZENE	15	U		12	U		2.5	U		2.5	U	
1,2,4-TRIMETHYLBENZENE	12	U		9.2	U		2	U		2	U	
1,2-DIBROMO-3-CHLOROPROPANE	67	U		52	U		11	U		11	U	
1,2-DIBROMOETHANE	24	U		18	U		4	U		4	U	
1,2-DICHLOROBENZENE	13	U		10	U		2.2	U		2.2	U	
1,2-DICHLOROETHANE	22	U		17	U		3.7	U		4.9	J	P
1,2-DICHLOROPROPANE	18	U		14	U		3	U		3	U	
1,3-DICHLOROBENZENE	14	U		11	U		2.3	U		2.3	U	
1,3-DICHLOROPROPANE	16	U		12	U		2.7	U		2.7	U	
1,4-DICHLOROBENZENE	13	U		10	U		2.2	U		2.2	U	
2,2-DICHLOROPROPANE	13	U		10	U		2.2	U		2.2	U	
2-BUTANONE	57	U		44	U		9.5	U		9.5	U	
2-CHLOROETHYL VINYL ETHER	99	U		76	U		17	U		17	U	
2-CHLOROTOLUENE	11	U		8.5	U		1.8	U		1.8	U	
2-HEXANONE	41	U		32	U		6.8	U		6.8	U	
4-CHLOROTOLUENE	18	U		14	U		3	U		3	U	
4-ISOPROPYLTOLUENE	12	U		9.2	U		2	U		2	U	
4-METHYL-2-PENTANONE	32	U		25	U		5.3	U		5.3	U	
ACETONE	110	U		85	U		18	U		18	U	
BENZENE	13	U		16	J	P	2.9	J	P	2.2	J	P
BROMOBENZENE	13	U		10	U		2.2	U		2.2	U	
BROMOCHLOROMETHANE	29	U		22	U		4.8	U		4.8	U	
BROMODICHLOROMETHANE	15	U		12	U		2.5	U		2.5	U	
BROMOFORM	64	U		49	U		11	U		11	U	
BROMOMETHANE	41	U		32	U		6.8	U		6.8	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			TB-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-4		
FRACTION: OV	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	J	P	0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U	
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: 240-10925-1	LAB_ID	240-10925-5			240-10925-6			240-10925-3			240-10925-2		
FRACTION: OV	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		13	U		10	U		2.2	U		2.2	U	
CARBON TETRACHLORIDE		13	U		10	U		2.2	U		2.2	U	
CHLOROBENZENE		15	U		12	U		2.5	U		2.5	U	
CHLORODIBROMOMETHANE		18	U		14	U		3	U		3	U	
CHLOROETHANE		29	U		22	U		4.8	U		4.8	U	
CHLOROFORM		16	U		12	U		2.7	U		2.7	U	
CHLOROMETHANE		30	U		23	U		5	U		5	U	
CIS-1,2-DICHLOROETHENE		3100			820			530			370		
CIS-1,3-DICHLOROPROPENE		14	U		11	U		2.3	U		2.3	U	
DIBROMOMETHANE		28	U		22	U		4.7	U		4.7	U	
DICHLORODIFLUOROMETHANE		31	U		24	U		5.2	U		5.2	U	
DIISOPROPYL ETHER		150	U		120	U		25	U		25	U	
ETHYL TERT-BUTYL ETHER		11	U		8.5	U		1.8	U		1.8	U	
ETHYLBENZENE		17	U		13	U		2.8	U		2.8	U	
HEXACHLOROBUTADIENE		30	U		23	U		5	U		5	U	
ISOPROPYLBENZENE		13	U		10	U		2.2	U		2.2	U	
M+P-XYLENES		24	U		18	U		4	U		4	U	
METHYL TERT-BUTYL ETHER		17	U		13	U		2.8	U		2.8	U	
METHYLCYCLOHEXANE					10	J	PZ1	3.5	J	PZ1			
METHYLENE CHLORIDE		49	J	P	25	U		5.5	U		5.5	U	
NAPHTHALENE		24	U		18	U		4	U		4	U	
N-BUTYLBENZENE		12	U		9.2	U		2	U		2	U	
N-PROPYLBENZENE		14	U		11	U		2.3	U		2.3	U	
O-XYLENE		14	U		11	U		2.3	U		2.3	U	
SEC-BUTYLBENZENE		13	U		10	U		2.2	U		2.2	U	
SILANOL, TRIMETHYL-													
STYRENE		11	U		8.5	U		1.8	U		1.8	U	
TERT-AMYL METHYL ETHER		6.7	U		5.2	U		1.1	U		1.1	U	
TERT-BUTYLBENZENE		13	U		10	U		2.2	U		2.2	U	
TERTIARY-BUTYL ALCOHOL		390	UR	C	300	UR	C	65	UR	C	65	UR	C
TETRACHLOROETHENE		29	U		22	U		4.8	U		4.8	U	
TOLUENE		43	J	P	10	U		2.2	U		2.2	U	
TOTAL XYLENES		28	U		22	U		4.7	U		4.7	U	
TRANS-1,2-DICHLOROETHENE		23	J	P	15	U		3.6	J	P	3.2	U	
TRANS-1,3-DICHLOROPROPENE		19	U		15	U		3.2	U		3.2	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			TB-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-4		
FRACTION: OV	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		1.2			0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U	
METHYLCYCLOHEXANE							
METHYLENE CHLORIDE		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
SILANOL, TRIMETHYL-		1.2	R	Z2	1.4	R	Z2
STYRENE		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: 240-10925-1	LAB_ID	240-10925-5			240-10925-6			240-10925-3			240-10925-2		
FRACTION: OV	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		2300			110			570			530		
TRICHLOROFLUOROMETHANE		21	U		16	U		3.5	U		3.5	U	
VINYL ACETATE		19	UR	C	15	UR	C	3.2	UR	C	3.2	UR	C
VINYL CHLORIDE		1300			2200			270			210		

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			TB-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-4		
FRACTION: OV	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		0.33	J	P	0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: 240-10925-1	LAB_ID	240-10925-5			240-10925-6			240-10925-3			240-10925-2		
FRACTION: OS	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		68			38			47			42		

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			MSA-MW32S-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-7		
FRACTION: OS	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		13			0.48	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: 240-10925-1	LAB_ID	240-10925-5			240-10925-6			240-10925-3			240-10925-2		
FRACTION: MISC	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U		0.082	U		0.082	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			MSA-MW32S-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-7		
FRACTION: PET	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		42	B	A	46	B	A
TPH (C10-C32)		230	U		230	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			MSA-MW32S-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-7		
FRACTION: MISC	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U	

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1A-050212 | Lab Sample ID: 240-10925-5

Matrix: Water | Lab File ID: UXM5710.D

Analysis Method: 8260C | Date Collected: 05/02/2012 10:16

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 17:42

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	100	U	100	23
71-55-6	1,1,1-Trichloroethane	100	U	100	22
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	100	U	100	28
75-34-3	1,1-Dichloroethane	100	U	100	15
75-35-4	1,1-Dichloroethene	100	U	100	19
563-58-6	1,1-Dichloropropene	100	U	100	13
87-61-6	1,2,3-Trichlorobenzene	100	U	100	17
96-18-4	1,2,3-Trichloropropane	100	U	100	43
526-73-8	1,2,3-Trimethylbenzene	500	U	500	0.59
120-82-1	1,2,4-Trichlorobenzene	100	U	100	15
95-63-6	1,2,4-Trimethylbenzene	100	U	100	12
96-12-8	1,2-Dibromo-3-Chloropropane	200	U	200	67
95-50-1	1,2-Dichlorobenzene	100	U	100	13
107-06-2	1,2-Dichloroethane	100	U	100	22
78-87-5	1,2-Dichloropropane	100	U	100	18
541-73-1	1,3-Dichlorobenzene	100	U	100	14
142-28-9	1,3-Dichloropropane	100	U	100	16
106-46-7	1,4-Dichlorobenzene	100	U	100	13
594-20-7	2,2-Dichloropropane	100	U	100	13
110-75-8	2-Chloroethyl vinyl ether	1000	U	1000	99
95-49-8	2-Chlorotoluene	100	U	100	11
591-78-6	2-Hexanone	1000	U	1000	41
108-86-1	Bromobenzene	100	U	100	13
74-97-5	Bromochloromethane	100	U	100	29
106-43-4	4-Chlorotoluene	100	U	100	18
99-87-6	p-Isopropyltoluene	100	U	100	12
67-64-1	Acetone	1000	U	1000	110
71-43-2	Benzene	100	U	100	13
75-25-2	Bromoform	100	U	100	64
74-83-9	Bromomethane	100	U	100	41
75-15-0	Carbon disulfide	100	U	100	13
56-23-5	Carbon tetrachloride	100	U	100	13
108-90-7	Chlorobenzene	100	U	100	15
75-00-3	Chloroethane	100	U	100	29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1A-050212 | Lab Sample ID: 240-10925-5

Matrix: Water | Lab File ID: UXM5710.D

Analysis Method: 8260C | Date Collected: 05/02/2012 10:16

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 17:42

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	100	U	100	16
74-87-3	Chloromethane	100	U	100	30
156-59-2	cis-1,2-Dichloroethene	3100		100	17
10061-01-5	cis-1,3-Dichloropropene	100	U	100	14
87-68-3	Hexachlorobutadiene	100	U	100	30
74-95-3	Dibromomethane	100	U	100	28
75-27-4	Bromodichloromethane	100	U	100	15
75-71-8	Dichlorodifluoromethane	100	U	100	31
100-41-4	Ethylbenzene	100	U	100	17
106-93-4	1,2-Dibromoethane	100	U	100	24
108-20-3	Diisopropyl ether	1000	U	1000	150
91-20-3	Naphthalene	100	U	100	24
179601-23-1	m-Xylene & p-Xylene	200	U	200	24
104-51-8	n-Butylbenzene	100	U	100	12
98-82-8	Isopropylbenzene	100	U	100	13
103-65-1	n-Propylbenzene	100	U	100	14
78-93-3	2-Butanone	1000	U	1000	57
108-10-1	4-Methyl-2-pentanone	1000	U	1000	32
135-98-8	sec-Butylbenzene	100	U	100	13
1634-04-4	Methyl tert-butyl ether	500	U	500	17
994-05-8	Tert-amyl-methyl ether (TAME)	500	U	500	6.7
75-09-2	Methylene Chloride	49	J	100	33
95-47-6	o-Xylene	100	U	100	14
100-42-5	Styrene	100	U	100	11
637-92-3	Ethyl-t-butyl ether (ETBE)	500	U	500	11
98-06-6	tert-Butylbenzene	100	U	100	13
127-18-4	Tetrachloroethene	100	U	100	29
108-88-3	Toluene	43	J	100	13
156-60-5	trans-1,2-Dichloroethene	23	J	100	19
10061-02-6	trans-1,3-Dichloropropene	100	U	100	19
79-01-6	Trichloroethene	2300		100	17
75-69-4	Trichlorofluoromethane	100	U	100	21
108-05-4	Vinyl acetate	200	U	200	19
75-01-4	Vinyl chloride	1300		100	22
75-65-0	tert-Butyl alcohol	5000	U	5000	390
1330-20-7	Xylenes, Total	200	U	200	28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1A-050212 Lab Sample ID: 240-10925-5

Matrix: Water Lab File ID: UXM5710.D

Analysis Method: 8260C Date Collected: 05/02/2012 10:16

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 17:42

Soil Aliquot Vol: Dilution Factor: 100

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	100	U	100	18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	93		63-129
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
2037-26-5	Toluene-d8 (Surr)	91		74-115
1868-53-7	Dibromofluoromethane (Surr)	90		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1A-050212 Lab Sample ID: 240-10925-5

Matrix: Water Lab File ID: UXM5710.D

Analysis Method: 8260C Date Collected: 05/02/2012 10:16

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 17:42

Soil Aliquot Vol: Dilution Factor: 100

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1B-050212 | Lab Sample ID: 240-10925-6

Matrix: Water | Lab File ID: UXM5750.D

Analysis Method: 8260C | Date Collected: 05/02/2012 11:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 13:17

Soil Aliquot Vol: | Dilution Factor: 76.92

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	77	U	77	18
71-55-6	1,1,1-Trichloroethane	77	U	77	17
79-34-5	1,1,2,2-Tetrachloroethane	77	U	77	14
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	77	U	77	22
75-34-3	1,1-Dichloroethane	77	U	77	12
75-35-4	1,1-Dichloroethene	77	U	77	15
563-58-6	1,1-Dichloropropene	77	U	77	10
87-61-6	1,2,3-Trichlorobenzene	77	U	77	13
96-18-4	1,2,3-Trichloropropane	77	U	77	33
526-73-8	1,2,3-Trimethylbenzene	380	U	380	0.45
120-82-1	1,2,4-Trichlorobenzene	77	U	77	12
95-63-6	1,2,4-Trimethylbenzene	77	U	77	9.2
96-12-8	1,2-Dibromo-3-Chloropropane	150	U	150	52
95-50-1	1,2-Dichlorobenzene	77	U	77	10
107-06-2	1,2-Dichloroethane	77	U	77	17
78-87-5	1,2-Dichloropropane	77	U	77	14
541-73-1	1,3-Dichlorobenzene	77	U	77	11
142-28-9	1,3-Dichloropropane	77	U	77	12
106-46-7	1,4-Dichlorobenzene	77	U	77	10
594-20-7	2,2-Dichloropropane	77	U	77	10
110-75-8	2-Chloroethyl vinyl ether	770	U	770	76
95-49-8	2-Chlorotoluene	77	U	77	8.5
591-78-6	2-Hexanone	770	U	770	32
108-86-1	Bromobenzene	77	U	77	10
74-97-5	Bromochloromethane	77	U	77	22
106-43-4	4-Chlorotoluene	77	U	77	14
99-87-6	p-Isopropyltoluene	77	U	77	9.2
67-64-1	Acetone	770	U	770	85
71-43-2	Benzene	16	J	77	10
75-25-2	Bromoform	77	U	77	49
74-83-9	Bromomethane	77	U	77	32
75-15-0	Carbon disulfide	77	U	77	10
56-23-5	Carbon tetrachloride	77	U	77	10
108-90-7	Chlorobenzene	77	U	77	12
75-00-3	Chloroethane	77	U	77	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1B-050212 Lab Sample ID: 240-10925-6

Matrix: Water Lab File ID: UXM5750.D

Analysis Method: 8260C Date Collected: 05/02/2012 11:15

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 13:17

Soil Aliquot Vol: Dilution Factor: 76.92

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	77	U	77	12
74-87-3	Chloromethane	77	U	77	23
156-59-2	cis-1,2-Dichloroethene	820		77	13
10061-01-5	cis-1,3-Dichloropropene	77	U	77	11
87-68-3	Hexachlorobutadiene	77	U	77	23
74-95-3	Dibromomethane	77	U	77	22
75-27-4	Bromodichloromethane	77	U	77	12
75-71-8	Dichlorodifluoromethane	77	U	77	24
100-41-4	Ethylbenzene	77	U	77	13
106-93-4	1,2-Dibromoethane	77	U	77	18
108-20-3	Diisopropyl ether	770	U	770	120
91-20-3	Naphthalene	77	U	77	18
179601-23-1	m-Xylene & p-Xylene	150	U	150	18
104-51-8	n-Butylbenzene	77	U	77	9.2
98-82-8	Isopropylbenzene	77	U	77	10
103-65-1	n-Propylbenzene	77	U	77	11
78-93-3	2-Butanone	770	U	770	44
108-10-1	4-Methyl-2-pentanone	770	U	770	25
135-98-8	sec-Butylbenzene	77	U	77	10
1634-04-4	Methyl tert-butyl ether	380	U	380	13
994-05-8	Tert-amyl-methyl ether (TAME)	380	U	380	5.2
75-09-2	Methylene Chloride	77	U	77	25
95-47-6	o-Xylene	77	U	77	11
100-42-5	Styrene	77	U	77	8.5
637-92-3	Ethyl-t-butyl ether (ETBE)	380	U	380	8.5
98-06-6	tert-Butylbenzene	77	U	77	10
127-18-4	Tetrachloroethene	77	U	77	22
108-88-3	Toluene	77	U	77	10
156-60-5	trans-1,2-Dichloroethene	77	U	77	15
10061-02-6	trans-1,3-Dichloropropene	77	U	77	15
79-01-6	Trichloroethene	110		77	13
75-69-4	Trichlorofluoromethane	77	U	77	16
108-05-4	Vinyl acetate	150	U	150	15
75-01-4	Vinyl chloride	2200		77	17
75-65-0	tert-Butyl alcohol	3800	U	3800	300
1330-20-7	Xylenes, Total	150	U	150	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1B-050212 Lab Sample ID: 240-10925-6

Matrix: Water Lab File ID: UXM5750.D

Analysis Method: 8260C Date Collected: 05/02/2012 11:15

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 13:17

Soil Aliquot Vol: Dilution Factor: 76.92

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	77	U	77	14

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	89		63-129
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
2037-26-5	Toluene-d8 (Surr)	88		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1B-050212 Lab Sample ID: 240-10925-6

Matrix: Water Lab File ID: UXM5750.D

Analysis Method: 8260C Date Collected: 05/02/2012 11:15

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 13:17

Soil Aliquot Vol: Dilution Factor: 76.92

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 1 TIC Result Total: 10

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.20	10	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8D-050212 | Lab Sample ID: 240-10925-3

Matrix: Water | Lab File ID: UXM5708.D

Analysis Method: 8260C | Date Collected: 05/02/2012 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 16:57

Soil Aliquot Vol: | Dilution Factor: 16.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	17	U	17	3.8
71-55-6	1,1,1-Trichloroethane	17	U	17	3.7
79-34-5	1,1,2,2-Tetrachloroethane	17	U	17	3.0
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	17	U	17	4.7
75-34-3	1,1-Dichloroethane	17	U	17	2.5
75-35-4	1,1-Dichloroethene	17	U	17	3.2
563-58-6	1,1-Dichloropropene	17	U	17	2.2
87-61-6	1,2,3-Trichlorobenzene	17	U	17	2.8
96-18-4	1,2,3-Trichloropropane	17	U	17	7.2
526-73-8	1,2,3-Trimethylbenzene	83	U	83	0.098
120-82-1	1,2,4-Trichlorobenzene	17	U	17	2.5
95-63-6	1,2,4-Trimethylbenzene	17	U	17	2.0
96-12-8	1,2-Dibromo-3-Chloropropane	33	U	33	11
95-50-1	1,2-Dichlorobenzene	17	U	17	2.2
107-06-2	1,2-Dichloroethane	17	U	17	3.7
78-87-5	1,2-Dichloropropane	17	U	17	3.0
541-73-1	1,3-Dichlorobenzene	17	U	17	2.3
142-28-9	1,3-Dichloropropane	17	U	17	2.7
106-46-7	1,4-Dichlorobenzene	17	U	17	2.2
594-20-7	2,2-Dichloropropane	17	U	17	2.2
110-75-8	2-Chloroethyl vinyl ether	170	U	170	17
95-49-8	2-Chlorotoluene	17	U	17	1.8
591-78-6	2-Hexanone	170	U	170	6.8
108-86-1	Bromobenzene	17	U	17	2.2
74-97-5	Bromochloromethane	17	U	17	4.8
106-43-4	4-Chlorotoluene	17	U	17	3.0
99-87-6	p-Isopropyltoluene	17	U	17	2.0
67-64-1	Acetone	170	U	170	18
71-43-2	Benzene	2.9	J	17	2.2
75-25-2	Bromoform	17	U	17	11
74-83-9	Bromomethane	17	U	17	6.8
75-15-0	Carbon disulfide	17	U	17	2.2
56-23-5	Carbon tetrachloride	17	U	17	2.2
108-90-7	Chlorobenzene	17	U	17	2.5
75-00-3	Chloroethane	17	U	17	4.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8D-050212 Lab Sample ID: 240-10925-3

Matrix: Water Lab File ID: UXM5708.D

Analysis Method: 8260C Date Collected: 05/02/2012 13:45

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 16:57

Soil Aliquot Vol: Dilution Factor: 16.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	17	U	17	2.7
74-87-3	Chloromethane	17	U	17	5.0
156-59-2	cis-1,2-Dichloroethene	530		17	2.8
10061-01-5	cis-1,3-Dichloropropene	17	U	17	2.3
87-68-3	Hexachlorobutadiene	17	U	17	5.0
74-95-3	Dibromomethane	17	U	17	4.7
75-27-4	Bromodichloromethane	17	U	17	2.5
75-71-8	Dichlorodifluoromethane	17	U	17	5.2
100-41-4	Ethylbenzene	17	U	17	2.8
106-93-4	1,2-Dibromoethane	17	U	17	4.0
108-20-3	Diisopropyl ether	170	U	170	25
91-20-3	Naphthalene	17	U	17	4.0
179601-23-1	m-Xylene & p-Xylene	33	U	33	4.0
104-51-8	n-Butylbenzene	17	U	17	2.0
98-82-8	Isopropylbenzene	17	U	17	2.2
103-65-1	n-Propylbenzene	17	U	17	2.3
78-93-3	2-Butanone	170	U	170	9.5
108-10-1	4-Methyl-2-pentanone	170	U	170	5.3
135-98-8	sec-Butylbenzene	17	U	17	2.2
1634-04-4	Methyl tert-butyl ether	83	U	83	2.8
994-05-8	Tert-amyl-methyl ether (TAME)	83	U	83	1.1
75-09-2	Methylene Chloride	17	U	17	5.5
95-47-6	o-Xylene	17	U	17	2.3
100-42-5	Styrene	17	U	17	1.8
637-92-3	Ethyl-t-butyl ether (ETBE)	83	U	83	1.8
98-06-6	tert-Butylbenzene	17	U	17	2.2
127-18-4	Tetrachloroethene	17	U	17	4.8
108-88-3	Toluene	17	U	17	2.2
156-60-5	trans-1,2-Dichloroethene	3.6	J	17	3.2
10061-02-6	trans-1,3-Dichloropropene	17	U	17	3.2
79-01-6	Trichloroethene	570		17	2.8
75-69-4	Trichlorofluoromethane	17	U	17	3.5
108-05-4	Vinyl acetate	33	U	33	3.2
75-01-4	Vinyl chloride	270		17	3.7
75-65-0	tert-Butyl alcohol	830	U	830	65
1330-20-7	Xylenes, Total	33	U	33	4.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8D-050212 | Lab Sample ID: 240-10925-3

Matrix: Water | Lab File ID: UXM5708.D

Analysis Method: 8260C | Date Collected: 05/02/2012 13:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 16:57

Soil Aliquot Vol: | Dilution Factor: 16.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	17	U	17	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
2037-26-5	Toluene-d8 (Surr)	89		74-115
1868-53-7	Dibromofluoromethane (Surr)	88		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8D-050212 Lab Sample ID: 240-10925-3

Matrix: Water Lab File ID: UXM5708.D

Analysis Method: 8260C Date Collected: 05/02/2012 13:45

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 16:57

Soil Aliquot Vol: Dilution Factor: 16.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	3.5	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8I-050212 | Lab Sample ID: 240-10925-2

Matrix: Water | Lab File ID: UXM5707.D

Analysis Method: 8260C | Date Collected: 05/02/2012 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 16:34

Soil Aliquot Vol: | Dilution Factor: 16.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	17	U	17	3.8
71-55-6	1,1,1-Trichloroethane	17	U	17	3.7
79-34-5	1,1,2,2-Tetrachloroethane	17	U	17	3.0
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	17	U	17	4.7
75-34-3	1,1-Dichloroethane	17	U	17	2.5
75-35-4	1,1-Dichloroethene	17	U	17	3.2
563-58-6	1,1-Dichloropropene	17	U	17	2.2
87-61-6	1,2,3-Trichlorobenzene	17	U	17	2.8
96-18-4	1,2,3-Trichloropropane	17	U	17	7.2
526-73-8	1,2,3-Trimethylbenzene	83	U	83	0.098
120-82-1	1,2,4-Trichlorobenzene	17	U	17	2.5
95-63-6	1,2,4-Trimethylbenzene	17	U	17	2.0
96-12-8	1,2-Dibromo-3-Chloropropane	33	U	33	11
95-50-1	1,2-Dichlorobenzene	17	U	17	2.2
107-06-2	1,2-Dichloroethane	4.9	J	17	3.7
78-87-5	1,2-Dichloropropane	17	U	17	3.0
541-73-1	1,3-Dichlorobenzene	17	U	17	2.3
142-28-9	1,3-Dichloropropane	17	U	17	2.7
106-46-7	1,4-Dichlorobenzene	17	U	17	2.2
594-20-7	2,2-Dichloropropane	17	U	17	2.2
110-75-8	2-Chloroethyl vinyl ether	170	U	170	17
95-49-8	2-Chlorotoluene	17	U	17	1.8
591-78-6	2-Hexanone	170	U	170	6.8
108-86-1	Bromobenzene	17	U	17	2.2
74-97-5	Bromochloromethane	17	U	17	4.8
106-43-4	4-Chlorotoluene	17	U	17	3.0
99-87-6	p-Isopropyltoluene	17	U	17	2.0
67-64-1	Acetone	170	U	170	18
71-43-2	Benzene	2.2	J	17	2.2
75-25-2	Bromoform	17	U	17	11
74-83-9	Bromomethane	17	U	17	6.8
75-15-0	Carbon disulfide	17	U	17	2.2
56-23-5	Carbon tetrachloride	17	U	17	2.2
108-90-7	Chlorobenzene	17	U	17	2.5
75-00-3	Chloroethane	17	U	17	4.8

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8I-050212 | Lab Sample ID: 240-10925-2

Matrix: Water | Lab File ID: UXM5707.D

Analysis Method: 8260C | Date Collected: 05/02/2012 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 16:34

Soil Aliquot Vol: | Dilution Factor: 16.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	17	U	17	2.7
74-87-3	Chloromethane	17	U	17	5.0
156-59-2	cis-1,2-Dichloroethene	370		17	2.8
10061-01-5	cis-1,3-Dichloropropene	17	U	17	2.3
87-68-3	Hexachlorobutadiene	17	U	17	5.0
74-95-3	Dibromomethane	17	U	17	4.7
75-27-4	Bromodichloromethane	17	U	17	2.5
75-71-8	Dichlorodifluoromethane	17	U	17	5.2
100-41-4	Ethylbenzene	17	U	17	2.8
106-93-4	1,2-Dibromoethane	17	U	17	4.0
108-20-3	Diisopropyl ether	170	U	170	25
91-20-3	Naphthalene	17	U	17	4.0
179601-23-1	m-Xylene & p-Xylene	33	U	33	4.0
104-51-8	n-Butylbenzene	17	U	17	2.0
98-82-8	Isopropylbenzene	17	U	17	2.2
103-65-1	n-Propylbenzene	17	U	17	2.3
78-93-3	2-Butanone	170	U	170	9.5
108-10-1	4-Methyl-2-pentanone	170	U	170	5.3
135-98-8	sec-Butylbenzene	17	U	17	2.2
1634-04-4	Methyl tert-butyl ether	83	U	83	2.8
994-05-8	Tert-amyl-methyl ether (TAME)	83	U	83	1.1
75-09-2	Methylene Chloride	17	U	17	5.5
95-47-6	o-Xylene	17	U	17	2.3
100-42-5	Styrene	17	U	17	1.8
637-92-3	Ethyl-t-butyl ether (ETBE)	83	U	83	1.8
98-06-6	tert-Butylbenzene	17	U	17	2.2
127-18-4	Tetrachloroethene	17	U	17	4.8
108-88-3	Toluene	17	U	17	2.2
156-60-5	trans-1,2-Dichloroethene	17	U	17	3.2
10061-02-6	trans-1,3-Dichloropropene	17	U	17	3.2
79-01-6	Trichloroethene	530		17	2.8
75-69-4	Trichlorofluoromethane	17	U	17	3.5
108-05-4	Vinyl acetate	33	U	33	3.2
75-01-4	Vinyl chloride	210		17	3.7
75-65-0	tert-Butyl alcohol	830	U	830	65
1330-20-7	Xylenes, Total	33	U	33	4.7

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8I-050212 | Lab Sample ID: 240-10925-2

Matrix: Water | Lab File ID: UXM5707.D

Analysis Method: 8260C | Date Collected: 05/02/2012 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 16:34

Soil Aliquot Vol: | Dilution Factor: 16.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	17	U	17	3.0

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
460-00-4	4-Bromofluorobenzene (Surr)	94		66-117
2037-26-5	Toluene-d8 (Surr)	91		74-115
1868-53-7	Dibromofluoromethane (Surr)	89		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8I-050212 Lab Sample ID: 240-10925-2

Matrix: Water Lab File ID: UXM5707.D

Analysis Method: 8260C Date Collected: 05/02/2012 12:40

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 16:34

Soil Aliquot Vol: Dilution Factor: 16.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8S-050212 Lab Sample ID: 240-10925-1

Matrix: Water Lab File ID: UXM5706.D

Analysis Method: 8260C Date Collected: 05/02/2012 10:50

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 16:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	0.22	J	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8S-050212 | Lab Sample ID: 240-10925-1

Matrix: Water | Lab File ID: UXM5706.D

Analysis Method: 8260C | Date Collected: 05/02/2012 10:50

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 16:11

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.2		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	0.33	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8S-050212 Lab Sample ID: 240-10925-1

Matrix: Water Lab File ID: UXM5706.D

Analysis Method: 8260C Date Collected: 05/02/2012 10:50

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 16:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
460-00-4	4-Bromofluorobenzene (Surr)	102		66-117
2037-26-5	Toluene-d8 (Surr)	99		74-115
1868-53-7	Dibromofluoromethane (Surr)	99		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8S-050212 Lab Sample ID: 240-10925-1

Matrix: Water Lab File ID: UXM5706.D

Analysis Method: 8260C Date Collected: 05/02/2012 10:50

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 16:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 2 TIC Result Total: 25.2

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.2	T J N
123-91-1	1,4-Dioxane	6.32	24	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: TB-050212 Lab Sample ID: 240-10925-4

Matrix: Water Lab File ID: UXM5709.D

Analysis Method: 8260C Date Collected: 05/02/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: TB-050212 | Lab Sample ID: 240-10925-4

Matrix: Water | Lab File ID: UXM5709.D

Analysis Method: 8260C | Date Collected: 05/02/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: TB-050212 | Lab Sample ID: 240-10925-4

Matrix: Water | Lab File ID: UXM5709.D

Analysis Method: 8260C | Date Collected: 05/02/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 17:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
460-00-4	4-Bromofluorobenzene (Surr)	93		66-117
2037-26-5	Toluene-d8 (Surr)	93		74-115
1868-53-7	Dibromofluoromethane (Surr)	97		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: TB-050212 Lab Sample ID: 240-10925-4

Matrix: Water Lab File ID: UXM5709.D

Analysis Method: 8260C Date Collected: 05/02/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 17:20

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.4

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.4	T J N

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1A-050212 | Lab Sample ID: 240-10925-5

Matrix: Water | Lab File ID: 20509026.D

Analysis Method: 8270C | Date Collected: 05/02/2012 10:16

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1000(mL) | Date Analyzed: 05/09/2012 19:09

Con. Extract Vol.: 2(mL) | Dilution Factor: 2

Injection Volume: 1(uL) | Level: ~~(low/med)~~ Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43287 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	68		2.0	0.98

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	71		28-110
367-12-4	2-Fluorophenol (Surr)	70		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	128	X	22-120
4165-60-0	Nitrobenzene-d5 (Surr)	64		27-111
4165-62-2	Phenol-d5 (Surr)	78		10-110
1718-51-0	Terphenyl-d14 (Surr)	89		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW1B-050212 | Lab Sample ID: 240-10925-6

Matrix: Water | Lab File ID: 20510011.D

Analysis Method: 8270C | Date Collected: 05/02/2012 11:15

Extract. Method: 3520C | Date Extracted: 05/07/2012 09:27

Sample wt/vol: 1020(mL) | Date Analyzed: 05/10/2012 11:44

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43490 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	38		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	49		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	67		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	47		10-110
1718-51-0	Terphenyl-d14 (Surr)	71		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8D-050212 | Lab Sample ID: 240-10925-3

Matrix: Water | Lab File ID: 20508034.D

Analysis Method: 8270C | Date Collected: 05/02/2012 13:45

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1040(mL) | Date Analyzed: 05/08/2012 18:58

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	47		0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		28-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	55		27-111
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	75		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8I-050212 | Lab Sample ID: 240-10925-2

Matrix: Water | Lab File ID: 20508032.D

Analysis Method: 8270C | Date Collected: 05/02/2012 12:40

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1050(mL) | Date Analyzed: 05/08/2012 18:21

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	42		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	57		28-110
367-12-4	2-Fluorophenol (Surr)	53		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	87		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	53		27-111
4165-62-2	Phenol-d5 (Surr)	56		10-110
1718-51-0	Terphenyl-d14 (Surr)	75		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8S-050212 | Lab Sample ID: 240-10925-1

Matrix: Water | Lab File ID: 20508031.D

Analysis Method: 8270C | Date Collected: 05/02/2012 10:50

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1040(mL) | Date Analyzed: 05/08/2012 18:02

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	13		0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	53		28-110
367-12-4	2-Fluorophenol (Surr)	52		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	79		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	57		10-110
1718-51-0	Terphenyl-d14 (Surr)	70		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-MW32S-050212 | Lab Sample ID: 240-10925-7

Matrix: Water | Lab File ID: 20510010.D

Analysis Method: 8270C | Date Collected: 05/02/2012 13:18

Extract. Method: 3520C | Date Extracted: 05/07/2012 09:27

Sample wt/vol: 1020(mL) | Date Analyzed: 05/10/2012 11:26

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43490 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.98	U	0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	52		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	54		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	52		27-111
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	60		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8S-050212 | Lab Sample ID: 240-10925-1

Matrix: Water | Lab File ID: YF050715.D

Analysis Method: 8015B | Date Collected: 05/02/2012 10:50

Sample wt/vol: 5(mL) | Date Analyzed: 05/07/2012 19:26

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42995 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10) GRO	42	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	60		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-MW32S-050212 Lab Sample ID: 240-10925-7

Matrix: Water Lab File ID: YF050717.D

Analysis Method: 8015B Date Collected: 05/02/2012 13:18

Sample wt/vol: 5(mL) Date Analyzed: 05/07/2012 20:45

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 42995 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10) GRO	46	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	55		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8S-050212 | Lab Sample ID: 240-10925-1

Matrix: Water | Lab File ID: P5F05081.D

Analysis Method: 8015B | Date Collected: 05/02/2012 10:50

Extraction Method: 3510C | Date Extracted: 05/04/2012 12:16

Sample wt/vol: 1020(mL) | Date Analyzed: 05/07/2012 13:15

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42964 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32) DRO	490	U	490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	62		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-MW32S-050212 | Lab Sample ID: 240-10925-7

Matrix: Water | Lab File ID: P5F05082.D

Analysis Method: 8015B | Date Collected: 05/02/2012 13:18

Extraction Method: 3510C | Date Extracted: 05/04/2012 12:16

Sample wt/vol: 1030(mL) | Date Analyzed: 05/07/2012 13:45

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42964 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32) DRO	490	U	490	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	54		10-110

TestAmerica Canton

Client Sample ID: MSA-DMW1A-050212

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E040502-004	**Work Order #...:**	MTEA41AA	**Matrix.....:**	WATER
Date Sampled...:	05/02/12	**Date Received..:**	05/04/12		
Prep Date.....:	05/10/12	**Analysis Date..:**	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW1B-050212

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E040502-005	**Work Order #...:** MTEA51AA		**Matrix.....:** WATER	
Date Sampled...: 05/02/12	**Date Received..:** 05/04/12			
Prep Date.....: 05/10/12	**Analysis Date..:** 05/19/12			
Prep Batch #...: 2131072				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW8D-050212

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E040502-003	**Work Order #...:**	MTEA31AA	**Matrix.....:**	WATER
Date Sampled...:	05/02/12	**Date Received..:**	05/04/12		
Prep Date.....:	05/10/12	**Analysis Date..:**	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW8I-050212

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E040502-002	**Work Order #...:**	MTEA21AA	**Matrix.....:**	WATER
Date Sampled...:	05/02/12	**Date Received..:**	05/04/12		
Prep Date.....:	05/10/12	**Analysis Date..:**	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW8S-050212

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E040502-001 Work Order #...: MTEA11AA Matrix.....: WATER
Date Sampled...: 05/02/12 Date Received..: 05/04/12
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1 Method.....: SW846 6850

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW32S-050212

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E040502-006	Work Order #...: MTEA61AA		Matrix.....: WATER	
Date Sampled...: 05/02/12	Date Received..: 05/04/12			
Prep Date.....: 05/10/12	Analysis Date..: 05/19/12			
Prep Batch #...: 2131072				
Dilution Factor: 1	Method.....: SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

APPENDIX C

SUPPORT DOCUMENTATION

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HGF	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HGF	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/7/2012	5/8/2012	5	1	6
MF	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
PCL	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
OS	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/5/2012	5/8/2012	3	3	6
OS	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/5/2012	5/8/2012	3	3	6
OS	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/5/2012	5/8/2012	3	3	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/7/2012	5/10/2012	5	3	8
OS	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/5/2012	5/9/2012	3	4	7
OS	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/7/2012	5/10/2012	5	3	8
OV	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	TB-050212	240-10925-4	TB	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	TB-050212	240-10925-4	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/11/2012	5/11/2012	9	0	9
OV	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
DRO	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/4/2012	5/7/2012	2	3	5
DRO	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/4/2012	5/7/2012	2	3	5
GRO	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/7/2012	5/7/2012	5	0	5
GRO	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/7/2012	5/7/2012	5	0	5

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact:	COC No: 006082
Address: 20251 Century Blvd Ste 260	Telephone: (301)528-5552	Telephone: (703)342-8384	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apanavage@tetratech.com	Analysis Turnaround Time (In BUS days)	Analyses	For lab use only
Phone: (301)528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab sampling ☐
Project Name: MSA GW Sampling	Method of Shipment/Carrier:			Job/SDG No.:
Project Number: 112I(04021-03	Shipping/Tracking No:			

PO#			Matrix					Containers & Preservatives							Filtered Sample (Y/N)	Composite/Grab	Analyses										Sample Specific Notes / Special Instructions:
Sample Identification	Sample Date	Sample Time	Air	Aqueous	Sediment	Solid	Other:	H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:			VOCs	Total Metals	Dissolved Metals	1,4-Dioxane	Perchlorate	TPH GRO	TPH DRO					
MSA-DMW8S-050212	5/2/12	1050		X					2	5			5				X	X	X	X	X	X	X					
MSA-DMW8I-050212		1240		X					2	3			3				X	X	X	X	X							
MSA-DMW8D-050212		1345		X					2	3			3				X	X	X	X	X							
TB-050212		—		X						2							X											
MSA-DMW1A-050212		1016		X					2	3			3				X	X	X	X	X							
MSA-DMW1B-050212		1115		X					2	3			3				X	X	X	X	X							
MSA-MW32S-050212		1318		X					2	5			5				X	X	X	X	X	X						

Possible Hazard Identification
☑ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☑ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company: Tetra Tech	Date/Time: 1503 / 5/2/12	Received by:	Company: TestAmerica	Date/Time: 5/2/12 / 1504
Relinquished by:	Company: TestAmerica	Date/Time: 1700 / 5/2/12	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL	Date/Time: 5/3/12 915

Page 557 of 560

05/30/2012

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TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10925

Client Tetra Tech Site Name _____ By: [signature] (Signature)

Cooler Received on 5/3/12 Opened on 5/3/12

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other Mult

Packing material used: ~~Bubble Wrap~~ Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C	X Multiple on Back
IR GUN# 5G	(CF -1°C)	Observed Sample Temp. 4.0 °C	Corrected Sample Temp. 3.0 °C	MJ 5/3
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. ~~Did custody papers accompany the sample(s)?~~ Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? MJ 5/3 ~~Yes~~ No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM PJO Date 5-3-12 by NS via Verbal Voice Mail Other

Concerning #14+15

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

per PM broken vials listed below, will only log for GRO, client to possibly resample VOC's.

COC not marked for DRO on MW32S @1318. but did recieve volume, will log per PM.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) 3 x 40mL sample MSA-MW32S-050212 were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

05/30/2012

SOP: NC-SC-00005, Sample Receiving

N:\QAQC\NARRATIVE\TestAmerica\Cooler Receipt TestAmerica\COOLER_TestAmerica_Rev 83_032612 jcs.doc

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
8S	<2 <2	5/8/12	AL
8I	<2 <2		
8D	<2 <2		
1A	<2 <2		
1B	<2 <2		
325	<2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client	4.0	3.0	5G	ice
client	3.4	2.4	1	1

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10925-1

Login Number: 10925
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	MW32S not marked for TPH DRO on COC.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	# VOC vials rec'd broken for MW32S.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Sample Summary

Client: TestAmerica North Canton
Project/Site: 240-10925

TestAmerica Job ID: G2E040502

Lab Sample ID	Client Sample ID	Matrix	Collected	Received
G2E040502001	MSA-DMW8S-050212	Water	05/02/12 10:50	05/04/12 09:10
G2E040502002	MSA-DMW8I-050212	Water	05/02/12 12:40	05/04/12 09:10
G2E040502003	MSA-DMW8D-050212	Water	05/02/12 13:45	05/04/12 09:10
G2E040502004	MSA-DMW1A-050212	Water	05/02/12 10:16	05/04/12 09:10
G2E040502005	MSA-DMW1B-050212	Water	05/02/12 11:15	05/04/12 09:10
G2E040502006	MSA-MW32S-050212	Water	05/02/12 13:18	05/04/12 09:10

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

G2E040502

Client Information (Sub Contract Lab)	Sampler:	Lab PM: O'Meara, Patrick J	Carrier Tracking No(s):	COC No.: 240-5672.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: patrick.omeara@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 240-10925-1
Address: 880 Riverside Parkway,	Due Date Requested: 5/21/2012			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel)	PO #:			
Email:	WO #:			
Project Name: MSA Groundwater Sampling	Project #: 24005772			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:
A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)
Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=wasteroil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ 6850 Perchlorate-West Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MSA-DMW8S-050212 (240-10925-1)	5/2/12	10:50 Eastern		Water			X	1	
MSA-DMW8I-050212 (240-10925-2)	5/2/12	12:40 Eastern		Water			X	1	
MSA-DMW8D-050212 (240-10925-3)	5/2/12	13:45 Eastern		Water			X	1	
MSA-DMW1A-050212 (240-10925-5)	5/2/12	10:16 Eastern		Water			X	1	
MSA-DMW1B-050212 (240-10925-6)	5/2/12	11:15 Eastern		Water			X	1	
MSA-MW32S-050212 (240-10925-7)	5/2/12	13:18 Eastern		Water			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:

Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
			[signature]	5/4/12 1500	TAC WS
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: ☒ Yes ☐ No
Custody Seal No.: 215745, 215744
Cooler Temperature(s) °C and Other Remarks: 1.5

Page 504 of 1560
05/24/2012
13

Method Summary

Client: TestAmerica North Canton
Project/Site: 240-10925

TestAmerica Job ID: G2E040502

Method	Method Description	Protocol	Laboratory
6850	6850, Perchlorate by LC/MS/MS	SW846	TAL WSC

Protocol References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Laboratory References:

TAL WSC = TestAmerica West Sacramento, 880 Riverside Parkway, West Sacramento, CA 95605, TEL (916)373-5600

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10925-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/03/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.4 and 3.0 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), TB-050212 (240-10925-4), MSA-DMW1A-050212 (240-10925-5) and MSA-DMW1B-050212 (240-10925-6) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/10/2012 and 05/11/2012.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43549/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43737/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2-Butanone and 2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10837-5 in batch 240-43549.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-11065-2 in batch 240-43737.

Refer to the QC report for details.

Samples MSA-DMW8I-050212 (240-10925-2)[16.67X], MSA-DMW8D-050212 (240-10925-3)[16.67X], MSA-DMW1A-050212 (240-10925-5)[100X] and MSA-DMW1B-050212 (240-10925-6)[76.92X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/05/2012 and 05/07/2012 and analyzed on 05/08/2012, 05/09/2012 and 05/10/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria high for MSA-DMW1A-050212 (240-10925-5).

1,4-Dioxane failed the recovery criteria low for the MS/MSD of sample 240-10842-8 in batch 240-43665. 1,4-Dioxane exceeded the rpd limit.

Refer to the QC report for details.

Sample MSA-DMW1A-050212 (240-10925-5)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following sample contained one acid and/or one base surrogate outside acceptance limits: MSA-DMW1A-050212 (240-10925-5). The laboratory's SOP allows one acid surrogate and/or one base surrogate to be outside acceptance limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Samples MSA-DMW8S-050212 (240-10925-1) and MSA-MW32S-050212 (240-10925-7) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/07/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42995/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples MSA-DMW8S-050212 (240-10925-1) and MSA-MW32S-050212 (240-10925-7) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/04/2012 and analyzed on 05/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/10/2012 and analyzed on 05/11/2012.

The following sample was diluted due to the nature of the sample matrix: MSA-DMW8I-050212 (240-10925-2). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/10/2012 and analyzed on 05/11/2012.

Several analytes were detected in method blank MB 240-43497/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The following sample was diluted due to the nature of the sample matrix: MSA-DMW8I-050212 (240-10925-2). Elevated reporting limits

(RLs) are provided.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/07/2012 and 05/11/2012 and analyzed on 05/08/2012 and 05/15/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/07/2012 and 05/11/2012 and analyzed on 05/08/2012 and 05/15/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10925-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10925-1	MSA-DMW8S-050212	Water	05/02/2012 1050	05/03/2012 0915
240-10925-2	MSA-DMW8I-050212	Water	05/02/2012 1240	05/03/2012 0915
240-10925-3	MSA-DMW8D-050212	Water	05/02/2012 1345	05/03/2012 0915
240-10925-4TB	TB-050212	Water	05/02/2012 0000	05/03/2012 0915
240-10925-5	MSA-DMW1A-050212	Water	05/02/2012 1016	05/03/2012 0915
240-10925-6	MSA-DMW1B-050212	Water	05/02/2012 1115	05/03/2012 0915
240-10925-7	MSA-MW32S-050212	Water	05/02/2012 1318	05/03/2012 0915

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10925-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL NC		SW846 3510C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

Method 8260C

Volatile Organic Compounds (GC/MS) by Method 8260C

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-10925-1 | Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 | GC Column: DB-624 | ID: ~~0.18~~(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 | Calibration End Date: 04/29/2012 19:50 | Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
~~Propionitrile~~	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		~~0.0386~~				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
~~Isobutyl alcohol~~	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		~~0.0086~~				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
~~n-Heptane~~	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		~~0.0406~~				12.0		15.0			
~~n-Butanol~~	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	~~0.0070~~							0.9990		0.9950
~~2-Nitropropane~~	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	~~0.0373~~	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorofluoromethane	FB	Ave	74598 3240218	146412	376630	789014	1566079	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl ether	FB	Ave	44644 1851341	89012	231543	484302	943782	1.00 40.0	2.00	5.00	10.0	20.0
3-Chloro-1-propene	FB	Ave	17177 965704	36949	93484	214615	456905	1.00 40.0	2.00	5.00	10.0	20.0
Diisopropyl ether	FB	Ave	175389 9021702	381358	989616	2099629	4197719	5.00 200	10.0	25.0	50.0	100
2-Chloro-1,3-butadiene	FB	Ave	67037 3335483	138884	364302	785295	1565439	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl-t-butyl ether (ETBE)	FB	Ave	114038 5829697	234431	633692	1358093	2727406	1.00 40.0	2.00	5.00	10.0	20.0
Propionitrile	FB	Ave	10519 484864	19537	53643	122521	239365	2.00 80.0	4.00	10.0	20.0	40.0
Ethyl acetate	FB	Ave	76413 3443932	143929	384742	808060	1641769	2.00 80.0	4.00	10.0	20.0	40.0
Methacrylonitrile	FB	Ave	24236 1201419	53633	136829	298324	582158	1.00 40.0	2.00	5.00	10.0	20.0
Isobutyl alcohol	FB	Ave	23378 1085228	43306	121353	274103	534944	20.0 800	40.0	100	200	400
Tert-amyl-methyl ether (TAME)	FB	Ave	88590 4733198	188598	508209	1098573	2224035	1.00 40.0	2.00	5.00	10.0	20.0
n-Heptane	FB	Ave	5104 272147	10152	29307	62019	127766	1.00 40.0	2.00	5.00	10.0	20.0
n-Butanol	FB	Lin1	12500 823386	29417	83258	186498	409174	20.0 800	40.0	100	200	400
2-Nitropropane	FB	Qua	10528 633675	19709	59496	119215	263103	2.00 80.0	4.00	10.0	20.0	40.0
Cyclohexanone	DCB	Lin1	32243 1979275	60655	200382	427297	962192	10.0 400	20.0	50.0	100	200
1,2,3-Trimethylbenzene	DCB	Ave	110047 6167616	248432	651353	1415601	2917084	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
2-Methylnaphthalene	DCB	Qua	52371 3134049	125934	353992	839119	1833171	2.00 80.0	4.00	10.0	20.0	40.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: BFB2951.D BFB Injection Date: 05/09/2012

Instrument ID: A3UX16 BFB Injection Time: 16:26

Analysis Batch No.: 43409

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.5	
75	30.0 - 60.0 % of mass 95	47.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	79.3	
175	5.0 - 9.0 % of mass 174	5.7	(7.2)1
176	95.0 - 101.0 % of mass 174	78.8	(99.5)1
177	5.0 - 9.0 % of mass 176	4.7	(5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-43409/2	UXM5660.D	05/09/2012	16:50
	STD8260 240-43409/3	UXM5661.D	05/09/2012	17:12
	STD8260 240-43409/4	UXM5662.D	05/09/2012	17:35
	STD8260 240-43409/5	UXM5663.D	05/09/2012	17:58
	STD8260 240-43409/6	UXM5664.D	05/09/2012	18:20
	STD8260 240-43409/7	UXM5665.D	05/09/2012	18:43
	ICV 240-43409/8	UXM5666.D	05/09/2012	19:06

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-10925-1 | Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 | GC Column: DB-624 ID: 0.18(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 | Calibration End Date: 05/09/2012 18:43 | Calibration ID: 8614

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-43409/7	UXM5665.D
Level 2	STD8260 240-43409/6	UXM5664.D
Level 3	STD8260 240-43409/5	UXM5663.D
Level 4	STD8260 240-43409/4	UXM5662.D
Level 5	STD8260 240-43409/3	UXM5661.D
Level 6	STD8260 240-43409/2	UXM5660.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3032 0.3143	0.2539	0.2973	0.2657	0.3062	Ave		0.2901			0.1000	8.4		15.0			
Chloromethane	0.6852 0.6205	0.6371	0.6849	0.6156	0.6587	Ave		0.6503			0.1000	4.7		15.0			
Vinyl chloride	0.4547 0.4560	0.4270	0.4657	0.4279	0.4758	Ave		0.4512			0.1000	4.4		15.0			
Bromomethane	0.2084 0.1529	0.1821	0.1851	0.1563	0.1804	Ave		0.1775			0.0500	12.0		15.0			
Chloroethane	0.2573 0.2377	0.2580	0.2693	0.2344	0.2581	Ave		0.2524				5.4		15.0			
Trichlorofluoromethane	0.3101 0.3295	0.3079	0.3225	0.2997	0.3473	Ave		0.3195			0.1000	5.4		15.0			
Acrolein	0.0620 0.0594	0.0566	0.0598	0.0605	0.0630	Ave		0.0602				3.7		15.0			
1,1-Dichloroethene	0.2593 0.2847	0.2457	0.2768	0.2781	0.2948	Ave		0.2733			0.1000	6.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1558 0.2077	0.1678	0.1758	0.1970	0.2009	Ave		0.1842			0.0500	11.0		15.0			
Acetone	0.1950 0.0973	0.1448	0.1189	0.1063	0.1066	Lin1	0.1992	0.0970			0.0500				0.9990		0.9950
Iodomethane	0.4877 0.4873	0.4523	0.4923	0.4807	0.4978	Ave		0.4830				3.3		15.0			
Carbon disulfide	0.8203 0.9849	0.8078	0.8789	0.8856	0.9660	Ave		0.8906			0.1000	8.2		15.0			
~~Acetonitrile~~	0.0521 0.0408	0.0448	0.0457	0.0427	0.0442	Ave		~~0.0451~~				8.6		15.0			
Methyl acetate	0.2743 0.2474	0.2522	0.2631	0.2590	0.2628	Ave		0.2598			0.1000	3.6		15.0			
Methylene Chloride	0.5939 0.3427	0.4564	0.4050	0.3631	0.3666	Lin1	0.2534	0.3421			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.2834 0.4163	0.2994	0.3340	0.3600	0.3897	Ave		0.3471			0.1000	15.0		15.0			
1,2-Dichloropropane	0.3163 0.3393	0.3026	0.3214	0.3206	0.3464	Ave		0.3244			0.1000	4.9		15.0			
Dibromomethane	0.1317 0.1397	0.1303	0.1368	0.1366	0.1460	Ave		0.1369				4.1		15.0			
1,~~4-Dioxane~~	0.0019 0.0018	0.0020	0.0021	0.0020	0.0021	Ave		~~0.0020~~				7.2		15.0			
Bromodichloromethane	0.2564 0.3265	0.2419	0.2713	0.2771	0.3245	Ave		0.2830			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1506 0.1609	0.1383	0.1637	0.1582	0.1703	Ave		0.1570				7.1		15.0			
cis-1,3-Dichloropropene	0.2551 0.3710	0.2499	0.2985	0.3081	0.3650	Lin1	-0.188	0.3666			0.1500				0.9960		0.9950
4-Methyl-2-pentanone	0.2837 0.2990	0.2651	0.2929	0.2909	0.3111	Ave		0.2905			0.0500	5.3		15.0			
Toluene	1.6482 1.7043	1.5200	1.5382	1.5720	1.7039	Ave		1.6145			0.4000	5.1		15.0			
trans-1,3-Dichloropropene	0.2583 0.4170	0.2712	0.3095	0.3332	0.4003	Qua	-0.269	0.3783	0.0012		0.1000				0.9990		0.9900
Ethyl methacrylate	0.3360 0.4227	0.3466	0.3745	0.3996	0.4375	Ave		0.3861				11.0		15.0			
1,1,2-Trichloroethane	0.2835 0.2793	0.2694	0.2686	0.2750	0.2894	Ave		0.2775			0.1000	2.9		15.0			
1,3-Dichloropropane	0.5297 0.5095	0.5041	0.4977	0.5018	0.5376	Ave		0.5134				3.2		15.0			
Tetrachloroethene	0.2829 0.3018	0.2688	0.2694	0.2845	0.3065	Ave		0.2856			0.2000	5.5		15.0			
2-Hexanone	0.2570 0.2616	0.2458	0.2583	0.2602	0.2737	Ave		0.2594			0.0500	3.5		15.0			
Dibromochloromethane	0.1998 0.2905	0.1878	0.2173	0.2406	0.2828	Lin1	-0.158	0.2858							0.9950		0.9950
1,2-Dibromoethane	0.2771 0.2885	0.2414	0.2810	0.2689	0.2989	Ave		0.2760				7.2		15.0			
Chlorobenzene	1.0779 1.0958	1.0292	1.0419	1.0268	1.0997	Ave		1.0619			0.3000	3.1		15.0			
1,1,1,2-Tetrachloroethane	0.2890 0.3687	0.2701	0.3001	0.3244	0.3603	Ave		0.3188				12.0		15.0			
Ethylbenzene	0.5370 0.5872	0.5263	0.5398	0.5618	0.5955	Ave		0.5579				5.1		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6927 0.7473	0.6545	0.6868	0.6838	0.7439	Ave		0.7015				5.2		15.0			
o-Xylene	0.6585 0.7303	0.6697	0.6826	0.7022	0.7337	Ave		0.6962				4.5		15.0			
Styrene	1.0101 1.2393	1.0332	1.0826	1.1410	1.2330	Ave		1.1232			0.3000	8.8		15.0			
Bromoform	0.0997 0.1652	0.1002	0.1141	0.1314	0.1520	Qua	-0.092	0.1394	0.0007		0.1000				1.0000		0.9900
Isopropylbenzene	1.5686 1.8453	1.5081	1.5792	1.6843	1.7759	Ave		1.6603			0.1000	7.9		15.0			
1,1,2,2-Tetrachloroethane	0.6421 0.6392	0.5897	0.6508	0.6293	0.6884	Ave		0.6399			0.3000	5.0		15.0			
Bromobenzene	0.7124 0.8007	0.7229	0.7655	0.7154	0.8316	Ave		0.7581				6.6		15.0			
1,2,3-Trichloropropane	0.2331 0.2050	0.1899	0.2018	0.2064	0.2197	Ave		0.2093				7.2		15.0			
trans-1,4-Dichloro-2-butene	0.0972 0.1779	0.1139	0.1228	0.1331	0.1671	Qua	-0.117	0.1526	0.0007						0.9990		0.9900
n-Propylbenzene	0.7268 0.8204	0.6778	0.7587	0.7438	0.8378	Ave		0.7609				7.8		15.0			
2-Chlorotoluene	0.6703 0.7397	0.6758	0.6924	0.6931	0.7657	Ave		0.7061				5.4		15.0			
1,3,5-Trimethylbenzene	2.0828 2.5958	2.0405	2.3124	2.3306	2.5681	Ave		2.3217				10.0		15.0			
4-Chlorotoluene	0.7205 0.7747	0.6930	0.7396	0.7189	0.7965	Ave		0.7405				5.2		15.0			
tert-Butylbenzene	1.9330 2.3935	1.9972	1.9127	2.1455	2.3504	Ave		2.1221				9.9		15.0			
1,2,4-Trimethylbenzene	2.2784 2.6594	2.2133	2.3747	2.3863	2.6735	Ave		2.4310				8.0		15.0			
sec-Butylbenzene	2.3140 2.8409	2.3222	2.4938	2.5429	2.7579	Ave		2.5453				8.6		15.0			
1,3-Dichlorobenzene	1.3846 1.4804	1.3348	1.4061	1.3608	1.4933	Ave		1.4100			0.6000	4.6		15.0			
p-Isopropyltoluene	1.8496 2.5189	1.9566	2.1436	2.2002	2.4336	Ave		2.1837				12.0		15.0			
1,4-Dichlorobenzene	1.5343 1.5331	1.3976	1.4633	1.4252	1.5585	Ave		1.4853			0.5000	4.5		15.0			
n-Butylbenzene	1.5207 2.0613	1.5638	1.6967	1.7858	1.9861	Ave		1.7691				12.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3844 1.4205	1.3540	1.3870	1.3472	1.4582	Ave		1.3919			0.4000	3.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0794 0.0870	0.0683	0.0814	0.0746	0.0883	Ave		0.0798			0.0500	9.5		15.0			
1,3,5-Trichlorobenzene	0.7539 0.8344	0.7656	0.7991	0.8104	0.8665	Ave		0.8050				5.2		15.0			
1,2,4-Trichlorobenzene	0.6479 0.6976	0.6519	0.6850	0.7123	0.7408	Ave		0.6892			0.2000	5.2		15.0			
Hexachlorobutadiene	0.2984 0.2880	0.3131	0.3156	0.3236	0.3074	Ave		0.3077				4.2		15.0			
Naphthalene	1.3167 1.5171	1.2964	1.5138	1.5269	1.6839	Ave		1.4758				9.9		15.0			
1,2,3-Trichlorobenzene	0.6093 0.5088	0.5775	0.5956	0.5994	0.6006	Ave		0.5819				6.4		15.0			
Dibromofluoromethane (Surr)	0.2449 0.2557	0.2414	0.2613	0.2511	0.2697	Ave		0.2540				4.1		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3352 0.3180	0.3022	0.3162	0.3092	0.3364	Ave		0.3195				4.3		15.0			
Toluene-d8 (Surr)	1.3399 1.4228	1.2843	1.2848	1.3063	1.4382	Ave		1.3460				5.1		15.0			
4-Bromofluorobenzene (Surr)	0.5239 0.5294	0.5089	0.5007	0.5033	0.5393	Ave		0.5176				3.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-43409/7	UXM5665.D
Level 2	STD8260 240-43409/6	UXM5664.D
Level 3	STD8260 240-43409/5	UXM5663.D
Level 4	STD8260 240-43409/4	UXM5662.D
Level 5	STD8260 240-43409/3	UXM5661.D
Level 6	STD8260 240-43409/2	UXM5660.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dichlorodifluoromethane	FB	Ave	52928 2269702	93754	243522	463658	1086854	1.00 40.0	2.00	5.00	10.0	20.0
Chloromethane	FB	Ave	119613 4481417	235228	560959	1074010	2338489	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl chloride	FB	Ave	79381 3293444	157659	381461	746538	1689049	1.00 40.0	2.00	5.00	10.0	20.0
Bromomethane	FB	Ave	36374 1104508	67238	151609	272704	640512	1.00 40.0	2.00	5.00	10.0	20.0
Chloroethane	FB	Ave	44908 1716443	95240	220599	409016	916098	1.00 40.0	2.00	5.00	10.0	20.0
Trichlorofluoromethane	FB	Ave	54132 2379686	113694	264136	522857	1232822	1.00 40.0	2.00	5.00	10.0	20.0
Acrolein	FB	Ave	108268 4291659	208916	489852	1054718	2236518	10.0 400	20.0	50.0	100	200
1,1-Dichloroethene	FB	Ave	45261 2056236	90712	226758	485291	1046688	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	FB	Ave	27191 1499903	61965	144014	343765	713138	1.00 40.0	2.00	5.00	10.0	20.0
Acetone	FB	Lin1	68091 1405182	106892	194786	371008	756882	2.00 80.0	4.00	10.0	20.0	40.0
Iodomethane	FB	Ave	85139 3519494	166987	403220	838661	1767315	1.00 40.0	2.00	5.00	10.0	20.0
Carbon disulfide	FB	Ave	143188 7112947	298248	719913	1545185	3429318	1.00 40.0	2.00	5.00	10.0	20.0
Acetonitrile	FB	Ave	91033 2949580	165343	374536	744837	1568000	10.0 400	20.0	50.0	100	200
Methyl acetate	FB	Ave	95774 3573608	186229	430940	903843	1865784	2.00 80.0	4.00	10.0	20.0	40.0
Methylene Chloride	FB	Lin1	103671 2475298	168518	331696	633560	1301231	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butyl alcohol	FB	Ave	63121 2518507	124355	290067	616054	1374774	20.0 800	40.0	100	200	400

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Acrylonitrile	FB	Ave	52034 2003187	97178	240045	505328	1040435	2.00 80.0	4.00	10.0	20.0	40.0
Methyl tert-butyl ether	FB	Ave	122034 5335545	237935	587315	1229118	2700444	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,2-Dichloroethene	FB	Ave	56689 2405544	115003	279577	570306	1234028	1.00 40.0	2.00	5.00	10.0	20.0
Hexane	FB	Ave	6935 369422	12652	33316	75415	176323	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloroethane	FB	Ave	109170 4823470	228784	539374	1133033	2419649	1.00 40.0	2.00	5.00	10.0	20.0
Vinyl acetate	FB	Ave	5716 309064	12270	30011	66463	156288	1.00 40.0	2.00	5.00	10.0	20.0
2-Butanone	FB	Ave	60742 1945625	96656	232607	472749	1019503	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,2-Dichloroethene	FB	Ave	58759 2499304	127218	291263	607016	1289686	1.00 40.0	2.00	5.00	10.0	20.0
2,2-Dichloropropane	FB	Ave	38786 2097846	84176	209232	453955	1043982	1.00 40.0	2.00	5.00	10.0	20.0
Bromochloromethane	FB	Ave	24107 1061929	50196	120738	262764	544778	1.00 40.0	2.00	5.00	10.0	20.0
Tetrahydrofuran	FB	Ave	19493 623566	35808	77340	146877	328365	1.00 40.0	2.00	5.00	10.0	20.0
Chloroform	FB	Ave	92104 3864795	181329	423896	898860	1954173	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1-Trichloroethane	FB	Ave	60865 3173238	131221	308200	701397	1564618	1.00 40.0	2.00	5.00	10.0	20.0
Cyclohexane	FB	Ave	91091 5430705	215494	515524	1191918	2576380	1.00 40.0	2.00	5.00	10.0	20.0
1,1-Dichloropropene	FB	Ave	58721 2759618	130942	285950	632823	1370311	1.00 40.0	2.00	5.00	10.0	20.0
Carbon tetrachloride	FB	Lin1	42993 2537725	89335	231883	534258	1209581	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane	FB	Ave	77174 3103848	151365	342889	721726	1595293	1.00 40.0	2.00	5.00	10.0	20.0
Benzene	FB	Ave	206587 8689613	407062	932199	1986989	4283069	1.00 40.0	2.00	5.00	10.0	20.0
Trichloroethene	FB	Ave	47568 2040340	100202	217360	458177	1037948	1.00 40.0	2.00	5.00	10.0	20.0
Methylcyclohexane	FB	Ave	49474 3006941	110554	273549	628057	1383227	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloropropane	FB	Ave	55206 2450679	111710	263218	559358	1229624	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Dibromomethane	FB	Ave	22994 1008878	48104	112078	238323	518308	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dioxane	FB	Ave	16398 639156	36076	85690	178453	381565	50.0 2000	100	250	500	1000
Bromodichloromethane	FB	Ave	44751 2358237	89305	222200	483540	1152051	1.00 40.0	2.00	5.00	10.0	20.0
2-Chloroethyl vinyl ether	FB	Ave	52570 2324437	102100	268139	551928	1208952	2.00 80.0	4.00	10.0	20.0	40.0
cis-1,3-Dichloropropene	FB	Lin1	44530 2679462	92253	244467	537549	1295556	1.00 40.0	2.00	5.00	10.0	20.0
4-Methyl-2-pentanone	FB	Ave	99051 4318688	195749	479833	1014919	2209065	2.00 80.0	4.00	10.0	20.0	40.0
Toluene	CBZ	Ave	210307 9099276	411209	1016091	2061119	4543591	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,3-Dichloropropene	CBZ	Qua	32958 2226299	73369	204476	436891	1067527	1.00 40.0	2.00	5.00	10.0	20.0
Ethyl methacrylate	CBZ	Ave	42867 2256709	93758	247370	523924	1166492	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2-Trichloroethane	CBZ	Ave	36173 1491327	72885	177454	360548	771696	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichloropropane	CBZ	Ave	67583 2720324	136363	328788	657931	1433555	1.00 40.0	2.00	5.00	10.0	20.0
Tetrachloroethene	CBZ	Ave	36100 1611193	72730	177936	373027	817199	1.00 40.0	2.00	5.00	10.0	20.0
2-Hexanone	CBZ	Ave	65573 2793096	133008	341210	682224	1459837	2.00 80.0	4.00	10.0	20.0	40.0
Dibromochloromethane	CBZ	Lin1	25488 1550871	50812	143509	315467	754120	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromoethane	CBZ	Ave	35352 1540508	65293	185588	352603	797130	1.00 40.0	2.00	5.00	10.0	20.0
Chlorobenzene	CBZ	Ave	137541 5850218	278439	688239	1346204	2932361	1.00 40.0	2.00	5.00	10.0	20.0
1,1,1,2-Tetrachloroethane	CBZ	Ave	36873 1968554	73073	198230	425305	960859	1.00 40.0	2.00	5.00	10.0	20.0
Ethylbenzene	CBZ	Ave	68517 3135166	142388	356542	736589	1587895	1.00 40.0	2.00	5.00	10.0	20.0
m-Xylene & p-Xylene	CBZ	Ave	176762 7979307	354111	907289	1793161	3967542	2.00 80.0	4.00	10.0	20.0	40.0
o-Xylene	CBZ	Ave	84027 3899232	181174	450888	920715	1956380	1.00 40.0	2.00	5.00	10.0	20.0
Styrene	CBZ	Ave	128890 6616538	279517	715134	1495942	3287869	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Bromoform	CBZ	Qua	12718 881821	27112	75374	172255	405318	1.00 40.0	2.00	5.00	10.0	20.0
Isopropylbenzene	CBZ	Ave	200153 9852120	407998	1043187	2208319	4735503	1.00 40.0	2.00	5.00	10.0	20.0
1,1,2,2-Tetrachloroethane	DCB	Ave	46647 1937683	92403	241055	485455	1016448	1.00 40.0	2.00	5.00	10.0	20.0
Bromobenzene	DCB	Ave	51753 2427220	113266	283562	551848	1227886	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichloropropane	DCB	Ave	16933 621331	29761	74732	159189	324454	1.00 40.0	2.00	5.00	10.0	20.0
trans-1,4-Dichloro-2-butene	DCB	Qua	7063 539264	17854	45490	102675	246750	1.00 40.0	2.00	5.00	10.0	20.0
n-Propylbenzene	DCB	Ave	52800 2487086	106201	281022	573776	1237146	1.00 40.0	2.00	5.00	10.0	20.0
2-Chlorotoluene	DCB	Ave	48690 2242202	105885	256455	534646	1130551	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trimethylbenzene	DCB	Ave	151300 7868982	319722	856550	1797825	3791960	1.00 40.0	2.00	5.00	10.0	20.0
4-Chlorotoluene	DCB	Ave	52338 2348358	108591	273967	554596	1176095	1.00 40.0	2.00	5.00	10.0	20.0
tert-Butylbenzene	DCB	Ave	140419 7255767	312935	708485	1655067	3470613	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trimethylbenzene	DCB	Ave	165509 8061860	346798	879613	1840842	3947720	1.00 40.0	2.00	5.00	10.0	20.0
sec-Butylbenzene	DCB	Ave	168092 8612090	363853	923744	1961638	4072207	1.00 40.0	2.00	5.00	10.0	20.0
1,3-Dichlorobenzene	DCB	Ave	100581 4487704	209145	520849	1049769	2205043	1.00 40.0	2.00	5.00	10.0	20.0
p-Isopropyltoluene	DCB	Ave	134358 7635938	306571	794006	1697244	3593438	1.00 40.0	2.00	5.00	10.0	20.0
1,4-Dichlorobenzene	DCB	Ave	111455 4647635	218980	542005	1099406	2301243	1.00 40.0	2.00	5.00	10.0	20.0
n-Butylbenzene	DCB	Ave	110464 6248644	245021	628480	1377564	2932703	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichlorobenzene	DCB	Ave	100569 4306239	212152	513773	1039222	2153207	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dibromo-3-Chloropropane	DCB	Ave	5767 263677	10707	30142	57565	130444	1.00 40.0	2.00	5.00	10.0	20.0
1,3,5-Trichlorobenzene	DCB	Ave	54764 2529292	119960	296010	625185	1279393	1.00 40.0	2.00	5.00	10.0	20.0
1,2,4-Trichlorobenzene	DCB	Ave	47064 2114669	102149	253740	549442	1093874	1.00 40.0	2.00	5.00	10.0	20.0

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
			LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Hexachlorobutadiene	DCB	Ave	21674 873172	49059	116907	249602	453970	1.00 40.0	2.00	5.00	10.0	20.0
Naphthalene	DCB	Ave	95646 4599095	203126	560714	1177834	2486410	1.00 40.0	2.00	5.00	10.0	20.0
1,2,3-Trichlorobenzene	DCB	Ave	44263 1542272	90493	220608	462422	886895	1.00 40.0	2.00	5.00	10.0	20.0
Dibromofluoromethane (Surr)	FB	Ave	42745 1846795	89137	214041	438121	957240	1.00 40.0	2.00	5.00	10.0	20.0
1,2-Dichloroethane-d4 (Surr)	FB	Ave	58517 2296881	111562	259034	539553	1194108	1.00 40.0	2.00	5.00	10.0	20.0
Toluene-d8 (Surr)	CBZ	Ave	170964 7596285	347431	848720	1712714	3834934	1.00 40.0	2.00	5.00	10.0	20.0
4-Bromofluorobenzene (Surr)	CBZ	Ave	66842 2826502	137681	330768	659861	1437951	1.00 40.0	2.00	5.00	10.0	20.0

Curve Type Legend:

Ave = Average ISTD
Lin1 = Linear 1/conc ISTD
Qua = Quadratic ISTD

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3514		11.0	10.0	10.4	20.0
Diisopropyl ether	Ave	0.2775	0.2746		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0089		517	500	3.5	20.0
Cyclohexanone	Lin1		0.0196		41.7	200	-79.2*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.571		8.62	10.0	-13.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2045	0.1000	7.05	10.0	-29.5*	20.0
Chloromethane	Ave	0.6503	0.5741	0.1000	8.83	10.0	-11.7	20.0
Vinyl chloride	Ave	0.4512	0.4382	0.1000	9.71	10.0	-2.9	20.0
Bromomethane	Ave	0.1775	0.1621	0.0500	9.13	10.0	-8.7	20.0
Chloroethane	Ave	0.2524	0.2375	0.0500	9.41	10.0	-5.9	20.0
Trichlorofluoromethane	Ave	0.3195	0.3224	0.1000	10.1	10.0	0.9	20.0
Acrolein	Ave	0.0602	0.0316		15.7	30.0	-47.6*	20.0
1,1-Dichloroethene	Ave	0.2733	0.2968	0.1000	10.9	10.0	8.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2129	0.0500	11.6	10.0	15.6	20.0
Acetone	Lin1		0.1000	0.0500	18.6	20.0	-7.0	20.0
Iodomethane	Ave	0.4830	0.4930		10.2	10.0	2.1	20.0
Carbon disulfide	Ave	0.8906	0.9121	0.1000	10.2	10.0	2.4	20.0
Acetonitrile	Ave	0.0451	0.0442		29.4	30.0	-2.0	20.0
Methyl acetate	Ave	0.2598	0.2961	0.1000	11.4	10.0	14.0	20.0
Methylene Chloride	Lin1		0.3698	0.1000	10.1	10.0	1.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0177		198	200	-1.0	20.0
Acrylonitrile	Ave	0.1429	0.1377		28.9	30.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.7047	0.1000	9.91	10.0	-0.9	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3422	0.1000	10.3	10.0	3.4	20.0
Hexane	Ave	0.0431	0.0478		11.1	10.0	10.8	20.0
1,1-Dichloroethane	Ave	0.6504	0.6789	0.1000	10.4	10.0	4.4	20.0
Vinyl acetate	Ave	0.0379	0.0349		9.19	10.0	-8.1	20.0
2-Butanone	Ave	0.1434	0.1319	0.0500	18.4	20.0	-8.1	20.0
2,2-Dichloropropane	Ave	0.2584	0.2680		10.4	10.0	3.7	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3544	0.1000	10.2	10.0	1.5	20.0
Bromochloromethane	Ave	0.1454	0.1487		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5335	0.2000	10.2	10.0	2.0	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4102	0.1000	10.4	10.0	4.2	20.0
Cyclohexane	Ave	0.6493	0.6633	0.1000	10.2	10.0	2.2	20.0
1,1-Dichloropropene	Ave	0.3618	0.3695		10.2	10.0	2.1	20.0
Carbon tetrachloride	Lin1		0.3100	0.1000	9.41	10.0	-5.9	20.0
1,2-Dichloroethane	Ave	0.4273	0.4347	0.1000	10.2	10.0	1.7	20.0
Benzene	Ave	1.162	1.177	0.5000	10.1	10.0	1.2	20.0
Trichloroethene	Ave	0.2745	0.2806	0.2000	10.2	10.0	2.2	20.0
1,2-Dichloropropane	Ave	0.3244	0.3251	0.1000	10.0	10.0	0.2	20.0
Methylcyclohexane	Ave	0.3471	0.3473	0.1000	10.0	10.0	0.0	20.0
Dibromomethane	Ave	0.1369	0.1442		10.5	10.0	5.4	20.0
Bromodichloromethane	Ave	0.2830	0.2938	0.1000	10.4	10.0	3.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1570	0.1413		9.00	10.0	-10.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.3014	0.1500	8.73	10.0	-12.7	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2896	0.0500	19.9	20.0	-0.3	20.0
Toluene	Ave	1.614	1.572	0.4000	9.74	10.0	-2.6	20.0
trans-1,3-Dichloropropene	Qua		0.3327	0.1000	9.24	10.0	-7.6	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2762	0.1000	9.95	10.0	-0.5	20.0
1,3-Dichloropropane	Ave	0.5134	0.4975		9.69	10.0	-3.1	20.0
Tetrachloroethene	Ave	0.2856	0.2813	0.2000	9.85	10.0	-1.5	20.0
2-Hexanone	Ave	0.2594	0.2452	0.0500	18.9	20.0	-5.5	20.0
Dibromochloromethane	Lin1		0.2350		8.77	10.0	-12.3	20.0
1,2-Dibromoethane	Ave	0.2760	0.2737		9.92	10.0	-0.8	20.0
Chlorobenzene	Ave	1.062	1.051	0.3000	9.90	10.0	-1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3286		10.3	10.0	3.1	20.0
Ethylbenzene	Ave	0.5579	0.5654		10.1	10.0	1.3	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.6978		19.9	20.0	-0.5	20.0
o-Xylene	Ave	0.6962	0.7046		10.1	10.0	1.2	20.0
Styrene	Ave	1.123	1.167	0.3000	10.4	10.0	3.9	20.0
Bromoform	Qua		0.1291	0.1000	9.47	10.0	-5.3	20.0
Isopropylbenzene	Ave	1.660	1.692	0.1000	10.2	10.0	1.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6196	0.3000	9.68	10.0	-3.2	20.0
Bromobenzene	Ave	0.7581	0.7479		9.87	10.0	-1.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.1984		9.48	10.0	-5.2	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1324		16.8	20.0	-16.0	20.0
n-Propylbenzene	Ave	0.7609	0.7738		10.2	10.0	1.7	20.0
2-Chlorotoluene	Ave	0.7061	0.7155		10.1	10.0	1.3	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.338		10.1	10.0	0.7	20.0
4-Chlorotoluene	Ave	0.7405	0.7420		10.0	10.0	0.2	20.0
tert-Butylbenzene	Ave	2.122	2.147		10.1	10.0	1.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.470		10.2	10.0	1.6	20.0
sec-Butylbenzene	Ave	2.545	2.467		9.69	10.0	-3.1	20.0
1,3-Dichlorobenzene	Ave	1.410	1.419	0.6000	10.1	10.0	0.6	20.0
p-Isopropyltoluene	Ave	2.184	2.305		10.6	10.0	5.5	20.0
1,4-Dichlorobenzene	Ave	1.485	1.439	0.5000	9.69	10.0	-3.1	20.0
n-Butylbenzene	Ave	1.769	1.800		10.2	10.0	1.7	20.0
1,2-Dichlorobenzene	Ave	1.392	1.345	0.4000	9.66	10.0	-3.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0779	0.0500	9.76	10.0	-2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6576	0.2000	9.54	10.0	-4.6	20.0
Hexachlorobutadiene	Ave	0.3077	0.2672		8.69	10.0	-13.1	20.0
Naphthalene	Ave	1.476	1.471		9.97	10.0	-0.3	20.0
1,2,3-Trichlorobenzene	Ave	0.5819	0.5595		9.61	10.0	-3.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2365		9.50	10.2	-6.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2929		9.36	10.2	-8.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.346	1.233		9.35	10.2	-8.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4948		9.76	10.2	-4.4	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: BFB2952.D BFB Injection Date: 05/10/2012

Instrument ID: A3UX16 BFB Injection Time: 10:23

Analysis Batch No.: 43549

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.4	
75	30.0 - 60.0 % of mass 95	47.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	4.8	(6.1)1
176	95.0 - 101.0 % of mass 174	77.5	(98.6)1
177	5.0 - 9.0 % of mass 176	5.0	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-43549/2	UXM5692.D	05/10/2012	10:53
	CCV 240-43549/3	UXM5693.D	05/10/2012	11:16
	LCS 240-43549/4	UXM5694.D	05/10/2012	11:39
	MB 240-43549/5	UXM5695.D	05/10/2012	12:02
MSA-DMW8S-050212	240-10925-1	UXM5706.D	05/10/2012	16:11
MSA-DMW8I-050212	240-10925-2	UXM5707.D	05/10/2012	16:34
MSA-DMW8D-050212	240-10925-3	UXM5708.D	05/10/2012	16:57
TB-050212	240-10925-4	UXM5709.D	05/10/2012	17:20
MSA-DMW1A-050212	240-10925-5	UXM5710.D	05/10/2012	17:42
	240-10837-D-5 MS	UXM5716.D	05/10/2012	19:58
	240-10837-E-5 MSD	UXM5717.D	05/10/2012	20:21

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2790	0.1000	9.62	10.0	-3.8	20.0
Chloromethane	Ave	0.6503	0.6113	0.1000	9.40	10.0	-6.0	20.0
Vinyl chloride	Ave	0.4512	0.4262	0.1000	9.45	10.0	-5.5	20.0
Bromomethane	Ave	0.1775	0.1770	0.0500	9.97	10.0	-0.3	20.0
Chloroethane	Ave	0.2524	0.2504	0.0500	9.92	10.0	-0.8	20.0
Trichlorofluoromethane	Ave	0.3195	0.3217	0.1000	10.1	10.0	0.7	20.0
Acrolein	Ave	0.0602	0.0539		89.5	100	-10.5	20.0
1,1-Dichloroethene	Ave	0.2733	0.2791	0.1000	10.2	10.0	2.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2017	0.0500	11.0	10.0	9.5	20.0
Acetone	Lin1		0.0988	0.0500	18.3	20.0	-8.5	20.0
Iodomethane	Ave	0.4830	0.4722		9.78	10.0	-2.2	20.0
Carbon disulfide	Ave	0.8906	0.9826	0.1000	11.0	10.0	10.3	20.0
~~Acetonitrile~~	Ave	~~0.0451~~	~~0.0445~~		98.8	100	-1.2	20.0
Methyl acetate	Ave	0.2598	0.2519	0.1000	19.4	20.0	-3.0	20.0
Methylene Chloride	Lin1		0.3834	0.1000	10.5	10.0	5.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0166		186	200	-7.1	20.0
Acrylonitrile	Ave	0.1429	0.1377		19.3	20.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.6763	0.1000	9.52	10.0	-4.8	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3410	0.1000	10.3	10.0	3.1	20.0
~~Hexane~~	Ave	0.0431	~~0.0483~~		11.2	10.0	12.1	20.0
1,1-Dichloroethane	Ave	0.6504	0.6517	0.1000	10.0	10.0	0.2	20.0
Vinyl acetate	Ave	0.0379	0.0403		10.6	10.0	6.2	20.0
2-Butanone	Ave	0.1434	0.1404	0.0500	19.6	20.0	-2.1	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3372	0.1000	9.66	10.0	-3.4	20.0
2,2-Dichloropropane	Ave	0.2584	0.2768		10.7	10.0	7.1	20.0
Bromochloromethane	Ave	0.1454	0.1447		9.95	10.0	-0.5	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5315	0.2000	10.2	10.0	1.7	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4191	0.1000	10.6	10.0	6.4	20.0
Cyclohexane	Ave	0.6493	0.6985	0.1000	10.8	10.0	7.6	20.0
1,1-Dichloropropene	Ave	0.3618	0.3859		10.7	10.0	6.6	20.0
Carbon tetrachloride	Lin1		0.3255	0.1000	9.86	10.0	-1.4	20.0
1,2-Dichloroethane	Ave	0.4273	0.4578	0.1000	10.7	10.0	7.1	20.0
Benzene	Ave	1.162	1.187	0.5000	10.2	10.0	2.2	20.0
Trichloroethene	Ave	0.2745	0.2912	0.2000	10.6	10.0	6.1	20.0
Methylcyclohexane	Ave	0.3471	0.3832	0.1000	11.0	10.0	10.4	20.0
1,2-Dichloropropane	Ave	0.3244	0.3319	0.1000	10.2	10.0	2.3	20.0
Dibromomethane	Ave	0.1369	0.1455		10.6	10.0	6.3	20.0
~~1,4-Dioxane~~	Ave	0.0020	~~0.0018~~		457	500	-8.7	20.0
Bromodichloromethane	Ave	0.2830	0.3185	0.1000	11.3	10.0	12.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1570	0.1558		19.9	20.0	-0.7	20.0
cis-1,3-Dichloropropene	Lin1		0.3284	0.1500	9.47	10.0	-5.3	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2951	0.0500	20.3	20.0	1.6	20.0
Toluene	Ave	1.614	1.737	0.4000	10.8	10.0	7.6	20.0
trans-1,3-Dichloropropene	Qua		0.3546	0.1000	9.79	10.0	-2.1	20.0
Ethyl methacrylate	Ave	0.3861	0.4404		11.4	10.0	14.1	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2924	0.1000	10.5	10.0	5.3	20.0
1,3-Dichloropropane	Ave	0.5134	0.5380		10.5	10.0	4.8	20.0
Tetrachloroethene	Ave	0.2856	0.3170	0.2000	11.1	10.0	11.0	20.0
2-Hexanone	Ave	0.2594	0.2762	0.0500	21.3	20.0	6.5	20.0
Dibromochloromethane	Lin1		0.2723		10.1	10.0	1.0	20.0
1,2-Dibromoethane	Ave	0.2760	0.2994		10.9	10.0	8.5	20.0
Chlorobenzene	Ave	1.062	1.117	0.3000	10.5	10.0	5.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3682		11.5	10.0	15.5	20.0
Ethylbenzene	Ave	0.5579	0.6165		11.0	10.0	10.5	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7510		21.4	20.0	7.1	20.0
o-Xylene	Ave	0.6962	0.7534		10.8	10.0	8.2	20.0
Styrene	Ave	1.123	1.258	0.3000	11.2	10.0	12.0	20.0
Bromoform	Qua		0.1388	0.1000	10.1	10.0	1.0	20.0
Isopropylbenzene	Ave	1.660	1.794	0.1000	10.8	10.0	8.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6643	0.3000	10.4	10.0	3.8	20.0
Bromobenzene	Ave	0.7581	0.7834		10.3	10.0	3.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2152		10.3	10.0	2.8	20.0
~~trans-1,4-Dichloro-2-butene~~	Qua		0.0543		4.24	10.0	~~-57.6*~~	20.0
n-Propylbenzene	Ave	0.7609	0.8162		10.7	10.0	7.3	20.0
2-Chlorotoluene	Ave	0.7061	0.7430		10.5	10.0	5.2	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.504		10.8	10.0	7.9	20.0
4-Chlorotoluene	Ave	0.7405	0.8068		10.9	10.0	8.9	20.0
tert-Butylbenzene	Ave	2.122	2.300		10.8	10.0	8.4	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.614		10.8	10.0	7.5	20.0
sec-Butylbenzene	Ave	2.545	2.730		10.7	10.0	7.3	20.0
1,3-Dichlorobenzene	Ave	1.410	1.472	0.6000	10.4	10.0	4.4	20.0
p-Isopropyltoluene	Ave	2.184	2.381		10.9	10.0	9.0	20.0
1,4-Dichlorobenzene	Ave	1.485	1.576	0.5000	10.6	10.0	6.1	20.0
n-Butylbenzene	Ave	1.769	1.900		10.7	10.0	7.4	20.0
1,2-Dichlorobenzene	Ave	1.392	1.409	0.4000	10.1	10.0	1.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0780	0.0500	9.77	10.0	-2.3	20.0
1,3,5-Trichlorobenzene	Ave	0.8050	0.8184		10.2	10.0	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6691	0.2000	9.71	10.0	-2.9	20.0
Hexachlorobutadiene	Ave	0.3077	0.3034		9.86	10.0	-1.4	20.0
Naphthalene	Ave	1.476	1.368		9.27	10.0	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5819	0.5411		9.30	10.0	-7.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2445		9.83	10.2	-3.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3043		9.72	10.2	-4.8	20.0
Toluene-d8 (Surr)	Ave	1.346	1.370		10.4	10.2	1.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5247		10.3	10.2	1.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43549/3 Calibration Date: 05/10/2012 11:16

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5693.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4896		9.25	10.0	-7.5	20.0
Ethyl ether	Ave	0.3182	0.3276		10.3	10.0	2.9	20.0
3-Chloro-1-propene	Ave	0.1408	0.1484		10.5	10.0	5.4	20.0
Diisopropyl ether	Ave	0.2775	0.2850		51.4	50.0	2.7	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.6754		13.1	10.0	31.0*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	1.041		11.7	10.0	16.9	20.0
Propionitrile	Ave	0.0386	0.0461		24.0	20.0	20.1*	20.0
Ethyl acetate	Ave	0.2719	0.2669		19.6	20.0	-1.8	20.0
Methacrylonitrile	Ave	0.1921	0.1929		10.0	10.0	0.4	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		210	200	5.0	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6111		8.54	10.0	-14.6	20.0
n-Heptane	Ave	0.0406	0.0423		10.4	10.0	4.1	20.0
n-Butanol	Lin1		0.0066		197	200	-1.7	20.0
2-Nitropropane	Qua		0.0411		19.9	20.0	-0.5	20.0
Cyclohexanone	Lin1		0.0552		56.6	100	-43.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.606		8.74	10.0	-12.6	20.0
2-Methylnaphthalene	Qua		0.3582		8.10	20.0	-59.5*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43549/3 Calibration Date: 05/10/2012 11:16

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5693.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2276		9.15	10.2	-10.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2873		9.18	10.2	-10.1	20.0
Toluene-d8 (Surr)	Ave	1.346	1.243		9.43	10.2	-7.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4929		9.72	10.2	-4.8	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: BFB2956.D BFB Injection Date: 05/11/2012

Instrument ID: A3UX16 BFB Injection Time: 10:30

Analysis Batch No.: 43737

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.5	
75	30.0 - 60.0 % of mass 95	47.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	77.1	
175	5.0 - 9.0 % of mass 174	5.4	(6.9)1
176	95.0 - 101.0 % of mass 174	77.4	(100.4)1
177	5.0 - 9.0 % of mass 176	4.9	(6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-43737/2	UXM5744.D	05/11/2012	10:56
	CCV 240-43737/3	UXM5745.D	05/11/2012	11:19
	LCS 240-43737/4	UXM5746.D	05/11/2012	11:42
	MB 240-43737/5	UXM5747.D	05/11/2012	12:04
MSA-DMW1B-050212	240-10925-6	UXM5750.D	05/11/2012	13:17
	240-11065-E-2 MS	UXM5768.D	05/11/2012	20:05
	240-11065-F-2 MSD	UXM5769.D	05/11/2012	20:28

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVIS 240-43737/2 Calibration Date: 05/11/2012 10:56

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5744.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2475	0.1000	8.53	10.0	-14.7	20.0
Chloromethane	Ave	0.6503	0.6698	0.1000	10.3	10.0	3.0	20.0
Vinyl chloride	Ave	0.4512	0.4758	0.1000	10.5	10.0	5.5	20.0
Bromomethane	Ave	0.1775	0.1684	0.0500	9.49	10.0	-5.1	20.0
Chloroethane	Ave	0.2524	0.2596	0.0500	10.3	10.0	2.8	20.0
Trichlorofluoromethane	Ave	0.3195	0.3437	0.1000	10.8	10.0	7.6	20.0
Acrolein	Ave	0.0602	0.0546		90.6	100	-9.4	20.0
1,1-Dichloroethene	Ave	0.2733	0.2997	0.1000	11.0	10.0	9.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2159	0.0500	11.7	10.0	17.2	20.0
Acetone	Lin1		0.1027	0.0500	19.1	20.0	-4.5	20.0
Iodomethane	Ave	0.4830	0.5104		10.6	10.0	5.7	20.0
Carbon disulfide	Ave	0.8906	0.9937	0.1000	11.2	10.0	11.6	20.0
~~Acetonitrile~~	Ave	~~0.0451~~	~~0.0478~~		106	100	6.1	20.0
Methyl acetate	Ave	0.2598	0.2764	0.1000	21.3	20.0	6.4	20.0
Methylene Chloride	Lin1		0.3931	0.1000	10.7	10.0	7.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0172		193	200	-3.7	20.0
Acrylonitrile	Ave	0.1429	0.1484		20.8	20.0	3.9	20.0
Methyl tert-butyl ether	Ave	0.7108	0.7130	0.1000	10.0	10.0	0.3	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3496	0.1000	10.6	10.0	5.7	20.0
Hexane	Ave	0.0431	0.0500		11.6	10.0	16.0	20.0
1,1-Dichloroethane	Ave	0.6504	0.6928	0.1000	10.7	10.0	6.5	20.0
Vinyl acetate	Ave	0.0379	0.0363		9.57	10.0	-4.3	20.0
2-Butanone	Ave	0.1434	0.1394	0.0500	19.4	20.0	-2.8	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3657	0.1000	10.5	10.0	4.8	20.0
2,2-Dichloropropane	Ave	0.2584	0.2887		11.2	10.0	11.7	20.0
Bromochloromethane	Ave	0.1454	0.1631		11.2	10.0	12.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0906		9.60	10.0	-4.0	20.0
Chloroform	Ave	0.5228	0.5724	0.2000	10.9	10.0	9.5	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4397	0.1000	11.2	10.0	11.7	20.0
Cyclohexane	Ave	0.6493	0.7523	0.1000	11.6	10.0	15.9	20.0
1,1-Dichloropropene	Ave	0.3618	0.3938		10.9	10.0	8.8	20.0
Carbon tetrachloride	Lin1		0.3410	0.1000	10.3	10.0	3.0	20.0
1,2-Dichloroethane	Ave	0.4273	0.4645	0.1000	10.9	10.0	8.7	20.0
Benzene	Ave	1.162	1.233	0.5000	10.6	10.0	6.1	20.0
Trichloroethene	Ave	0.2745	0.2915	0.2000	10.6	10.0	6.2	20.0
Methylcyclohexane	Ave	0.3471	0.4004	0.1000	11.5	10.0	15.3	20.0
1,2-Dichloropropane	Ave	0.3244	0.3476	0.1000	10.7	10.0	7.2	20.0
Dibromomethane	Ave	0.1369	0.1478		10.8	10.0	8.0	20.0
~~1,4-Dioxane~~	Ave	0.0020	~~0.0019~~		469	500	-6.2	20.0
Bromodichloromethane	Ave	0.2830	0.3130	0.1000	11.1	10.0	10.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVIS 240-43737/2 Calibration Date: 05/11/2012 10:56

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5744.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1570	0.1728		22.0	20.0	10.1	20.0
cis-1,3-Dichloropropene	Lin1		0.3541	0.1500	10.2	10.0	2.0	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.3121	0.0500	21.5	20.0	7.5	20.0
Toluene	Ave	1.614	1.707	0.4000	10.6	10.0	5.7	20.0
trans-1,3-Dichloropropene	Qua		0.3631	0.1000	10.0	10.0	0.0	20.0
Ethyl methacrylate	Ave	0.3861	0.4283		11.1	10.0	10.9	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.3052	0.1000	11.0	10.0	10.0	20.0
1,3-Dichloropropane	Ave	0.5134	0.5454		10.6	10.0	6.2	20.0
Tetrachloroethene	Ave	0.2856	0.3043	0.2000	10.7	10.0	6.5	20.0
2-Hexanone	Ave	0.2594	0.2713	0.0500	20.9	20.0	4.6	20.0
Dibromochloromethane	Lin1		0.2812		10.4	10.0	4.0	20.0
1,2-Dibromoethane	Ave	0.2760	0.3007		10.9	10.0	9.0	20.0
Chlorobenzene	Ave	1.062	1.132	0.3000	10.7	10.0	6.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3442		10.8	10.0	8.0	20.0
Ethylbenzene	Ave	0.5579	0.6054		10.9	10.0	8.5	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7639		21.8	20.0	8.9	20.0
o-Xylene	Ave	0.6962	0.7377		10.6	10.0	6.0	20.0
Styrene	Ave	1.123	1.250	0.3000	11.1	10.0	11.3	20.0
Bromoform	Qua		0.1388	0.1000	10.1	10.0	1.0	20.0
Isopropylbenzene	Ave	1.660	1.752	0.1000	10.6	10.0	5.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6685	0.3000	10.4	10.0	4.5	20.0
Bromobenzene	Ave	0.7581	0.8166		10.8	10.0	7.7	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2126		10.2	10.0	1.5	20.0
~~trans-1,4-Dichloro-2-butene~~	Qua		0.1002		7.10	10.0	~~-29.0~~	20.0
n-Propylbenzene	Ave	0.7609	0.8437		11.1	10.0	10.9	20.0
2-Chlorotoluene	Ave	0.7061	0.7700		10.9	10.0	9.0	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.568		11.1	10.0	10.6	20.0
4-Chlorotoluene	Ave	0.7405	0.7853		10.6	10.0	6.0	20.0
tert-Butylbenzene	Ave	2.122	2.361		11.1	10.0	11.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.656		10.9	10.0	9.3	20.0
sec-Butylbenzene	Ave	2.545	2.763		10.9	10.0	8.6	20.0
1,3-Dichlorobenzene	Ave	1.410	1.514	0.6000	10.7	10.0	7.3	20.0
p-Isopropyltoluene	Ave	2.184	2.394		11.0	10.0	9.7	20.0
1,4-Dichlorobenzene	Ave	1.485	1.566	0.5000	10.5	10.0	5.4	20.0
n-Butylbenzene	Ave	1.769	1.881		10.6	10.0	6.3	20.0
1,2-Dichlorobenzene	Ave	1.392	1.462	0.4000	10.5	10.0	5.0	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0754	0.0500	9.44	10.0	-5.6	20.0
1,3,5-Trichlorobenzene	Ave	0.8050	0.8428		10.5	10.0	4.7	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6909	0.2000	10.0	10.0	0.2	20.0
Hexachlorobutadiene	Ave	0.3077	0.2929		9.52	10.0	-4.8	20.0
Naphthalene	Ave	1.476	1.381		9.36	10.0	-6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVIS 240-43737/2 Calibration Date: 05/11/2012 10:56

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5744.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5819	0.5496		9.45	10.0	-5.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2561		10.3	10.2	0.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3103		9.91	10.2	-2.9	20.0
Toluene-d8 (Surr)	Ave	1.346	1.349		10.2	10.2	0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4949		9.76	10.2	-4.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43737/3 Calibration Date: 05/11/2012 11:19

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5745.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4850		9.17	10.0	-8.3	20.0
Ethyl ether	Ave	0.3182	0.3288		10.3	10.0	3.3	20.0
3-Chloro-1-propene	Ave	0.1408	0.1471		10.4	10.0	4.5	20.0
Diisopropyl ether	Ave	0.2775	0.2818		50.8	50.0	1.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.7091		13.8	10.0	37.5*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	1.054		11.8	10.0	18.4	20.0
Propionitrile	Ave	0.0386	0.0479		24.8	20.0	24.0*	20.0
Ethyl acetate	Ave	0.2719	0.2618		19.3	20.0	-3.7	20.0
Methacrylonitrile	Ave	0.1921	0.1945		10.1	10.0	1.2	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		212	200	5.9	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6046		8.45	10.0	-15.5	20.0
n-Heptane	Ave	0.0406	0.0423		10.4	10.0	4.0	20.0
n-Butanol	Lin1		0.0061		185	200	-7.7	20.0
2-Nitropropane	Qua		0.0418		20.2	20.0	1.0	20.0
Cyclohexanone	Lin1		0.0624		63.3	100	-36.7*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.641		8.86	10.0	-11.4	20.0
2-Methylnaphthalene	Qua		0.3586		8.10	20.0	-59.5*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43737/3 Calibration Date: 05/11/2012 11:19

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5745.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2470		9.93	10.2	-2.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3010		9.62	10.2	-5.8	20.0
Toluene-d8 (Surr)	Ave	1.346	1.308		9.92	10.2	-2.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5113		10.1	10.2	-1.2	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: UXM5695.D Lab Sample ID: MB 240-43549/5

Matrix: Water Heated Purge: (Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/10/2012 12:02

GC Column: DB-624 ID: 0.18 (mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-43549/4	UXM5694.D	05/10/2012 11:39
MSA-DMW8S-050212	240-10925-1	UXM5706.D	05/10/2012 16:11
MSA-DMW8I-050212	240-10925-2	UXM5707.D	05/10/2012 16:34
MSA-DMW8D-050212	240-10925-3	UXM5708.D	05/10/2012 16:57
TB-050212	240-10925-4	UXM5709.D	05/10/2012 17:20
MSA-DMW1A-050212	240-10925-5	UXM5710.D	05/10/2012 17:42
	240-10837-D-5 MS	UXM5716.D	05/10/2012 19:58
	240-10837-E-5 MSD	UXM5717.D	05/10/2012 20:21

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43549/5

Matrix: Water | Lab File ID: UXM5695.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.372	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	0.247	J	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	0.462	J	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
2037-26-5	Toluene-d8 (Surr)	97		74-115
1868-53-7	Dibromofluoromethane (Surr)	91		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5694.D

Lab ID: LCS 240-43549/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	10.8	108	72-116	
1,1,1-Trichloroethane	10.0	10.1	101	74-118	
1,1,2,2-Tetrachloroethane	10.0	9.44	94	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.7	117	74-151	
1,1-Dichloroethane	10.0	10.1	101	82-115	
1,1-Dichloroethene	10.0	10.8	108	78-131	
1,1-Dichloropropene	10.0	10.1	101	83-114	
1,2,3-Trichlorobenzene	10.0	8.98	90	54-126	
1,2,3-Trichloropropane	10.0	9.86	99	73-129	
1,2,3-Trimethylbenzene	10.0	8.55	86	70-130	
1,2,4-Trichlorobenzene	10.0	9.37	94	48-135	
1,2,4-Trimethylbenzene	10.0	10.2	102	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.58	96	42-136	
1,2-Dichlorobenzene	10.0	9.69	97	81-110	
1,2-Dichloroethane	10.0	10.4	104	71-127	
1,2-Dichloropropane	10.0	10.4	104	81-115	
1,3-Dichlorobenzene	10.0	9.93	99	80-110	
1,3-Dichloropropane	10.0	10.2	102	79-116	
1,4-Dichlorobenzene	10.0	9.91	99	82-110	
2,2-Dichloropropane	10.0	10.7	107	50-129	
2-Chloroethyl vinyl ether	10.0	9.48 J	95	52-131	
2-Chlorotoluene	10.0	9.87	99	76-116	
2-Hexanone	20.0	21.0	105	55-133	
Bromobenzene	10.0	10.1	101	76-115	
Bromochloromethane	10.0	9.77	98	77-120	
4-Chlorotoluene	10.0	10.1	101	77-115	
p-Isopropyltoluene	10.0	10.6	106	74-120	
Acetone	20.0	17.1	86	43-136	
Benzene	10.0	10.1	101	83-112	
Bromoform	10.0	8.83	88	40-131	
Bromomethane	10.0	8.94	89	11-185	
Carbon disulfide	10.0	10.4	104	62-142	
Carbon tetrachloride	10.0	9.42	94	66-128	
Chlorobenzene	10.0	10.1	101	85-110	
Chloroethane	10.0	8.97	90	25-153	
Chloroform	10.0	9.45	95	79-117	
Chloromethane	10.0	7.85	79	44-126	
cis-1,2-Dichloroethene	10.0	9.56	96	80-113	
cis-1,3-Dichloropropene	10.0	8.48	85	61-115	
Hexachlorobutadiene	10.0	9.10	91	36-134	
Dibromomethane	10.0	11.0	110	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5694.D

Lab ID: LCS 240-43549/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.9	109	72-121	
Dichlorodifluoromethane	10.0	6.12	61	19-129	
Ethylbenzene	10.0	10.5	105	83-112	
1,2-Dibromoethane	10.0	10.0	100	79-113	
Diisopropyl ether	10.0	9.77 J	98	77-118	
Naphthalene	10.0	9.33	93	32-141	
m-Xylene & p-Xylene	20.0	20.7	104	83-113	
n-Butylbenzene	10.0	10.4	104	66-125	
Isopropylbenzene	10.0	10.6	106	75-114	
n-Propylbenzene	10.0	10.3	103	74-121	
2-Butanone	20.0	18.8	94	60-126	
4-Methyl-2-pentanone	20.0	20.3	102	63-128	
sec-Butylbenzene	10.0	10.2	102	70-117	
Methyl tert-butyl ether	10.0	9.74	97	52-144	
Methylene Chloride	10.0	10.0	100	66-131	
o-Xylene	10.0	10.6	106	83-113	
Styrene	10.0	10.7	107	79-114	
tert-Butylbenzene	10.0	10.3	103	71-115	
Tetrachloroethene	10.0	10.6	106	79-114	
Toluene	10.0	10.4	104	84-111	
trans-1,2-Dichloroethene	10.0	9.89	99	83-117	
trans-1,3-Dichloropropene	10.0	9.26	93	58-117	
Trichloroethene	10.0	10.5	105	76-117	
Trichlorofluoromethane	10.0	10.5	105	49-157	
Vinyl acetate	10.0	9.55	96	46-161	
Vinyl chloride	10.0	8.64	86	53-127	
tert-Butyl alcohol	200	192	96	70-130	
Xylenes, Total	30.0	31.3	104	83-112	
Dibromochloromethane	10.0	9.32	93	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: UXM5747.D Lab Sample ID: MB 240-43737/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/11/2012 12:04

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-43737/4	UXM5746.D	05/11/2012 11:42
MSA-DMW1B-050212	240-10925-6	UXM5750.D	05/11/2012 13:17
	240-11065-E-2 MS	UXM5768.D	05/11/2012 20:05
	240-11065-F-2 MSD	UXM5769.D	05/11/2012 20:28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43737/5

Matrix: Water | Lab File ID: UXM5747.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.322	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	0.192	J	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43737/5

Matrix: Water Lab File ID: UXM5747.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	0.479	J	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43737/5

Matrix: Water Lab File ID: UXM5747.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
2037-26-5	Toluene-d8 (Surr)	89		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43737/5

Matrix: Water Lab File ID: UXM5747.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 1 TIC Result Total: 6.82

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-94-1	Cyclohexanone	9.44	6.82	J

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5746.D

Lab ID: LCS 240-43737/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	10.7	107	72-116	
1,1,1-Trichloroethane	10.0	10.3	103	74-118	
1,1,2,2-Tetrachloroethane	10.0	10.0	100	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.4	124	74-151	
1,1-Dichloroethane	10.0	10.3	103	82-115	
1,1-Dichloroethene	10.0	10.7	107	78-131	
1,1-Dichloropropene	10.0	10.6	106	83-114	
1,2,3-Trichlorobenzene	10.0	9.43	94	54-126	
1,2,3-Trichloropropane	10.0	9.60	96	73-129	
1,2,3-Trimethylbenzene	10.0	8.74	87	70-130	
1,2,4-Trichlorobenzene	10.0	9.43	94	48-135	
1,2,4-Trimethylbenzene	10.0	10.4	104	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.38	94	42-136	
1,2-Dichlorobenzene	10.0	9.94	99	81-110	
1,2-Dichloroethane	10.0	10.4	104	71-127	
1,2-Dichloropropane	10.0	10.2	102	81-115	
1,3-Dichlorobenzene	10.0	10.2	102	80-110	
1,3-Dichloropropane	10.0	10.0	100	79-116	
1,4-Dichlorobenzene	10.0	9.92	99	82-110	
2,2-Dichloropropane	10.0	10.3	103	50-129	
2-Chloroethyl vinyl ether	10.0	8.67 J	87	52-131	
2-Chlorotoluene	10.0	10.1	101	76-116	
2-Hexanone	20.0	21.3	107	55-133	
Bromobenzene	10.0	9.97	100	76-115	
Bromochloromethane	10.0	9.89	99	77-120	
4-Chlorotoluene	10.0	10.3	103	77-115	
p-Isopropyltoluene	10.0	10.8	108	74-120	
Acetone	20.0	17.5	88	43-136	
Benzene	10.0	10.3	103	83-112	
Bromoform	10.0	10.0	100	40-131	
Bromomethane	10.0	8.35	84	11-185	
Carbon disulfide	10.0	10.2	102	62-142	
Carbon tetrachloride	10.0	9.71	97	66-128	
Chlorobenzene	10.0	10.1	101	85-110	
Chloroethane	10.0	8.81	88	25-153	
Chloroform	10.0	10.1	101	79-117	
Chloromethane	10.0	8.62	86	44-126	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.20	82	61-115	
Hexachlorobutadiene	10.0	9.52	95	36-134	
Dibromomethane	10.0	10.5	105	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5746.D

Lab ID: LCS 240-43737/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.5	105	72-121	
Dichlorodifluoromethane	10.0	6.57	66	19-129	
Ethylbenzene	10.0	10.6	106	83-112	
1,2-Dibromoethane	10.0	10.6	106	79-113	
Diisopropyl ether	10.0	9.66 J	97	77-118	
Naphthalene	10.0	9.41	94	32-141	
m-Xylene & p-Xylene	20.0	21.0	105	83-113	
n-Butylbenzene	10.0	10.4	104	66-125	
Isopropylbenzene	10.0	10.5	105	75-114	
n-Propylbenzene	10.0	10.6	106	74-121	
2-Butanone	20.0	18.3	92	60-126	
4-Methyl-2-pentanone	20.0	20.1	101	63-128	
sec-Butylbenzene	10.0	10.2	102	70-117	
Methyl tert-butyl ether	10.0	9.58	96	52-144	
Methylene Chloride	10.0	9.69	97	66-131	
o-Xylene	10.0	10.7	107	83-113	
Styrene	10.0	10.9	109	79-114	
tert-Butylbenzene	10.0	10.3	103	71-115	
Tetrachloroethene	10.0	10.4	104	79-114	
Toluene	10.0	10.4	104	84-111	
trans-1,2-Dichloroethene	10.0	10.3	103	83-117	
trans-1,3-Dichloropropene	10.0	9.56	96	58-117	
Trichloroethene	10.0	10.4	104	76-117	
Trichlorofluoromethane	10.0	10.8	108	49-157	
Vinyl acetate	10.0	8.93	89	46-161	
Vinyl chloride	10.0	9.31	93	53-127	
tert-Butyl alcohol	200	185	93	70-130	
Xylenes, Total	30.0	31.7	106	83-112	
Dibromochloromethane	10.0	9.33	93	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5716.D

Lab ID: 240-10837-D-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	400	40 U	416	104	64-118	
1,1,1-Trichloroethane	400	40 U	399	100	68-121	
1,1,2,2-Tetrachloroethane	400	40 U	394	99	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	400	40 U	412	103	70-152	
1,1-Dichloroethane	400	40 U	412	103	79-116	
1,1-Dichloroethene	400	16 J	428	103	74-135	
1,1-Dichloropropene	400	40 U	412	103	80-114	
1,2,3-Trichlorobenzene	400	40 U	363	91	45-129	
1,2,3-Trichloropropane	400	40 U	397	99	67-132	
1,2,3-Trimethylbenzene	400	200 U	333	83	70-130	
1,2,4-Trichlorobenzene	400	40 U	354	89	38-138	
1,2,4-Trimethylbenzene	400	40 U	388	97	67-124	
1,2-Dibromo-3-Chloropropane	400	80 U	381	95	32-139	
1,2-Dichlorobenzene	400	40 U	380	95	75-111	
1,2-Dichloroethane	400	40 U	432	108	68-129	
1,2-Dichloropropane	400	40 U	404	101	78-115	
1,3-Dichlorobenzene	400	40 U	387	97	73-110	
1,3-Dichloropropane	400	40 U	400	100	74-118	
1,4-Dichlorobenzene	400	40 U	379	95	75-110	
2,2-Dichloropropane	400	40 U	368	92	38-127	
2-Chloroethyl vinyl ether	400	400 U	400 U	0	10-150	F
2-Chlorotoluene	400	40 U	386	97	69-117	
2-Hexanone	800	400 U	828	104	47-139	
Bromobenzene	400	40 U	397	99	71-116	
Bromochloromethane	400	40 U	395	99	73-121	
4-Chlorotoluene	400	40 U	393	98	71-116	
p-Isopropyltoluene	400	40 U	393	98	64-122	
Acetone	800	400 U	756	95	33-145	
Benzene	400	12 J	416	101	72-121	
Bromoform	400	40 U	368	92	32-128	
Bromomethane	400	40 U	334	83	10-186	
Carbon disulfide	400	40 U	391	98	57-147	
Carbon tetrachloride	400	40 U	366	91	59-129	
Chlorobenzene	400	240	648	103	80-110	
Chloroethane	400	40 U	345	86	21-165	
Chloroform	400	40 U	397	99	76-118	
Chloromethane	400	40 U	306	77	33-132	
cis-1,2-Dichloroethene	400	1400	1820	108	70-120	E
cis-1,3-Dichloropropene	400	40 U	320	80	51-110	
Hexachlorobutadiene	400	40 U	311	78	27-132	
Dibromomethane	400	40 U	432	108	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5716.D

Lab ID: 240-10837-D-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	400	40 U	424	106	67-120	
Dichlorodifluoromethane	400	40 U	219	55	17-128	
Ethylbenzene	400	40 U	388	97	75-116	
1,2-Dibromoethane	400	40 U	399	100	74-113	
Diisopropyl ether	400	400 U	385 J	96	73-118	
Naphthalene	400	40 U	369	92	15-158	
m-Xylene & p-Xylene	800	80 U	788	99	75-117	
n-Butylbenzene	400	40 U	374	94	56-127	
Isopropylbenzene	400	40 U	384	96	68-116	
n-Propylbenzene	400	40 U	393	98	64-124	
2-Butanone	800	400 U	400 U	0	54-129	F
4-Methyl-2-pentanone	800	400 U	820	103	56-131	
sec-Butylbenzene	400	40 U	368	92	60-119	
Methyl tert-butyl ether	400	200 U	375	94	46-144	
Methylene Chloride	400	40 U	386	97	63-128	
o-Xylene	400	40 U	398	100	76-116	
Styrene	400	40 U	408	102	71-117	
tert-Butylbenzene	400	40 U	382	95	61-119	
Tetrachloroethene	400	40 U	389	97	70-117	
Toluene	400	6.0 J	404	100	78-114	
trans-1,2-Dichloroethene	400	14 J	404	98	80-119	
trans-1,3-Dichloropropene	400	40 U	355	89	46-116	
Trichloroethene	400	50	460	103	66-120	
Trichlorofluoromethane	400	40 U	384	96	46-157	
Vinyl acetate	400	80 U	376	94	43-157	
Vinyl chloride	400	910	1240	83	49-130	
tert-Butyl alcohol	8000	2000 U	7820	98	70-130	
Xylenes, Total	1200	80 U	1190	99	76-116	
Dibromochloromethane	400	40 U	359	90	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5717.D

Lab ID: 240-10837-E-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	400	391	98	6	30	64-118	
1,1,1-Trichloroethane	400	412	103	3	30	68-121	
1,1,2,2-Tetrachloroethane	400	408	102	3	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	400	424	106	3	30	70-152	
1,1-Dichloroethane	400	420	105	2	30	79-116	
1,1-Dichloroethene	400	440	106	3	30	74-135	
1,1-Dichloropropene	400	404	101	2	30	80-114	
1,2,3-Trichlorobenzene	400	386	97	6	30	45-129	
1,2,3-Trichloropropane	400	412	103	4	30	67-132	
1,2,3-Trimethylbenzene	400	345	86	4	30	70-130	
1,2,4-Trichlorobenzene	400	368	92	4	30	38-138	
1,2,4-Trimethylbenzene	400	408	102	5	30	67-124	
1,2-Dibromo-3-Chloropropane	400	362	91	5	30	32-139	
1,2-Dichlorobenzene	400	391	98	3	30	75-111	
1,2-Dichloroethane	400	424	106	2	30	68-129	
1,2-Dichloropropane	400	416	104	3	30	78-115	
1,3-Dichlorobenzene	400	392	98	1	30	73-110	
1,3-Dichloropropane	400	408	102	2	30	74-118	
1,4-Dichlorobenzene	400	389	97	3	30	75-110	
~~2,2-Dichloropropane~~	400	390	98	6	30	38-127	
2-Chloroethyl vinyl ether	400	400 U	0	NC	30	10-150	F
2-Chlorotoluene	400	400	100	4	30	69-117	
2-Hexanone	800	804	101	3	30	47-139	
Bromobenzene	400	408	102	3	30	71-116	
Bromochloromethane	400	412	103	4	30	73-121	
4-Chlorotoluene	400	404	101	3	30	71-116	
p-Isopropyltoluene	400	408	102	4	30	64-122	
Acetone	800	780	98	3	30	33-145	
Benzene	400	416	101	0	30	72-121	
Bromoform	400	363	91	1	30	32-128	
Bromomethane	400	350	88	5	30	10-186	
Carbon disulfide	400	398	100	2	30	57-147	
Carbon tetrachloride	400	378	95	3	30	59-129	
Chlorobenzene	400	640	101	1	30	80-110	
Chloroethane	400	364	91	5	30	21-165	
Chloroform	400	404	101	2	30	76-118	
Chloromethane	400	315	79	3	30	33-132	
cis-1,2-Dichloroethene	400	1790	102	1	30	70-120	E
cis-1,3-Dichloropropene	400	350	88	9	30	51-110	
Hexachlorobutadiene	400	338	85	8	30	27-132	
Dibromomethane	400	432	108	0	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5717.D

Lab ID: 240-10837-E-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	400	420	105	1	30	67-120	
Dichlorodifluoromethane	400	214	54	2	30	17-128	
Ethylbenzene	400	400	100	3	30	75-116	
1,2-Dibromoethane	400	397	99	1	30	74-113	
Diisopropyl ether	400	395 J	99	2	30	73-118	
Naphthalene	400	392	98	6	30	15-158	
m-Xylene & p-Xylene	800	784	98	1	30	75-117	
n-Butylbenzene	400	388	97	4	30	56-127	
Isopropylbenzene	400	383	96	0	30	68-116	
n-Propylbenzene	400	408	102	4	30	64-124	
2-Butanone	800	400 U	0	NC	30	54-129	F
4-Methyl-2-pentanone	800	856	107	4	30	56-131	
sec-Butylbenzene	400	384	96	4	30	60-119	
Methyl tert-butyl ether	400	395	99	5	30	46-144	
Methylene Chloride	400	393	98	2	30	63-128	
o-Xylene	400	396	99	1	30	76-116	
Styrene	400	400	100	2	30	71-117	
tert-Butylbenzene	400	398	100	4	30	61-119	
Tetrachloroethene	400	381	95	2	30	70-117	
Toluene	400	397	98	2	30	78-114	
trans-1,2-Dichloroethene	400	416	101	3	30	80-119	
trans-1,3-Dichloropropene	400	363	91	2	30	46-116	
Trichloroethene	400	460	103	0	30	66-120	
Trichlorofluoromethane	400	400	100	4	30	46-157	
Vinyl acetate	400	390	98	4	30	43-157	
Vinyl chloride	400	1240	82	0	30	49-130	
tert-Butyl alcohol	8000	8060	101	3	30	70-130	
Xylenes, Total	1200	1180	98	1	30	76-116	
Dibromochloromethane	400	362	91	1	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5768.D

Lab ID: 240-11065-E-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	80.0	8.0 U	77.4	97	64-118	
1,1,1-Trichloroethane	80.0	8.0 U	72.6	91	68-121	
1,1,2,2-Tetrachloroethane	80.0	8.0 U	80.8	101	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	80.0	8.0 U	83.2	104	70-152	
1,1-Dichloroethane	80.0	8.0 U	76.7	96	79-116	
1,1-Dichloroethene	80.0	8.0 U	77.3	97	74-135	
1,1-Dichloropropene	80.0	8.0 U	76.6	96	80-114	
1,2,3-Trichlorobenzene	80.0	8.0 U	76.2	95	45-129	
1,2,3-Trichloropropane	80.0	8.0 U	84.8	106	67-132	
1,2,3-Trimethylbenzene	80.0	40 U	66.3	83	70-130	
1,2,4-Trichlorobenzene	80.0	8.0 U	71.7	90	38-138	
1,2,4-Trimethylbenzene	80.0	8.0 U	76.4	96	67-124	
1,2-Dibromo-3-Chloropropane	80.0	16 U	81.6	102	32-139	
1,2-Dichlorobenzene	80.0	8.0 U	76.4	96	75-111	
1,2-Dichloroethane	80.0	8.0 U	80.0	100	68-129	
1,2-Dichloropropane	80.0	8.0 U	78.0	98	78-115	
1,3-Dichlorobenzene	80.0	8.0 U	75.3	94	73-110	
1,3-Dichloropropane	80.0	8.0 U	80.8	101	74-118	
1,4-Dichlorobenzene	80.0	8.0 U	75.5	94	75-110	
2,2-Dichloropropane	80.0	8.0 U	67.0	84	38-127	
2-Chloroethyl vinyl ether	80.0	80 U	80 U	0	10-150	F
2-Chlorotoluene	80.0	8.0 U	74.4	93	69-117	
2-Hexanone	160	80 U	168	105	47-139	
Bromobenzene	80.0	8.0 U	76.1	95	71-116	
Bromochloromethane	80.0	8.0 U	73.7	92	73-121	
4-Chlorotoluene	80.0	8.0 U	77.1	96	71-116	
p-Isopropyltoluene	80.0	8.0 U	78.2	98	64-122	
Acetone	160	80 U	150	94	33-145	
Benzene	80.0	8.0 U	76.2	95	72-121	
Bromoform	80.0	8.0 U	76.0	95	32-128	
Bromomethane	80.0	8.0 U	56.3	70	10-186	
Carbon disulfide	80.0	8.0 U	72.6	91	57-147	
Carbon tetrachloride	80.0	6.4 J	71.7	82	59-129	
Chlorobenzene	80.0	8.0 U	75.7	95	80-110	
Chloroethane	80.0	8.0 U	62.9	79	21-165	
Chloroform	80.0	8.0 U	73.8	92	76-118	
Chloromethane	80.0	8.0 U	61.2	77	33-132	
cis-1,2-Dichloroethene	80.0	8.0 U	72.1	90	70-120	
cis-1,3-Dichloropropene	80.0	8.0 U	62.0	78	51-110	
Hexachlorobutadiene	80.0	8.0 U	59.7	75	27-132	
Dibromomethane	80.0	8.0 U	81.6	102	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5768.D

Lab ID: 240-11065-E-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	80.0	8.0 U	80.0	100	67-120	
Dichlorodifluoromethane	80.0	8.0 U	45.4	57	17-128	
Ethylbenzene	80.0	8.0 U	75.4	94	75-116	
1,2-Dibromoethane	80.0	8.0 U	81.6	102	74-113	
Diisopropyl ether	80.0	80 U	66.8 J	84	73-118	
Naphthalene	80.0	8.0 U	80.0	100	15-158	
m-Xylene & p-Xylene	160	16 U	150	94	75-117	
n-Butylbenzene	80.0	8.0 U	72.3	90	56-127	
Isopropylbenzene	80.0	8.0 U	73.8	92	68-116	
n-Propylbenzene	80.0	8.0 U	78.2	98	64-124	
2-Butanone	160	80 U	155	97	54-129	
4-Methyl-2-pentanone	160	80 U	165	103	56-131	
sec-Butylbenzene	80.0	8.0 U	72.0	90	60-119	
Methyl tert-butyl ether	80.0	40 U	72.6	91	46-144	
Methylene Chloride	80.0	8.0 U	71.5	89	63-128	
o-Xylene	80.0	8.0 U	77.2	97	76-116	
Styrene	80.0	8.0 U	79.0	99	71-117	
tert-Butylbenzene	80.0	8.0 U	74.7	93	61-119	
Tetrachloroethene	80.0	8.0 U	76.4	96	70-117	
Toluene	80.0	8.0 U	76.6	96	78-114	
trans-1,2-Dichloroethene	80.0	8.0 U	73.3	92	80-119	
trans-1,3-Dichloropropene	80.0	8.0 U	72.7	91	46-116	
Trichloroethene	80.0	180	247	89	66-120	
Trichlorofluoromethane	80.0	8.0 U	71.2	89	46-157	
Vinyl acetate	80.0	16 U	71.4	89	43-157	
Vinyl chloride	80.0	8.0 U	64.3	80	49-130	
tert-Butyl alcohol	1600	400 U	1640	103	70-130	
Xylenes, Total	240	16 U	227	95	76-116	
Dibromochloromethane	80.0	8.0 U	72.8	91	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5769.D

Lab ID: 240-11065-F-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	80.0	80.0	100	3	30	64-118	
1,1,1-Trichloroethane	80.0	74.7	93	3	30	68-121	
1,1,2,2-Tetrachloroethane	80.0	81.6	102	1	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	80.0	78.7	98	6	30	70-152	
1,1-Dichloroethane	80.0	78.6	98	2	30	79-116	
1,1-Dichloroethene	80.0	77.7	97	1	30	74-135	
1,1-Dichloropropene	80.0	77.7	97	1	30	80-114	
1,2,3-Trichlorobenzene	80.0	78.0	98	2	30	45-129	
1,2,3-Trichloropropane	80.0	80.8	101	5	30	67-132	
1,2,3-Trimethylbenzene	80.0	65.0	81	2	30	70-130	
1,2,4-Trichlorobenzene	80.0	72.6	91	1	30	38-138	
1,2,4-Trimethylbenzene	80.0	76.5	96	0	30	67-124	
1,2-Dibromo-3-Chloropropane	80.0	78.9	99	3	30	32-139	
1,2-Dichlorobenzene	80.0	75.3	94	1	30	75-111	
1,2-Dichloroethane	80.0	80.8	101	1	30	68-129	
1,2-Dichloropropane	80.0	78.6	98	1	30	78-115	
1,3-Dichlorobenzene	80.0	76.8	96	2	30	73-110	
1,3-Dichloropropane	80.0	78.6	98	3	30	74-118	
1,4-Dichlorobenzene	80.0	74.1	93	2	30	75-110	
2,2-Dichloropropane	80.0	69.7	87	4	30	38-127	
2-Chloroethyl vinyl ether	80.0	80 U	0	NC	30	10-150	F
2-Chlorotoluene	80.0	76.6	96	3	30	69-117	
2-Hexanone	160	168	105	0	30	47-139	
Bromobenzene	80.0	76.7	96	1	30	71-116	
Bromochloromethane	80.0	77.2	97	5	30	73-121	
4-Chlorotoluene	80.0	76.7	96	1	30	71-116	
p-Isopropyltoluene	80.0	77.1	96	1	30	64-122	
Acetone	160	149	93	1	30	33-145	
Benzene	80.0	76.7	96	1	30	72-121	
Bromoform	80.0	75.5	94	1	30	32-128	
Bromomethane	80.0	63.7	80	12	30	10-186	
Carbon disulfide	80.0	74.3	93	2	30	57-147	
Carbon tetrachloride	80.0	73.8	84	3	30	59-129	
Chlorobenzene	80.0	75.4	94	0	30	80-110	
Chloroethane	80.0	63.5	79	1	30	21-165	
Chloroform	80.0	75.8	95	3	30	76-118	
Chloromethane	80.0	63.0	79	3	30	33-132	
cis-1,2-Dichloroethene	80.0	74.9	94	4	30	70-120	
cis-1,3-Dichloropropene	80.0	63.0	79	2	30	51-110	
Hexachlorobutadiene	80.0	61.8	77	4	30	27-132	
Dibromomethane	80.0	82.4	103	1	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5769.D

Lab ID: 240-11065-F-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	80.0	80.8	101	1	30	67-120	
Dichlorodifluoromethane	80.0	45.0	56	1	30	17-128	
Ethylbenzene	80.0	76.3	95	1	30	75-116	
1,2-Dibromoethane	80.0	82.4	103	1	30	74-113	
Diisopropyl ether	80.0	71.0 J	89	6	30	73-118	
Naphthalene	80.0	80.8	101	1	30	15-158	
m-Xylene & p-Xylene	160	153	96	2	30	75-117	
n-Butylbenzene	80.0	72.8	91	1	30	56-127	
Isopropylbenzene	80.0	75.2	94	2	30	68-116	
n-Propylbenzene	80.0	78.5	98	0	30	64-124	
2-Butanone	160	154	97	1	30	54-129	
4-Methyl-2-pentanone	160	165	103	0	30	56-131	
sec-Butylbenzene	80.0	72.4	91	1	30	60-119	
Methyl tert-butyl ether	80.0	74.4	93	3	30	46-144	
Methylene Chloride	80.0	73.4	92	3	30	63-128	
o-Xylene	80.0	77.4	97	0	30	76-116	
Styrene	80.0	79.1	99	0	30	71-117	
tert-Butylbenzene	80.0	76.2	95	2	30	61-119	
Tetrachloroethene	80.0	76.5	96	0	30	70-117	
Toluene	80.0	77.5	97	1	30	78-114	
trans-1,2-Dichloroethene	80.0	76.4	96	4	30	80-119	
trans-1,3-Dichloropropene	80.0	73.0	91	0	30	46-116	
Trichloroethene	80.0	243	84	2	30	66-120	
Trichlorofluoromethane	80.0	74.5	93	5	30	46-157	
Vinyl acetate	80.0	74.9	94	5	30	43-157	
Vinyl chloride	80.0	65.3	82	1	30	49-130	
tert-Butyl alcohol	1600	1660	104	1	30	70-130	
Xylenes, Total	240	230	96	1	30	76-116	
Dibromochloromethane	80.0	72.3	90	1	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MSA-DMW8S-050212	240-10925-1	99	100	99	102
MSA-DMW8I-050212	240-10925-2	89	91	91	94
MSA-DMW8D-050212	240-10925-3	88	92	89	89
TB-050212	240-10925-4	97	98	93	93
MSA-DMW1A-050212	240-10925-5	90	93	91	90
MSA-DMW1B-050212	240-10925-6	87	89	88	87
	MB 240-43549/5	91	98	97	97
	MB 240-43737/5	87	91	89	89
	LCS 240-43549/4	92	95	101	102
	LCS 240-43737/4	99	97	101	101
	240-10837-D-5 MS	97	100	101	102
	240-11065-E-2 MS	89	93	95	96
	240-10837-E-5 MSD	94	93	95	96
	240-11065-F-2 MSD	92	93	93	94

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: STD8260 240-43409/4 Date Analyzed: 05/09/2012 17:35

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5662.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1744720	5.70	1311107	8.39	771411	10.64
UPPER LIMIT		3489440	6.20	2622214	8.89	1542822	11.14
LOWER LIMIT		872360	5.20	655554	7.89	385706	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43409/8		1716805	5.70	1288543	8.39	755167	10.64
CCVIS 240-43549/2		1685929	5.70	1198706	8.39	696224	10.64
CCVIS 240-43737/2		1445219	5.70	1138123	8.39	647237	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCVIS 240-43549/2 Date Analyzed: 05/10/2012 10:53

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5692.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1685929	5.70	1198706	8.39	696224	10.64
UPPER LIMIT		3371858	6.20	2397412	8.89	1392448	11.14
LOWER LIMIT		842965	5.20	599353	7.89	348112	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-43549/3		1693016	5.70	1283426	8.39	677855	10.64
LCS 240-43549/4		1679901	5.70	1201426	8.39	713156	10.64
MB 240-43549/5		1644585	5.70	1222754	8.39	644299	10.64
240-10925-1	MSA-DMW8S-050212	1418745	5.70	1059003	8.39	600281	10.64
240-10925-2	MSA-DMW8I-050212	1651027	5.70	1164500	8.39	655679	10.64
240-10925-3	MSA-DMW8D-050212	1647750	5.70	1240007	8.39	670302	10.64
240-10925-4	TB-050212	1483496	5.70	1166322	8.39	632030	10.64
240-10925-5	MSA-DMW1A-050212	1602071	5.70	1193039	8.39	652748	10.64
240-10837-D-5 MS		1587604	5.70	1149469	8.39	664336	10.64
240-10837-E-5 MSD		1579177	5.70	1228432	8.39	675357	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCVIS 240-43737/2 Date Analyzed: 05/11/2012 10:56

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5744.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1445219	5.70	1138123	8.39	647237	10.64
UPPER LIMIT		2890438	6.20	2276246	8.89	1294474	11.14
LOWER LIMIT		722610	5.20	569062	7.89	323619	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-43737/3		1506826	5.70	1088061	8.39	605848	10.64
LCS 240-43737/4		1527568	5.70	1076685	8.39	649449	10.64
MB 240-43737/5		1650525	5.70	1169906	8.39	658804	10.64
240-10925-6	MSA-DMW1B-050212	1571445	5.70	1169492	8.39	644141	10.64
240-11065-E-2 MS		1630836	5.70	1171016	8.39	669621	10.64
240-11065-F-2 MSD		1702427	5.70	1225385	8.39	698223	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

Method 8270C

Semivolatile Organic Compounds (GC/MS) by Method 8270C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20501001.D DFTPP Injection Date: 05/01/2012

Instrument ID: A4HP10 DFTPP Injection Time: 14:58

Analysis Batch No.: 42389

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	47.4	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	42.3	
70	Less than 2.0% of mass 69	0.2	(0.6)1
127	25.0 - 75.0% of mass 198	54.3	
197	Less than 1.0% of mass 198	0.3	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	22.4	
365	Greater than 0.75% of mass 198	2.4	
441	Present, but less than mass 443	10.3	
442	40.0 - 110.0% of mass 198	67.1	
443	15.0 - 24.0% of mass 442	13.1	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-42389/2	20501002.D	05/01/2012	15:17
	STD4 240-42389/3	20501003.D	05/01/2012	15:36
	STD3 240-42389/4	20501004.D	05/01/2012	15:54
	STD2 240-42389/5	20501005.D	05/01/2012	16:13
	STD1 240-42389/6	20501006.D	05/01/2012	16:32
	STD9 240-42389/7	20501007.D	05/01/2012	16:50
	STD8 240-42389/8	20501008.D	05/01/2012	17:09
	STD7 240-42389/9	20501009.D	05/01/2012	17:28
	STD6 240-42389/10	20501010.D	05/01/2012	17:47
	ICV 240-42389/11	20501011.D	05/01/2012	18:05

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 42389

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18 (mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/01/2012 15:17 Calibration End Date: 05/01/2012 17:47 Calibration ID: 8470

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42389/6	20501006.D
Level 2	STD2 240-42389/5	20501005.D
Level 3	STD3 240-42389/4	20501004.D
Level 4	STD4 240-42389/3	20501003.D
Level 5	STD5 240-42389/2	20501002.D
Level 6	STD6 240-42389/10	20501010.D
Level 7	STD7 240-42389/9	20501009.D
Level 8	STD8 240-42389/8	20501008.D
Level 9	STD9 240-42389/7	20501007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5383	0.5471 0.5624	0.5710 0.5755	0.5312 0.5703	0.5216	Ave		0.5522				3.7		15.0			
N-Nitrosodimethylamine	0.8685	0.8309 0.9098	0.8418 0.9072	0.8664 0.9273	0.8555	Ave		0.8759				4.0		15.0			
Pyridine	1.4029	1.0019 1.5019	1.1463 1.5322	1.3693 1.5164	1.3982	Ave		1.3586				14.0		15.0			
Ethyl methacrylate	1.2138	1.1432 1.2309	1.1652 1.2524	1.2137 1.2629	1.1562	Ave		1.2048				3.7		15.0			
Benzaldehyde	1.3022 0.7666	1.1856 +++++	1.1340 +++++	1.1783 +++++	1.0462	Ave		1.1022				17.0	*	15.0			
3-Chloropropionitrile	1.0056	0.9301 1.0176	1.0123 1.0350	1.0183 1.0289	0.9640	Ave		1.0015				3.6		15.0			
Malononitrile	1.5857	1.6440 1.4011	1.6344 1.2129	1.7344 1.0348	1.6589	Qua	-0.304	1.9683	-0.037						1.0000		0.9900
Benzoic acid	0.1655	+++++ 0.2127	+++++ 0.2180	0.1108 0.2521	0.2164	Qua	0.1881	0.1234	0.0024						0.9940		0.9900
Phenol	1.7650	1.6368 1.8262	1.6121 1.8418	1.7834 1.8329	1.7392	Ave		1.7547				5.0		15.0			
Aniline	2.2627	1.7955 2.2578	1.9114 2.3435	2.1395 2.3661	2.1316	Ave		2.1510				9.5		15.0			
Bis(2-chloroethyl)ether	1.4225	1.5193 1.5492	1.4025 1.5267	1.4756 1.4951	1.3777	Ave		1.4711				4.3		15.0			
2-Chlorophenol	1.4399	1.2041 1.5070	1.3931 1.5177	1.4185 1.5158	1.3843	Ave		1.4325				5.7		15.0			
1,3-Dichlorobenzene	1.5850	1.5692 1.6378	1.5226 1.6633	1.5675 1.6159	1.5172	Ave		1.5848				3.3		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 42389

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/01/2012 15:17 Calibration End Date: 05/01/2012 17:47 Calibration ID: 8470

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42389/6	20501006.D
Level 2	STD2 240-42389/5	20501005.D
Level 3	STD3 240-42389/4	20501004.D
Level 4	STD4 240-42389/3	20501003.D
Level 5	STD5 240-42389/2	20501002.D
Level 6	STD6 240-42389/10	20501010.D
Level 7	STD7 240-42389/9	20501009.D
Level 8	STD8 240-42389/8	20501008.D
Level 9	STD9 240-42389/7	20501007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	307165	13645 490093	15238 434189	50080 804911	122106	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	495593	20722 792766	22466 684385	81681 1308857	200276	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	800564	24988 1308711	30592 1155893	129094 2140322	327324	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Ethyl methacrylate	DCB	Ave	692670	28511 1072634	31097 944805	114425 1782629	270662	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	7142 437461	29569 +++++	30264 +++++	111086 +++++	244913	0.100 10.0	0.500 +++++	1.00 +++++	2.00 +++++	5.00
3-Chloropropionitrile	DCB	Ave	573842	23195 886685	27017 780803	96001 1452211	225669	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Malononitrile	DCB	Qua	904867	41001 1220924	43619 915012	163507 1460537	388359	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Qua	750480	+++++ 1465510	+++++ 1260663	79790 2788652	396814	20.0	+++++ 30.0	+++++ 40.0	4.00 50.0	10.0
Phenol	DCB	Ave	1007178	40822 1591368	43024 1389452	168127 2587092	407142	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	1291226	44778 1967440	51013 1767926	201700 3339739	499019	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	811744	37891 1349994	37431 1151715	139116 2110350	322530	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	821684	32025 1313167	37179 1144956	133724 2139546	324063	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	904501	39134 1427204	40636 1254776	147777 2280804	355188	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,4-Dichlorobenzene	DCB	Ave	925077	39948 1446885	43766 1293286	154215 2363139	365307	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-42389/11 Calibration Date: 05/01/2012 18:05

Instrument ID: A4HP10 Calib Start Date: 05/01/2012 15:17

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/01/2012 17:47

Lab File ID: 20501011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5522	0.5485		9.93	10.0	-0.7	50.0
N-Nitrosodimethylamine	Ave	0.8759	0.9120		10.4	10.0	4.1	50.0
Pyridine	Ave	1.359	1.431		10.5	10.0	5.3	50.0
Ethyl methacrylate	Ave	1.205	1.224		10.2	10.0	1.6	50.0
3-Chloropropionitrile	Ave	1.001	1.015		10.1	10.0	1.3	50.0
Malononitrile	Qua		1.574		10.0	10.0	0.0	50.0
Benzaldehyde	Ave	1.102	0.6596		5.98	10.0	-40.2	50.0
Phenol	Ave	1.755	1.754		10.0	10.0	-0.0	20.0
Aniline	Ave	2.151	2.280		10.6	10.0	6.0	50.0
Bis(2-chloroethyl)ether	Ave	1.471	1.442		9.80	10.0	-2.0	50.0
2-Chlorophenol	Ave	1.433	1.454		10.1	10.0	1.5	50.0
1,3-Dichlorobenzene	Ave	1.585	1.605		10.1	10.0	1.3	50.0
1,4-Dichlorobenzene	Ave	1.639	1.652		10.1	10.0	0.8	20.0
Benzyl alcohol	Ave	0.8376	0.8338		9.95	10.0	-0.5	50.0
1,2-Dichlorobenzene	Ave	1.515	1.537		10.1	10.0	1.4	50.0
2-Methylphenol	Ave	1.310	1.283		9.79	10.0	-2.1	50.0
bis (2-chloroisopropyl) ether	Ave	2.536	2.539		10.0	10.0	0.1	50.0
3 & 4 Methylphenol	Ave	1.306	1.327		10.2	10.0	1.6	50.0
N-Nitrosodi-n-propylamine	Ave	0.9781	1.017	0.0500	10.4	10.0	4.0	50.0
Acetophenone	Ave	1.907	1.914		10.0	10.0	0.4	50.0
Hexachloroethane	Ave	0.5630	0.5704		10.1	10.0	1.3	50.0
Nitrobenzene	Ave	0.3766	0.3875		10.3	10.0	2.9	50.0
Isophorone	Ave	0.6794	0.7073		10.4	10.0	4.1	50.0
2,4-Dimethylphenol	Ave	0.3518	0.3590		10.2	10.0	2.0	50.0
2-Nitrophenol	Qua		0.2034		9.90	10.0	-1.0	20.0
1,3,5-Trichlorobenzene	Ave	0.3301	0.3404		10.3	10.0	3.1	50.0
Bis(2-chloroethoxy)methane	Ave	0.4006	0.4135		10.3	10.0	3.2	50.0
Benzoic acid	Qua		0.1561		17.6	20.0	-12.0	50.0
2,4-Dichlorophenol	Qua		0.2877		9.90	10.0	-1.0	20.0
1,2,4-Trichlorobenzene	Ave	0.3214	0.3285		10.2	10.0	2.2	50.0
Naphthalene	Ave	1.111	1.093		9.83	10.0	-1.7	50.0
4-Chloroaniline	Ave	0.4276	0.4777		11.2	10.0	11.7	50.0
Hexachlorobutadiene	Ave	0.1565	0.1611		10.3	10.0	3.0	20.0
1,2,3-Trichlorobenzene	Ave	0.3007	0.3099		10.3	10.0	3.0	50.0
Caprolactam	Qua		0.1115		9.69	10.0	-3.1	50.0
4-Chloro-3-methylphenol	Ave	0.2761	0.3074		11.1	10.0	11.3	20.0
2-Methylnaphthalene	Ave	0.7121	0.7120		10.0	10.0	-0.0	50.0
1-Methylnaphthalene	Ave	0.6770	0.6753		9.98	10.0	-0.2	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5146	0.5225		10.2	10.0	1.5	50.0
Hexachlorocyclopentadiene	Qua		0.2755	0.0500	9.51	10.0	-4.9	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20510001.D DFTPP Injection Date: 05/10/2012

Instrument ID: A4HP10 DFTPP Injection Time: 08:43

Analysis Batch No.: 43490

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	46.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	42.0	
70	Less than 2.0% of mass 69	0.3	(0.7)1
127	25.0 - 75.0% of mass 198	52.5	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	22.4	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	11.5	
442	40.0 - 110.0% of mass 198	72.7	
443	15.0 - 24.0% of mass 442	14.4	(19.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43490/2	20510002.D	05/10/2012	08:59
	MB 240-42981/20-A	20510003.D	05/10/2012	09:21
	LCS 240-42981/21-A	20510004.D	05/10/2012	09:39
MSA-MW32S-050212	240-10925-7	20510010.D	05/10/2012	11:26
MSA-DMW1B-050212	240-10925-6	20510011.D	05/10/2012	11:44

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43490/2 Calibration Date: 05/10/2012 08:59

Instrument ID: A4HP10 Calib Start Date: 05/01/2012 15:17

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/01/2012 17:47

Lab File ID: 20510002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5522	0.5628		10.2	10.0	1.9	50.0
N-Nitrosodimethylamine	Ave	0.8759	0.8895		10.2	10.0	1.6	50.0
Pyridine	Ave	1.359	1.537		11.3	10.0	13.1	50.0
Ethyl methacrylate	Ave	1.205	1.214		10.1	10.0	0.7	50.0
3-Chloropropionitrile	Ave	1.001	0.9920		9.91	10.0	-0.9	50.0
Malononitrile	Qua		1.557		9.90	10.0	-1.0	50.0
Benzaldehyde	Ave	1.102	0.6461		5.86	10.0	-41.4	50.0
Phenol	Ave	1.755	1.787		10.2	10.0	1.9	20.0
Aniline	Ave	2.151	2.192		10.2	10.0	1.9	50.0
Bis(2-chloroethyl)ether	Ave	1.471	1.401		9.53	10.0	-4.7	50.0
2-Chlorophenol	Ave	1.433	1.469		10.3	10.0	2.6	50.0
1,3-Dichlorobenzene	Ave	1.585	1.586		10.0	10.0	0.0	50.0
1,4-Dichlorobenzene	Ave	1.639	1.635		9.98	10.0	-0.2	50.0
Benzyl alcohol	Ave	0.8376	0.7752		9.26	10.0	-7.4	50.0
1,2-Dichlorobenzene	Ave	1.515	1.489		9.82	10.0	-1.8	50.0
2-Methylphenol	Ave	1.310	1.254		9.57	10.0	-4.3	50.0
bis (2-chloroisopropyl) ether	Ave	2.536	2.478		9.77	10.0	-2.3	50.0
3 & 4 Methylphenol	Ave	1.306	1.338		10.2	10.0	2.4	50.0
N-Nitrosodi-n-propylamine	Ave	0.9781	0.9872	0.0500	10.1	10.0	0.9	50.0
Acetophenone	Ave	1.907	1.890		9.91	10.0	-0.9	50.0
Hexachloroethane	Ave	0.5630	0.5656		10.0	10.0	0.5	50.0
Nitrobenzene	Ave	0.3766	0.3816		10.1	10.0	1.3	50.0
Isophorone	Ave	0.6794	0.6855		10.1	10.0	0.9	50.0
2-Nitrophenol	Qua		0.2068		10.1	10.0	1.0	20.0
1,3,5-Trichlorobenzene	Ave	0.3301	0.3286		9.95	10.0	-0.5	50.0
2,4-Dimethylphenol	Ave	0.3518	0.3578		10.2	10.0	1.7	50.0
Bis(2-chloroethoxy)methane	Ave	0.4006	0.4031		10.1	10.0	0.6	50.0
Benzoic acid	Qua		0.2400		25.0	20.0	25.0	50.0
2,4-Dichlorophenol	Qua		0.2863		9.86	10.0	-1.4	20.0
1,2,4-Trichlorobenzene	Ave	0.3214	0.3261		10.1	10.0	1.5	50.0
Naphthalene	Ave	1.111	1.081		9.72	10.0	-2.8	50.0
4-Chloroaniline	Ave	0.4276	0.4396		10.3	10.0	2.8	50.0
Hexachlorobutadiene	Ave	0.1565	0.1517		9.70	10.0	-3.0	20.0
1,2,3-Trichlorobenzene	Ave	0.3007	0.3034		10.1	10.0	0.9	50.0
Caprolactam	Qua		0.1207		10.5	10.0	5.0	50.0
4-Chloro-3-methylphenol	Ave	0.2761	0.3066		11.1	10.0	11.0	20.0
2-Methylnaphthalene	Ave	0.7121	0.6952		9.76	10.0	-2.4	50.0
1-Methylnaphthalene	Ave	0.6770	0.6627		9.79	10.0	-2.1	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5146	0.5155		10.0	10.0	0.2	50.0
Hexachlorocyclopentadiene	Qua		0.3012	0.0500	10.4	10.0	4.0	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20502001.D DFTPP Injection Date: 05/02/2012

Instrument ID: A4HP7 DFTPP Injection Time: 10:03

Analysis Batch No.: 42463

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	60.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	45.5	
70	Less than 2.0% of mass 69	0.2	(0.5)1
127	25.0 - 75.0% of mass 198	50.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	23.2	
365	Greater than 0.75% of mass 198	2.0	
441	Present, but less than mass 443	7.0	
442	40.0 - 110.0% of mass 198	44.8	
443	15.0 - 24.0% of mass 442	8.8	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-42463/2	20502002.D	05/02/2012	10:23
	STD4 240-42463/3	20502003.D	05/02/2012	10:42
	STD3 240-42463/4	20502004.D	05/02/2012	11:01
	STD2 240-42463/5	20502005.D	05/02/2012	11:19
	STD1 240-42463/6	20502006.D	05/02/2012	11:38
	STD9 240-42463/7	20502007.D	05/02/2012	11:57
	STD8 240-42463/8	20502008.D	05/02/2012	12:16
	STD7 240-42463/9	20502009.D	05/02/2012	12:35
	STD6 240-42463/10	20502010.D	05/02/2012	12:54
	ICV 240-42463/11	20502011.D	05/02/2012	13:13

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 42463

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2012 10:23 Calibration End Date: 05/02/2012 12:54 Calibration ID: 8490

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42463/6	20502006.D
Level 2	STD2 240-42463/5	20502005.D
Level 3	STD3 240-42463/4	20502004.D
Level 4	STD4 240-42463/3	20502003.D
Level 5	STD5 240-42463/2	20502002.D
Level 6	STD6 240-42463/10	20502010.D
Level 7	STD7 240-42463/9	20502009.D
Level 8	STD8 240-42463/8	20502008.D
Level 9	STD9 240-42463/7	20502007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5797	0.7266 0.5728	0.4617 0.6094	0.5087 0.5684	0.4851	Ave		0.5640				15.0		15.0			
N-Nitrosodimethylamine	0.8841	0.7933 0.8811	0.7168 0.9316	0.7448 0.9112	0.7452	Ave		0.8260				10.0		15.0			
Pyridine	1.5075	1.3258 1.5146	1.1707 1.6776	1.1870 1.6034	1.1707	Ave		1.3947				15.0		15.0			
Ethyl methacrylate	1.1731	0.9728 1.1757	1.0484 1.2864	1.0037 1.2062	1.0290	Ave		1.1119				10.0		15.0			
Benzaldehyde	1.3735 0.7433	1.0441 +++++	1.0548 +++++	1.0867 +++++	0.9578	Ave		1.0434				20.0	*	15.0			
3-Chloropropionitrile	1.0012	0.9519 1.0222	0.9033 1.1093	0.8667 1.0492	0.8718	Ave		0.9719				9.1		15.0			
Malononitrile	1.5032	1.4102 1.2671	1.3756 1.2102	1.4463 1.0266	1.4564	Ave		1.3370				12.0		15.0			
Benzoic acid	0.2334	+++++ 0.2441	+++++ 0.2610	0.1647 0.2825	0.2322	Qua	0.0075	0.1951	0.0017						0.9990		0.9900
Phenol	1.7085	1.5885 1.7359	1.4815 1.9095	1.5782 1.8649	1.5731	Ave		1.6800				9.0		15.0			
Aniline	2.1278	1.9210 2.1146	1.8743 2.3821	2.0349 2.3349	1.9327	Ave		2.0903				9.0		15.0			
Bis(2-chloroethyl)ether	1.2927	1.2120 1.4453	1.3088 1.4464	1.1722 1.4211	1.1887	Ave		1.3109				8.8		15.0			
2-Chlorophenol	1.5020	1.3476 1.5269	1.3800 1.6760	1.4496 1.6251	1.4098	Ave		1.4896				7.8		15.0			
1,3-Dichlorobenzene	1.6350	1.3701 1.6113	1.5553 1.7820	1.5792 1.6988	1.5113	Ave		1.5929				7.8		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 42463

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/02/2012 10:23 Calibration End Date: 05/02/2012 12:54 Calibration ID: 8490

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42463/6	20502006.D
Level 2	STD2 240-42463/5	20502005.D
Level 3	STD3 240-42463/4	20502004.D
Level 4	STD4 240-42463/3	20502003.D
Level 5	STD5 240-42463/2	20502002.D
Level 6	STD6 240-42463/10	20502010.D
Level 7	STD7 240-42463/9	20502009.D
Level 8	STD8 240-42463/8	20502008.D
Level 9	STD9 240-42463/7	20502007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	295395	15059 438022	23147 625497	45772 673269	99759	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	450536	16441 673759	35936 956142	67018 1079397	153230	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	768213	27478 1158210	58696 1721786	106807 1899329	240725	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Ethyl methacrylate	DCB	Ave	597788	20162 899063	52561 1320239	90314 1428878	211595	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	6716 378785	21639 +++++	52883 +++++	97785 +++++	196945	0.100 10.0	0.500 +++++	1.00 +++++	2.00 +++++	5.00
3-Chloropropionitrile	DCB	Ave	510186	19728 781632	45289 1138488	77990 1242817	179271	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Malononitrile	DCB	Ave	766019	29227 968969	68966 1242126	130144 1216141	299474	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzoic acid	NPT	Qua	875958	+++++ 1316669	+++++ 1896774	116824 2481316	377621	20.0	+++++ 30.0	+++++ 40.0	4.00 50.0	10.0
Phenol	DCB	Ave	870609	32922 1327444	74279 1959830	142015 2209157	323473	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	1084265	39813 1617005	93973 2444854	183107 2765811	397413	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	658742	25119 1105232	65620 1484510	105481 1683453	244438	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	765390	27929 1167612	69190 1720143	130437 1925074	289895	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	833174	28397 1232139	77977 1828913	142098 2012335	310759	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Caprolactam	NPT	Qua	213594	+++++ 328191	11115 466991	31422 +++++	84526	10.0	+++++ 15.0	1.00 20.0	2.00 +++++	5.00

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-42463/11 Calibration Date: 05/02/2012 13:13

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20502011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5264		9.33	10.0	-6.7	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.8251		9.99	10.0	-0.1	50.0
Pyridine	Ave	1.395	1.479		10.6	10.0	6.0	50.0
Ethyl methacrylate	Ave	1.112	1.109		9.97	10.0	-0.3	50.0
3-Chloropropionitrile	Ave	0.9719	0.9803		10.1	10.0	0.9	50.0
Malononitrile	Ave	1.337	1.496		11.2	10.0	11.9	50.0
Benzaldehyde	Ave	1.043	0.6145		5.89	10.0	-41.1	50.0
Phenol	Ave	1.680	1.722		10.2	10.0	2.5	20.0
Aniline	Ave	2.090	2.144		10.3	10.0	2.6	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.327		10.1	10.0	1.2	50.0
2-Chlorophenol	Ave	1.490	1.506		10.1	10.0	1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.567		9.84	10.0	-1.6	50.0
1,4-Dichlorobenzene	Ave	1.646	1.623		9.86	10.0	-1.4	20.0
Benzyl alcohol	Ave	0.8859	0.8898		10.0	10.0	0.4	50.0
1,2-Dichlorobenzene	Ave	1.544	1.517		9.83	10.0	-1.7	50.0
2-Methylphenol	Ave	1.290	1.293		10.0	10.0	0.2	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.616		9.29	10.0	-7.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.366		10.3	10.0	3.2	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.8701	0.0500	9.68	10.0	-3.2	50.0
Acetophenone	Ave	1.873	1.869		9.98	10.0	-0.2	50.0
Hexachloroethane	Ave	0.5453	0.5299		9.72	10.0	-2.8	50.0
Nitrobenzene	Ave	0.3636	0.3573		9.83	10.0	-1.7	50.0
Isophorone	Ave	0.6461	0.6605		10.2	10.0	2.2	50.0
2,4-Dimethylphenol	Ave	0.3785	0.3876		10.2	10.0	2.4	50.0
2-Nitrophenol	Ave	0.2067	0.2181		10.5	10.0	5.5	20.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3733		10.3	10.0	2.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3789		10.1	10.0	1.3	50.0
Benzoic acid	Qua		0.2340		20.3	20.0	1.5	50.0
2,4-Dichlorophenol	Ave	0.3173	0.3295		10.4	10.0	3.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3617		10.4	10.0	3.9	50.0
Naphthalene	Ave	1.144	1.159		10.1	10.0	1.3	50.0
4-Chloroaniline	Ave	0.4747	0.4591		9.67	10.0	-3.3	50.0
Hexachlorobutadiene	Ave	0.1832	0.1824		9.96	10.0	-0.4	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.3260		9.86	10.0	-1.4	50.0
Caprolactam	Qua		0.1203		10.5	10.0	5.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3207		10.6	10.0	6.1	20.0
2-Methylnaphthalene	Ave	0.7358	0.7408		10.1	10.0	0.7	50.0
1-Methylnaphthalene	Ave	0.7008	0.7068		10.1	10.0	0.8	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5505		9.87	10.0	-1.3	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3366	0.0500	10.3	10.0	3.3	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20508001.D DFTPP Injection Date: 05/08/2012

Instrument ID: A4HP7 DFTPP Injection Time: 08:46

Analysis Batch No.: 43126

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	61.2	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	58.2	
70	Less than 2.0% of mass 69	0.3	(0.5)1
127	25.0 - 75.0% of mass 198	61.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	26.3	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	11.9	
442	40.0 - 110.0% of mass 198	74.4	
443	15.0 - 24.0% of mass 442	14.6	(19.6)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43126/2	20508002.D	05/08/2012	09:05
	MB 240-42901/22-A	20508011.D	05/08/2012	11:52
	LCS 240-42901/23-A	20508012.D	05/08/2012	12:11
	240-10837-T-5-A MS	20508027.D	05/08/2012	16:48
	240-10837-Q-5-A MSD	20508028.D	05/08/2012	17:06
MSA-DMW8S-050212	240-10925-1	20508031.D	05/08/2012	18:02
MSA-DMW8I-050212	240-10925-2	20508032.D	05/08/2012	18:21
MSA-DMW8D-050212	240-10925-3	20508034.D	05/08/2012	18:58
	240-10842-O-8-A MS	20508039.D	05/08/2012	20:30

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43126/2 Calibration Date: 05/08/2012 09:05

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5272		9.35	10.0	-6.5	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.7907		9.57	10.0	-4.3	50.0
Pyridine	Ave	1.395	1.390		9.97	10.0	-0.3	50.0
Ethyl methacrylate	Ave	1.112	1.104		9.92	10.0	-0.8	50.0
3-Chloropropionitrile	Ave	0.9719	0.8004		8.24	10.0	-17.6	50.0
Malononitrile	Ave	1.337	1.340		10.0	10.0	0.2	50.0
Benzaldehyde	Ave	1.043	0.7144		6.85	10.0	-31.5	50.0
Phenol	Ave	1.680	1.721		10.2	10.0	2.4	20.0
Aniline	Ave	2.090	2.189		10.5	10.0	4.7	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.311		10.0	10.0	0.0	50.0
2-Chlorophenol	Ave	1.490	1.473		9.89	10.0	-1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.599		10.0	10.0	0.4	50.0
1,4-Dichlorobenzene	Ave	1.646	1.662		10.1	10.0	1.0	50.0
Benzyl alcohol	Ave	0.8859	0.8606		9.71	10.0	-2.9	50.0
1,2-Dichlorobenzene	Ave	1.544	1.529		9.91	10.0	-0.9	50.0
2-Methylphenol	Ave	1.290	1.300		10.1	10.0	0.7	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.634		9.39	10.0	-6.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.360		10.3	10.0	2.7	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.9308	0.0500	10.4	10.0	3.6	50.0
Acetophenone	Ave	1.873	1.935		10.3	10.0	3.3	50.0
Hexachloroethane	Ave	0.5453	0.5619		10.3	10.0	3.0	50.0
Nitrobenzene	Ave	0.3636	0.3688		10.1	10.0	1.4	50.0
Isophorone	Ave	0.6461	0.6574		10.2	10.0	1.7	50.0
2-Nitrophenol	Ave	0.2067	0.2114		10.2	10.0	2.3	20.0
2,4-Dimethylphenol	Ave	0.3785	0.3801		10.0	10.0	0.4	50.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3290		9.06	10.0	-9.4	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3772		10.1	10.0	0.9	50.0
Benzoic acid	Qua		0.1909		17.0	20.0	-15.0	50.0
2,4-Dichlorophenol	Ave	0.3173	0.2887		9.10	10.0	-9.0	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3214		9.23	10.0	-7.7	50.0
Naphthalene	Ave	1.144	1.081		9.45	10.0	-5.5	50.0
4-Chloroaniline	Ave	0.4747	0.4497		9.48	10.0	-5.2	50.0
Hexachlorobutadiene	Ave	0.1832	0.1595		8.71	10.0	-12.9	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.2901		8.78	10.0	-12.2	50.0
Caprolactam	Qua		0.1216		10.6	10.0	6.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3096		10.2	10.0	2.4	20.0
2-Methylnaphthalene	Ave	0.7358	0.7177		9.75	10.0	-2.5	50.0
1-Methylnaphthalene	Ave	0.7008	0.6679		9.53	10.0	-4.7	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5324		9.54	10.0	-4.6	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3328	0.0500	10.2	10.0	2.1	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20509001.D DFTPP Injection Date: 05/09/2012

Instrument ID: A4HP7 DFTPP Injection Time: 09:52

Analysis Batch No.: 43287

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	61.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	57.1	
70	Less than 2.0% of mass 69	0.2	(0.3)1
127	25.0 - 75.0% of mass 198	59.7	
197	Less than 1.0% of mass 198	0.3	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	25.4	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	11.1	
442	40.0 - 110.0% of mass 198	71.2	
443	15.0 - 24.0% of mass 442	14.4	(20.3)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43287/2	20509002.D	05/09/2012	10:11
MSA-DMW1A-050212	240-10925-5	20509026.D	05/09/2012	19:09

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43287/2 Calibration Date: 05/09/2012 10:11

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20509002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5072		8.99	10.0	-10.1	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.7035		8.52	10.0	-14.8	50.0
Pyridine	Ave	1.395	1.258		9.02	10.0	-9.8	50.0
Ethyl methacrylate	Ave	1.112	1.126		10.1	10.0	1.3	50.0
3-Chloropropionitrile	Ave	0.9719	0.7356		7.57	10.0	-24.3	50.0
Malononitrile	Ave	1.337	1.183		8.85	10.0	-11.5	50.0
Benzaldehyde	Ave	1.043	0.6214		5.96	10.0	-40.4	50.0
Phenol	Ave	1.680	1.698		10.1	10.0	1.1	20.0
Aniline	Ave	2.090	2.164		10.4	10.0	3.5	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.338		10.2	10.0	2.0	50.0
2-Chlorophenol	Ave	1.490	1.493		10.0	10.0	0.2	50.0
1,3-Dichlorobenzene	Ave	1.593	1.624		10.2	10.0	1.9	50.0
1,4-Dichlorobenzene	Ave	1.646	1.667		10.1	10.0	1.3	50.0
Benzyl alcohol	Ave	0.8859	0.8768		9.90	10.0	-1.0	50.0
1,2-Dichlorobenzene	Ave	1.544	1.536		9.95	10.0	-0.5	50.0
2-Methylphenol	Ave	1.290	1.279		9.91	10.0	-0.9	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.542		8.86	10.0	-11.4	50.0
3 & 4 Methylphenol	Ave	1.324	1.313		9.92	10.0	-0.8	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.8743	0.0500	9.73	10.0	-2.7	50.0
Acetophenone	Ave	1.873	1.848		9.87	10.0	-1.3	50.0
Hexachloroethane	Ave	0.5453	0.5883		10.8	10.0	7.9	50.0
Nitrobenzene	Ave	0.3636	0.3610		9.93	10.0	-0.7	50.0
Isophorone	Ave	0.6461	0.6282		9.72	10.0	-2.8	50.0
2-Nitrophenol	Ave	0.2067	0.2059		9.96	10.0	-0.4	20.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3461		9.53	10.0	-4.7	50.0
2,4-Dimethylphenol	Ave	0.3785	0.3696		9.76	10.0	-2.4	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3750		10.0	10.0	0.3	50.0
Benzoic acid	Qua		0.1716		15.5	20.0	-22.5	50.0
2,4-Dichlorophenol	Ave	0.3173	0.2913		9.18	10.0	-8.2	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3238		9.30	10.0	-7.0	50.0
Naphthalene	Ave	1.144	1.064		9.30	10.0	-7.0	50.0
4-Chloroaniline	Ave	0.4747	0.4373		9.21	10.0	-7.9	50.0
Hexachlorobutadiene	Ave	0.1832	0.1678		9.16	10.0	-8.4	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.2998		9.07	10.0	-9.3	50.0
Caprolactam	Qua		0.1169		10.2	10.0	2.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3016		9.97	10.0	-0.3	20.0
2-Methylnaphthalene	Ave	0.7358	0.7147		9.71	10.0	-2.9	50.0
1-Methylnaphthalene	Ave	0.7008	0.6728		9.60	10.0	-4.0	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5309		9.51	10.0	-4.9	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3380	0.0500	10.4	10.0	3.7	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20511001.D DFTPP Injection Date: 05/11/2012

Instrument ID: A4HP7 DFTPP Injection Time: 08:59

Analysis Batch No.: 43665

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	47.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	36.2	
70	Less than 2.0% of mass 69	0.1	(0.4)1
127	25.0 - 75.0% of mass 198	47.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	24.5	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	6.8	
442	40.0 - 110.0% of mass 198	85.6	
443	15.0 - 24.0% of mass 442	16.2	(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-43665/2	20511002.D	05/11/2012	09:17
	STD4 240-43665/3	20511003.D	05/11/2012	09:36
	STD3 240-43665/4	20511004.D	05/11/2012	09:54
	STD2 240-43665/5	20511005.D	05/11/2012	10:13
	STD1 240-43665/6	20511006.D	05/11/2012	10:32
	STD9 240-43665/7	20511007.D	05/11/2012	10:50
	STD8 240-43665/8	20511008.D	05/11/2012	11:09
	STD7 240-43665/9	20511009.D	05/11/2012	11:28
	STD6 240-43665/10	20511010.D	05/11/2012	11:47
	ICV 240-43665/11	20511011.D	05/11/2012	12:06
	240-10842-R-8-A MSD	20511021.D	05/11/2012	15:14

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton | Job No.: 240-10925-1 | Analy Batch No.: 43665

SDG No.:

Instrument ID: A4HP7 | GC Column: RXI-5SILMS ID: 0.45(mm) | Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2012 09:17 | Calibration End Date: 05/11/2012 11:47 | Calibration ID: 8680

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-43665/6	20511006.D
Level 2	STD2 240-43665/5	20511005.D
Level 3	STD3 240-43665/4	20511004.D
Level 4	STD4 240-43665/3	20511003.D
Level 5	STD5 240-43665/2	20511002.D
Level 6	STD6 240-43665/10	20511010.D
Level 7	STD7 240-43665/9	20511009.D
Level 8	STD8 240-43665/8	20511008.D
Level 9	STD9 240-43665/7	20511007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.8214	0.7424 0.8345	0.8429 0.7791	0.7470 0.8123	0.6817	Ave		0.7827				7.1		15.0			
N-Nitrosodimethylamine	1.3517	1.1966 1.3430	1.1696 1.3633	1.2470 1.2652	1.0985	Ave		1.2544				7.6		15.0			
Pyridine	2.2974	1.9328 2.3707	1.9078 2.3286	1.9502 2.3534	1.8306	Ave		2.1214				11.0		15.0			
Ethyl methacrylate	1.6866	1.3892 1.6940	1.4486 1.6548	1.5423 1.6320	1.3388	Ave		1.5483				9.1		15.0			
Benzaldehyde	1.5333 0.8741	1.2294 +++++	1.1836 +++++	1.2281 +++++	1.1826	Ave		1.2052				17.0	*	15.0			
3-Chloropropionitrile	1.4897	1.2595 1.4622	1.3006 1.4937	1.3044 1.3859	1.2124	Ave		1.3636				8.0		15.0			
Malononitrile	2.2448	1.9935 1.8577	2.0845 1.6532	2.1475 1.3326	2.0596	Qua	-0.921	2.8087	-0.057						0.9970		0.9900
Phenol	1.8841	1.8281 1.8717	1.6617 1.9458	1.8052 1.8512	1.7580	Ave		1.8257				4.7		15.0			
Aniline	2.4151	2.2639 2.3911	2.0794 2.6720	2.3016 2.4648	2.2573	Ave		2.3556				7.4		15.0			
Bis(2-chloroethyl)ether	1.6894	1.5295 1.6002	1.6300 1.6117	1.5935 1.5697	1.4387	Ave		1.5829				4.7		15.0			
2-Chlorophenol	1.5079	1.4241 1.4922	1.3577 1.5327	1.4941 1.4601	1.4438	Ave		1.4641				3.8		15.0			
1,3-Dichlorobenzene	1.5599	1.5840 1.5209	1.5347 1.5599	1.5653 1.5199	1.4890	Ave		1.5417				2.0		15.0			
1,4-Dichlorobenzene	1.5862	1.5357 1.5490	1.5652 1.6083	1.5720 1.5963	1.5055	Ave		1.5648				2.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 43665

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2012 09:17 Calibration End Date: 05/11/2012 11:47 Calibration ID: 8680

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-43665/6	20511006.D
Level 2	STD2 240-43665/5	20511005.D
Level 3	STD3 240-43665/4	20511004.D
Level 4	STD4 240-43665/3	20511003.D
Level 5	STD5 240-43665/2	20511002.D
Level 6	STD6 240-43665/10	20511010.D
Level 7	STD7 240-43665/9	20511009.D
Level 8	STD8 240-43665/8	20511008.D
Level 9	STD9 240-43665/7	20511007.D

ANALYTE	IS REF	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
			LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5	LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5
1,4-Dioxane	DCB	Ave	898047	29864 877772	53634 1332736	91977 1450101	232991	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
N-Nitrosodimethylamine	DCB	Ave	1477869	48133 1412523	74427 2332066	153537 2258759	375430	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Pyridine	DCB	Ave	2511786	77751 2493532	121398 3983487	240115 4201399	625677	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Ethyl methacrylate	DCB	Ave	1844014	55884 1781727	92180 2830709	189895 2913497	457576	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzaldehyde	DCB	Ave	14099 955722	49456 +++++	75316 +++++	151211 +++++	404192	0.100 10.0	0.500 +++++	1.00 +++++	2.00 +++++	5.00
3-Chloropropionitrile	DCB	Ave	1628764	50666 1537918	82763 2555238	160605 2474200	414372	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Malononitrile	DCB	Qua	2454302	80191 1953892	132644 2827988	264405 2379077	703940	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Phenol	DCB	Ave	2059949	73536 1968690	105738 3328544	222265 3304898	600849	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Aniline	DCB	Ave	2640472	91068 2514914	132320 4570903	283383 4400217	771513	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Bis(2-chloroethyl)ether	DCB	Ave	1847082	61528 1683076	103723 2757065	196201 2802335	491724	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
2-Chlorophenol	DCB	Ave	1648641	57288 1569498	86396 2621837	183963 2606604	493464	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,3-Dichlorobenzene	DCB	Ave	1705456	63719 1599695	97654 2668354	192729 2713354	508905	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
1,4-Dichlorobenzene	DCB	Ave	1734282	61776 1629227	99601 2751285	193546 2849750	514556	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00
Benzyl alcohol	DCB	Ave	1019560	33191 957339	55373 1654172	113491 1670426	308329	10.0	0.500 15.0	1.00 20.0	2.00 25.0	5.00

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-43665/11 Calibration Date: 05/11/2012 12:06

Instrument ID: A4HP7 Calib Start Date: 05/11/2012 09:17

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/11/2012 11:47

Lab File ID: 20511011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.7827	1.792		22.9	10.0	128.9*	50.0
N-Nitrosodimethylamine	Ave	1.254	1.385		11.0	10.0	10.4	50.0
Pyridine	Ave	2.121	2.312		10.9	10.0	9.0	50.0
Ethyl methacrylate	Ave	1.548	1.663		10.7	10.0	7.4	50.0
3-Chloropropionitrile	Ave	1.364	1.513		11.1	10.0	11.0	50.0
Malononitrile	Qua		2.271		10.8	10.0	8.0	50.0
Benzaldehyde	Ave	1.205	0.7368		6.11	10.0	-38.9	50.0
Phenol	Ave	1.826	1.912		10.5	10.0	4.7	20.0
Aniline	Ave	2.356	2.457		10.4	10.0	4.3	50.0
Bis(2-chloroethyl)ether	Ave	1.583	1.667		10.5	10.0	5.3	50.0
2-Chlorophenol	Ave	1.464	1.525		10.4	10.0	4.2	50.0
1,3-Dichlorobenzene	Ave	1.542	1.553		10.1	10.0	0.7	50.0
1,4-Dichlorobenzene	Ave	1.565	1.585		10.1	10.0	1.3	20.0
Benzyl alcohol	Ave	0.9081	0.9464		10.4	10.0	4.2	50.0
1,2-Dichlorobenzene	Ave	1.430	1.443		10.1	10.0	0.9	50.0
2-Methylphenol	Ave	1.285	1.318		10.3	10.0	2.6	50.0
bis (2-chloroisopropyl) ether	Ave	2.393	2.451		10.2	10.0	2.4	50.0
3 & 4 Methylphenol	Ave	1.345	1.375		10.2	10.0	2.3	50.0
N-Nitrosodi-n-propylamine	Ave	0.9738	1.018	0.0500	10.5	10.0	4.6	50.0
Acetophenone	Ave	1.885	1.946		10.3	10.0	3.2	50.0
Hexachloroethane	Ave	0.5545	0.5753		10.4	10.0	3.7	50.0
Nitrobenzene	Ave	0.4062	0.4273		10.5	10.0	5.2	50.0
Isophorone	Ave	0.7209	0.7540		10.5	10.0	4.6	50.0
2,4-Dimethylphenol	Ave	0.3697	0.3794		10.3	10.0	2.6	50.0
2-Nitrophenol	Ave	0.1894	0.1968		10.4	10.0	3.9	20.0
1,3,5-Trichlorobenzene	Ave	0.3433	0.3404		9.92	10.0	-0.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.4323	0.4458		10.3	10.0	3.1	50.0
Benzoic acid	Qua		0.2483		21.0	20.0	5.0	50.0
2,4-Dichlorophenol	Ave	0.3052	0.3155		10.3	10.0	3.4	20.0
1,2,4-Trichlorobenzene	Ave	0.3316	0.3285		9.91	10.0	-0.9	50.0
Naphthalene	Ave	1.108	1.114		10.1	10.0	0.5	50.0
4-Chloroaniline	Ave	0.4507	0.4746		10.5	10.0	5.3	50.0
Hexachlorobutadiene	Ave	0.1695	0.1692		9.98	10.0	-0.2	20.0
1,2,3-Trichlorobenzene	Ave	0.3021	0.3048		10.1	10.0	0.9	50.0
Caprolactam	Ave	0.1145	0.1256		11.0	10.0	9.6	50.0
4-Chloro-3-methylphenol	Ave	0.2919	0.3026		10.4	10.0	3.7	20.0
2-Methylnaphthalene	Ave	0.6841	0.6838		10.0	10.0	-0.0	50.0
1-Methylnaphthalene	Ave	0.6531	0.6428		9.84	10.0	-1.6	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5500	0.5470		9.94	10.0	-0.6	50.0
Hexachlorocyclopentadiene	Ave	0.3241	0.3370	0.0500	10.4	10.0	4.0	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20508011.D Lab Sample ID: MB 240-42901/22-A

Matrix: Water Date Extracted: 05/05/2012 09:23

Instrument ID: A4HP7 Date Analyzed: 05/08/2012 11:52

Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42901/23-A	20508012.D	05/08/2012 12:11
	240-10837-T-5-A MS	20508027.D	05/08/2012 16:48
	240-10837-Q-5-A MSD	20508028.D	05/08/2012 17:06
MSA-DMW8S-050212	240-10925-1	20508031.D	05/08/2012 18:02
MSA-DMW8I-050212	240-10925-2	20508032.D	05/08/2012 18:21
MSA-DMW8D-050212	240-10925-3	20508034.D	05/08/2012 18:58
	240-10842-O-8-A MS	20508039.D	05/08/2012 20:30
MSA-DMW1A-050212	240-10925-5	20509026.D	05/09/2012 19:09
	240-10842-R-8-A MSD	20511021.D	05/11/2012 15:14

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42901/22-A

Matrix: Water | Lab File ID: 20508011.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1000(mL) | Date Analyzed: 05/08/2012 11:52

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		28-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	76		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	62		27-111
4165-62-2	Phenol-d5 (Surr)	67		10-110
1718-51-0	Terphenyl-d14 (Surr)	79		37-119

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508012.D

Lab ID: LCS 240-42901/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	11.1	56	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab File ID: 20510003.D Lab Sample ID: MB 240-42981/20-A

Matrix: Water Date Extracted: 05/07/2012 09:27

Instrument ID: A4HP10 Date Analyzed: 05/10/2012 09:21

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-42981/21-A	20510004.D	05/10/2012 09:39
MSA-MW32S-050212	240-10925-7	20510010.D	05/10/2012 11:26
MSA-DMW1B-050212	240-10925-6	20510011.D	05/10/2012 11:44

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42981/20-A

Matrix: Water | Lab File ID: 20510003.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/07/2012 09:27

Sample wt/vol: 1000(mL) | Date Analyzed: 05/10/2012 09:21

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43490 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	48		28-110
367-12-4	2-Fluorophenol (Surr)	59		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	54		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	56		27-111
4165-62-2	Phenol-d5 (Surr)	63		10-110
1718-51-0	Terphenyl-d14 (Surr)	91		37-119

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20510004.D

Lab ID: LCS 240-42981/21-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	13.4	67	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508027.D

Lab ID: 240-10837-T-5-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	21.7	61	87.8	124	10-110	F

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508028.D

Lab ID: 240-10837-Q-5-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	82.3	112	7	30	10-110	F

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20508039.D

Lab ID: 240-10842-O-8-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.0	14	22.9	44	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20511021.D

Lab ID: 240-10842-R-8-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	15.0	3	41	30	10-110	F

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MSA-DMW8S-050212	240-10925-1	52	57	50	53	79	70
MSA-DMW8I-050212	240-10925-2	53	56	53	57	87	75
MSA-DMW8D-050212	240-10925-3	47	51	55	52	69	75
MSA-DMW1A-050212	240-10925-5	70	78	64	71	128 X	89
MSA-DMW1B-050212	240-10925-6	49	47	50	51	67	71
MSA-MW32S-050212	240-10925-7	52	51	52	51	54	60
	MB 240-42901/22-A	66	67	62	59	76	79
	MB 240-42981/20-A	59	63	56	48	54	91
	LCS 240-42901/23-A	69	71	65	67	95	78
	LCS 240-42981/21-A	79	81	72	64	76	70
	240-10837-T-5-A MS	65	69	65	65	97	75
	240-10842-O-8-A MS	62	66	58	56	83	64
	240-10837-Q-5-A MSD	69	71	65	66	95	77
	240-10842-R-8-A MSD	56	67	53	51	63	70

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: STD6 240-42389/10 Date Analyzed: 05/01/2012 17:47

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20501010.D Heated Purge: (Y/N) N

Calibration ID: 8470

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		228260	3.48	907021	4.36	519716	5.62
UPPER LIMIT		456520	3.98	1814042	4.86	1039432	6.12
LOWER LIMIT		114130	2.98	453511	3.86	259858	5.12
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42389/11		217805	3.48	831728	4.36	489304	5.62
CCV 240-43490/2 CCVIS		193537	3.20	745581	4.08	427377	5.34

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: STD6 240-42389/10 Date Analyzed: 05/01/2012 17:47

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20501010.D Heated Purge: (Y/N) N

Calibration ID: 8470

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		836893	6.70	697948	8.65	579912	10.03
UPPER LIMIT		1673786	7.20	1395896	9.15	1159824	10.53
LOWER LIMIT		418447	6.20	348974	8.15	289956	9.53
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42389/11		800396	6.70	668048	8.65	537852	10.03
CCV 240-43490/2 CCVIS		684682	6.41	561667	8.35	453756	9.55

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCV 240-43490/2 Date Analyzed: 05/10/2012 08:59

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20510002.D Heated Purge: (Y/N) N

Calibration ID: 8474

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		193537	3.20	745581	4.08	427377	5.34
UPPER LIMIT		387074	3.70	1491162	4.58	854754	5.84
LOWER LIMIT		96769	2.70	372791	3.58	213689	4.84
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42981/20-A		211897	3.20	850305	4.08	480582	5.33
LCS 240-42981/21-A		204622	3.21	813601	4.08	469604	5.34
240-10925-7	MSA-MW32S-050212	232154	3.20	883880	4.08	510726	5.33
240-10925-6	MSA-DMW1B-050212	222720	3.20	838073	4.08	500382	5.33

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCV 240-43490/2 Date Analyzed: 05/10/2012 08:59

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20510002.D Heated Purge: (Y/N) N

Calibration ID: 8474

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		684682	6.41	561667	8.35	453756	9.55
UPPER LIMIT		1369364	6.91	1123334	8.85	907512	10.05
LOWER LIMIT		342341	5.91	280834	7.85	226878	9.05
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42981/20-A		800829	6.41	675723	8.36	551424	9.57
LCS 240-42981/21-A		764810	6.41	637255	8.34	520326	9.54
240-10925-7	MSA-MW32S-050212	843095	6.40	739608	8.34	598350	9.54
240-10925-6	MSA-DMW1B-050212	792534	6.41	669427	8.35	549169	9.55

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		203831	3.51	750748	4.40	449631	5.66
UPPER LIMIT		407662	4.01	1501496	4.90	899262	6.16
LOWER LIMIT		101916	3.01	375374	3.90	224816	5.16
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		219450	3.51	793338	4.40	481824	5.66
CCV 240-43126/2 CCVIS		203268	3.39	807358	4.28	443644	5.54
CCV 240-43287/2 CCVIS		106999	3.44	410808	4.33	231315	5.59

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: STD6 240-42463/10 Date Analyzed: 05/02/2012 12:54

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20502010.D Heated Purge: (Y/N) N

Calibration ID: 8490

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		701859	6.74	609578	8.73	444154	10.12
UPPER LIMIT		1403718	7.24	1219156	9.23	888308	10.62
LOWER LIMIT		350930	6.24	304789	8.23	222077	9.62
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42463/11		750463	6.74	697064	8.71	502891	10.10
CCV 240-43126/2 CCVIS		728055	6.61	667024	8.58	498151	9.89
CCV 240-43287/2 CCVIS		376575	6.66	343671	8.63	250061	9.97

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCV 240-43126/2 Date Analyzed: 05/08/2012 09:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20508002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		203268	3.39	807358	4.28	443644	5.54
UPPER LIMIT		406536	3.89	1614716	4.78	887288	6.04
LOWER LIMIT		101634	2.89	403679	3.78	221822	5.04
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42901/22-A		215470	3.39	837951	4.28	473321	5.53
LCS 240-42901/23-A		211516	3.39	825101	4.28	475505	5.54
240-10837-T-5-A MS		209364	3.40	818809	4.28	493581	5.54
240-10837-Q-5-A MSD		209412	3.40	839319	4.28	485920	5.54
240-10925-1	MSA-DMW8S-050212	219440	3.39	870305	4.28	495967	5.53
240-10925-2	MSA-DMW8I-050212	254435	3.40	944250	4.28	537981	5.53
240-10925-3	MSA-DMW8D-050212	230515	3.39	929849	4.28	536871	5.53
240-10842-O-8-A MS		209225	3.40	835519	4.28	543280	5.54

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCV 240-43126/2 Date Analyzed: 05/08/2012 09:05

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20508002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		728055	6.61	667024	8.58	498151	9.89
UPPER LIMIT		1456110	7.11	1334048	9.08	996302	10.39
LOWER LIMIT		364028	6.11	333512	8.08	249076	9.39
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-42901/22-A		751385	6.61	713440	8.57	527924	9.87
LCS 240-42901/23-A		771734	6.61	721036	8.57	536929	9.87
240-10837-T-5-A MS		761143	6.61	717063	8.57	555477	9.87
240-10837-Q-5-A MSD		752567	6.61	706606	8.57	555213	9.87
240-10925-1	MSA-DMW8S-050212	772967	6.61	736074	8.56	573957	9.86
240-10925-2	MSA-DMW8I-050212	861221	6.61	792550	8.56	624425	9.86
240-10925-3	MSA-DMW8D-050212	820756	6.61	778628	8.56	626398	9.86
240-10842-O-8-A MS		811563	6.62	773792	8.57	591505	9.88

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCV 240-43287/2 Date Analyzed: 05/09/2012 10:11

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20509002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		106999	3.44	410808	4.33	231315	5.59
UPPER LIMIT		213998	3.94	821616	4.83	462630	6.09
LOWER LIMIT		53500	2.94	205404	3.83	115658	5.09
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-10925-5	MSA-DMW1A-050212	85977	3.43	363976	4.33	246910	5.58

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCV 240-43287/2 Date Analyzed: 05/09/2012 10:11

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20509002.D Heated Purge: (Y/N) N

Calibration ID: 8498

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		376575	6.66	343671	8.63	250061	9.97
UPPER LIMIT		753150	7.16	687342	9.13	500122	10.47
LOWER LIMIT		188288	6.16	171836	8.13	125031	9.47
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-10925-5	MSA-DMW1A-050212	432108	6.66	453583	8.61	343562	9.94

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: STD6 240-43665/10 Date Analyzed: 05/11/2012 11:47

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20511010.D Heated Purge: (Y/N) N

Calibration ID: 8680

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		437336	3.45	1550128	4.35	857737	5.61
UPPER LIMIT		874672	3.95	3100256	4.85	1715474	6.11
LOWER LIMIT		218668	2.95	775064	3.85	428869	5.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43665/11		440902	3.45	1545336	4.35	858847	5.61
240-10842-R-8-A MSD		295486	3.45	1133322	4.35	755877	5.61

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: STD6 240-43665/10 Date Analyzed: 05/11/2012 11:47

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20511010.D Heated Purge: (Y/N) N

Calibration ID: 8680

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1328211	6.69	1262099	8.67	1119020	10.02
UPPER LIMIT		2656422	7.19	2524198	9.17	2238040	10.52
LOWER LIMIT		664106	6.19	631050	8.17	559510	9.52
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43665/11		1301262	6.69	1208547	8.67	1044058	10.03
240-10842-R-8-A MSD		1034466	6.69	952330	8.66	891660	10.02

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

Method 8015B - GRO

Gasoline Range Organics (GC) by Method 8015B

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL.5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 6					RT WINDOW	AVG RT
Total Petroleum Hydrocarbons (C6-C10)	11.810	11.810	11.810	11.810	11.810	11.810					4.817 - 18.802	11.810
C6-C12	13.469	13.469	13.469	13.469	13.469	13.469					4.917 - 22.022	13.469
Trifluorotoluene (Surr)	9.768	9.772	9.769	9.772	9.771	9.774					9.522 - 10.022	9.771

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (UG/L)				
		LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5
Total Petroleum Hydrocarbons (C6-C10)	Ave	31810312 471343808	64091921	113029874	235565977	346880438	100 1600	200	400	800	1200
C6-C12	Ave	37547242 517161889	72788086	126621830	259357128	381833988	100 1600	200	400	800	1200
Trifluorotoluene (Surr)	Ave	3841333 4831084	3750122	3958818	4240925	4607363	10.0 10.0	10.0	10.0	10.0	10.0

Curve Type Legend:
Ave = Average

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.81	4.82	18.80
C6-C12	13.47	4.92	22.02
Trifluorotoluene (Surr)	9.77	9.52	10.02

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCV 240-42995/5 Date Analyzed: 05/07/2012 12:40

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF050705.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.76		
UPPER LIMIT				9.86		
LOWER LIMIT				9.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
~~CCV 240-42995/5~~ CCVRT		05/07/2012 12:40	YF050705.D	9.76		
MB 240-42995/6		05/07/2012 13:20	YF050706.D	9.75		
LCS 240-42995/7		05/07/2012 14:00	YF050707.D	9.75		
240-10808-B-2 MS		05/07/2012 15:20	YF050709.D	9.76		
240-10808-B-2 MSD		05/07/2012 16:00	YF050710.D	9.76		
240-10925-1	MSA-DMW8S-050212	05/07/2012 19:26	YF050715.D	9.75		
~~CCV 240-42995/16~~		~~05/07/2012 20:05~~	YF050716.D	9.76		
240-10925-7	MSA-MW32S-050212	05/07/2012 20:45	YF050717.D	9.76		
CCV 240-42995/18		05/07/2012 21:23	YF050718.D	9.76		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42995/5 Calibration Date: 05/07/2012 12:40

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050705.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	319991		854	800	6.7	15.0
C6-C12	Ave	336931	352680		837	800	4.7	15.0
Trifluorotoluene (Surr)	Ave	420494	308604		7.34	10.0	-26.6*	15.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42995/5 Calibration Date: 05/07/2012 12:40

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050705.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.80	4.80	18.80
C6-C12	13.45	4.90	21.99
Trifluorotoluene (Surr)	9.76	9.51	10.01

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42995/16 Calibration Date: 05/07/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050716.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	325536		869	800	8.6	15.0
C6-C12	Ave	336931	359447		854	800	6.7	15.0
Trifluorotoluene (Surr)	Ave	420494	291877		6.94	10.0	-30.6*	15.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42995/16 Calibration Date: 05/07/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050716.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.80	4.80	18.80
C6-C12	13.45	4.90	21.99
Trifluorotoluene (Surr)	9.76	9.51	10.01

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42995/18 Calibration Date: 05/07/2012 21:23

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050718.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	322989		862	800	7.7	15.0
C6-C12	Ave	336931	358027		850	800	6.3	15.0
Trifluorotoluene (Surr)	Ave	420494	304013		7.23	10.0	-27.7*	15.0

FORM VII

GASOLINE RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42995/18 Calibration Date: 05/07/2012 21:23

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050718.D Heated Purge: (Y/N) N

Analyte	RT	RT WINDOW	
		TO	FROM
Total Petroleum Hydrocarbons (C6-C10)	11.80	4.80	18.80
C6-C12	13.45	4.90	21.99
Trifluorotoluene (Surr)	9.76	9.51	10.01

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: MB 240-42995/6

Matrix: Water Date Extracted: 05/07/2012 13:20

Lab File ID:(1) YF050706.D Lab File ID:(2)

Date Analyzed:(1) 05/07/2012 13:20 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-42995/7	05/07/2012 14:00	
	240-10808-B-2 MS	05/07/2012 15:20	
	240-10808-B-2 MSD	05/07/2012 16:00	
MSA-DMW8S-050212	240-10925-1	05/07/2012 19:26	
MSA-MW32S-050212	240-10925-7	05/07/2012 20:45	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42995/6

Matrix: Water | Lab File ID: YF050706.D

Analysis Method: 8015B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/07/2012 13:20

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 42995 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10) GRO	28.0	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	58		10-150

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050707.D

Lab ID: LCS 240-42995/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	942	118	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050709.D

Lab ID: 240-10808-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	37 J	962	116	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050710.D

Lab ID: 240-10808-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	953	115	1	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MSA-DMW8S-050212	240-10925-1	60
MSA-MW32S-050212	240-10925-7	55
	MB 240-42995/6	58
	LCS 240-42995/7	70
	240-10808-B-2 MS	73
	240-10808-B-2 MSD	71

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

Method 8015B - DRO

Diesel Range Organics (DRO) (GC) by Method 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: A2HP5F Start Date: 04/13/2012 10:08

Analysis Batch Number: 40180 End Date: 04/13/2012 15:36

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-40180/4 IC		04/13/2012 10:08	1	P5F04134.D	
STD2 240-40180/5 IC		04/13/2012 10:38	1	P5F04135.D	
STD3 240-40180/6 IC		04/13/2012 11:08	1	P5F04136.D	
STD4 240-40180/7 IC		04/13/2012 11:38	1	P5F04137.D	
STD5 240-40180/8 IC		04/13/2012 12:08	1	P5F04138.D	
ICV 240-40180/9		04/13/2012 12:38	1	P5F04139.D	
STD1 240-40180/10 IC		04/13/2012 13:08	1		
STD2 240-40180/11 IC		04/13/2012 13:38	1		
STD3 240-40180/12 IC		04/13/2012 14:08	1		
STD4 240-40180/13 IC		04/13/2012 14:37	1		
STD5 240-40180/14 IC		04/13/2012 15:06	1		
ICV 240-40180/15		04/13/2012 15:36	1		

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	197527 183497	194334	179644	186362	Ave		188272.909				4.0		20.0			
n-Nonane	222434 217668	222225	205767	214296	Ave		216478.041				3.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RESPONSE AND CONCENTRATION

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	CURVE TYPE	RESPONSE					CONCENTRATION (NG/UL)				
		LVL 1	LVL 2	LVL 3	LVL 4	LVL 5	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5
Diesel	Ave	19752720	38866848	89822065	186362364	366993221	100	200	500	1000	2000
n-Nonane	Ave	2224338	4444509	10288357	21429585	43533593	10.0	20.0	50.0	100	200

Curve Type Legend:
Ave = Average

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1 Analy Batch No.: 40180

SDG No.:

Instrument ID: A2HP5F GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 04/13/2012 10:08 Calibration End Date: 04/13/2012 12:08 Calibration ID: 8059

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-40180/4	P5F04134.D
Level 2	STD2 240-40180/5	P5F04135.D
Level 3	STD3 240-40180/6	P5F04136.D
Level 4	STD4 240-40180/7	P5F04137.D
Level 5	STD5 240-40180/8	P5F04138.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Diesel	9.179	9.179	9.179	9.179	9.179						4.893 - 13.468	9.179
n-Nonane	3.798	3.796	3.795	3.799	3.802						3.728 - 3.868	3.798

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-40180/9 Calibration Date: 04/13/2012 12:38

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04139.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	191992		510	500	2.0	20.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICV 240-40180/9 Calibration Date: 04/13/2012 12:38

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F04139.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.18	4.89	13.47

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Sample No.: CCVRT 240-42964/4 Date Analyzed: 05/07/2012 09:46

Instrument ID: A2HP5F GC Column: ID: ()

Lab File ID (Standard): P5F05074.D Heated Purge: (Y/N) N

Calibration ID: 8059

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				3.80		
UPPER LIMIT				3.90		
LOWER LIMIT				3.70		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-42964/4		05/07/2012 09:46	P5F05074.D	3.80		
240-10925-1	MSA-DMW8S-050212	05/07/2012 13:15	P5F05081.D	3.80		
240-10925-7	MSA-MW32S-050212	05/07/2012 13:45	P5F05082.D	3.80		
MB 240-42831/9-A		05/07/2012 14:15	P5F05083.D	3.80		
LCS 240-42831/10-A		05/07/2012 14:45	P5F05084.D	3.80		
CCV 240-42964/15		05/07/2012 15:15	P5F05085.D	3.80		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVRT 240-42964/4 Calibration Date: 05/07/2012 09:46

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F05074.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	195069		518	500	3.6	15.0
n-Nonane	Ave	216478	235449		54.4	50.0	8.8	15.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVRT 240-42964/4 Calibration Date: 05/07/2012 09:46

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F05074.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.25	4.91	13.59
n-Nonane	3.80	3.73	3.87

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42964/15 Calibration Date: 05/07/2012 15:15

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F05085.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	188273	207212		550	500	10.1	15.0
n-Nonane	Ave	216478	240161		55.5	50.0	10.9	15.0

FORM VII

DIESEL RANGE ORGANICS CONTINUING CALIBRATION RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-42964/15 Calibration Date: 05/07/2012 15:15

Instrument ID: A2HP5F Calib Start Date: 04/13/2012 10:08

GC Column: ID: Calib End Date: 04/13/2012 12:08

Lab File ID: P5F05085.D

Analyte	RT	RT WINDOW	
		TO	FROM
Diesel	9.25	4.91	13.59
n-Nonane	3.80	3.73	3.87

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: MB 240-42831/9-A

Matrix: Water Date Extracted: 05/04/2012 12:16

Lab File ID:(1) P5F05083.D Lab File ID:(2)

Date Analyzed:(1) 05/07/2012 14:15 Date Analyzed:(2)

Instrument ID:(1) A2HP5F Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MSA-DMW8S-050212	240-10925-1	05/07/2012 13:15	
MSA-MW32S-050212	240-10925-7	05/07/2012 13:45	
	LCS 240-42831/10-A	05/07/2012 14:45	

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-42831/9-A

Matrix: Water | Lab File ID: P5F05083.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3510C | Date Extracted: 05/04/2012 12:16

Sample wt/vol: 1000(mL) | Date Analyzed: 05/07/2012 14:15

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: | ID:

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 42964 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	500	U	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	64		10-110

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P5F05084.D

Lab ID: LCS 240-42831/10-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	2230	89	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	C91 #
MSA-DMW8S-050212	240-10925-1	62
MSA-MW32S-050212	240-10925-7	54
	MB 240-42831/9-A	64
	LCS 240-42831/10-A	74

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

WATER, 6850, Perchlorate

Case Narrative

TestAmerica West Sacramento Project Number G2E040502

WATER, 6850, Perchlorate
Samples: 1, 2, 3, 4, 5, 6
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTGXH1AC
SMCS: MTGXH1AD

Samples: 1, 2, 3, 4, 5, 6
The opening Perchlorate continuing calibration verification (CCV) & minimum reporting limit (MRL) standards had ion abundance ratios outside of acceptance criteria for the native compound. The exceedence was caused by matrix interference from an over-range field sample analyzed immediately preceding the standards. This ratio is used for positive identification in field samples and all samples with positive results demonstrated ion ratios which were within method acceptance limits. The primary ion used for quantitation in samples and QC was within acceptance limits for percent drift in all CCV and MRL standards pertaining to this batch. All other standards and QC pertaining to this batch had acceptable ion ratios for the native compound. Data is reported with no further corrective action.

There are no other anomalies associated with this project.

Sample Summary

TestAmerica West Sacramento Project Number G2E040502

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MTEA1	1	MSA-DMW8S-050212	5/2/2012 10:50 AM	5/4/2012 09:10 AM
MTEA2	2	MSA-DMW8I-050212	5/2/2012 12:40 PM	5/4/2012 09:10 AM
MTEA3	3	MSA-DMW8D-050212	5/2/2012 01:45 PM	5/4/2012 09:10 AM
MTEA4	4	MSA-DMW1A-050212	5/2/2012 10:16 AM	5/4/2012 09:10 AM
MTEA5	5	MSA-DMW1B-050212	5/2/2012 11:15 AM	5/4/2012 09:10 AM
MTEA6	6	MSA-MW32S-050212	5/2/2012 01:18 PM	5/4/2012 09:10 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

G2E040502

PARAMETER	ANALYTICAL METHOD
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

METHOD / ANALYST SUMMARY

G2E040502

ANALYTICAL METHOD	ANALYST	ANALYST ID
SW846 6850	Nathan Shafer	000181

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

QC DATA ASSOCIATION SUMMARY

G2E040502

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 6850		2131072	2131035
002	WATER	SW846 6850		2131072	2131035
003	WATER	SW846 6850		2131072	2131035
004	WATER	SW846 6850		2131072	2131035
005	WATER	SW846 6850		2131072	2131035
006	WATER	SW846 6850		2131072	2131035

ICAL Data

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name		Position	Level	Sample Type	Acq. Date & Time
18MAY12-perc-003.d	Blank No IS		P2-A5		Sample	5/18/2012 09:14
18MAY12-perc-004.d	LC6850L9_00001 Blank + IS		P2-B1		Sample	5/18/2012 09:30
18MAY12-perc-005.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL		P2-B2	1	Calibration	5/18/2012 09:47
18MAY12-perc-006.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL		P2-B3	2	Calibration	5/18/2012 10:03
18MAY12-perc-007.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL		P2-B4	3	Calibration	5/18/2012 10:19
18MAY12-perc-008.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL		P2-B5	4	Calibration	5/18/2012 10:35
18MAY12-perc-009.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL		P2-B6	5	Calibration	5/18/2012 10:52
18MAY12-perc-010.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL		P2-B7	6	Calibration	5/18/2012 11:08
18MAY12-perc-011.d	LC6850L7_00001 12LCMS0070, 10ng/mL		P2-B8	7	Calibration	5/18/2012 11:24
18MAY12-perc-012.d	LC6850L8_00001 12LCMS0071, 20ng/mL		P2-B9	8	Calibration	5/18/2012 11:40
18MAY12-perc-013.d	LC6850L9_00001 Blank + IS		P2-C1		Sample	5/18/2012 11:56
18MAY12-perc-014.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL		P2-C2	ICV	QC	5/18/2012 12:13
18MAY12-perc-015.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL		P2-C7	CCV6	QC	5/18/2012 12:29
18MAY12-perc-016.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL		P2-C4	CCV3	QC	5/18/2012 12:45
18MAY12-perc-017.d	G2E010442-2, 2128058, 2.00mL/2.00mL		P1-A1		Sample	5/18/2012 13:01
18MAY12-perc-018.d	G2E030413-1, 2128058, 2.00mL/2.00mL		P1-A2		Sample	5/18/2012 13:17
18MAY12-perc-019.d	G2E030413-2, 2128058, 2.00mL/2.00mL	IS LOW	P1-A3		Sample	5/18/2012 13:34
18MAY12-perc-020.d	G2E030413-3, 2128058, 2.00mL/2.00mL	IS LOW	P1-A4		Sample	5/18/2012 13:50
18MAY12-perc-021.d	G2E030450-1, 2128058, 2.00mL/2.00mL		P1-A5		Sample	5/18/2012 14:06
18MAY12-perc-022.d	G2E030450-2, 2128058, 2.00mL/2.00mL		P1-A6		Sample	5/18/2012 14:22
18MAY12-perc-023.d	G2E030450-3, 2128058, 2.00mL/2.00mL	IS LOW	P1-A7		Sample	5/18/2012 14:39
18MAY12-perc-024.d	G2E030450-4, 2128058, 2.00mL/2.00mL	IS LOW	P1-A8		Sample	5/18/2012 14:55
18MAY12-perc-025.d	G2E030450-4MS, 2128058, 2.00mL/2.00mL	IS LOW	P1-A9		Sample	5/18/2012 15:11
18MAY12-perc-026.d	G2E030450-4SD, 2128058, 2.00mL/2.00mL	IS LOW	P1-B1		Sample	5/18/2012 15:27
18MAY12-perc-027.d	G2E030450-5, 2128058, 2.00mL/2.00mL	IS LOW	P1-B2		Sample	5/18/2012 15:43
18MAY12-perc-028.d	G2E030450-6, 2128058, 2.00mL/2.00mL		P1-B3		Sample	5/18/2012 16:00

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373-5600 Page 1172 of 1265
05/30/2012 32 of 120

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-18 08:36		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.10	-0.01	Pass	0.69	0.70	0.10	-0.01	Pass	90294	0	Pass
301.97	302.00	0.10	-0.03	Pass	0.70	0.70	0.10	0.00	Pass	395043	0	Pass
601.93	601.98	0.10	-0.05	Pass	0.68	0.70	0.10	-0.02	Pass	1102140	0	Pass
1033.92	1033.99	0.10	-0.07	Pass	0.71	0.70	0.10	0.01	Pass	555768	0	Pass
1333.91	1333.97	0.10	-0.06	Pass	0.69	0.70	0.10	-0.01	Pass	928246	0	Pass
1633.89	1633.95	0.10	-0.06	Pass	0.72	0.70	0.10	0.02	Pass	755641	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.00	112.99	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	281916	0	Pass
302.00	302.00	0.10	0.00	Pass	0.69	0.70	0.10	-0.01	Pass	313159	0	Pass
601.99	601.98	0.10	0.01	Pass	0.68	0.70	0.10	-0.02	Pass	516853	0	Pass
1034.00	1033.99	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	246299	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	700966	0	Pass
1633.92	1633.95	0.10	-0.03	Pass	0.68	0.70	0.10	-0.02	Pass	514044	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.30	-0.01	Pass	1.18	1.20	0.60	-0.02	Pass	106745	0	Pass
301.92	302.00	0.30	-0.08	Pass	1.29	1.20	0.60	0.09	Pass	543203	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.32	1.20	0.60	0.12	Pass	1627812	0	Pass
1033.86	1033.99	0.30	-0.13	Pass	1.33	1.20	0.60	0.13	Pass	1048345	0	Pass
1333.86	1333.97	0.30	-0.11	Pass	1.29	1.20	0.60	0.09	Pass	2051063	0	Pass
1633.86	1633.95	0.30	-0.09	Pass	1.23	1.20	0.60	0.03	Pass	1897464	0	Pass

TestAmerica West Sacramento (916) 373-5600

Page 1222 of 1265

05/30/2012 82 of 120

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.03	112.99	0.30	0.04	Pass	1.17	1.20	0.60	-0.03	Pass	361479	0	Pass
301.98	302.00	0.30	-0.02	Pass	1.24	1.20	0.60	0.04	Pass	448549	0	Pass
601.95	601.98	0.30	-0.03	Pass	1.21	1.20	0.60	0.01	Pass	818535	0	Pass
1033.93	1033.99	0.30	-0.06	Pass	1.26	1.20	0.60	0.06	Pass	509361	0	Pass
1333.90	1333.97	0.30	-0.07	Pass	1.29	1.20	0.60	0.09	Pass	1243501	0	Pass
1633.91	1633.95	0.30	-0.04	Pass	1.24	1.20	0.60	0.04	Pass	1023503	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.76	2.50	1.25	0.26	Pass	127426	0	Pass
301.85	302.00	0.50	-0.15	Pass	2.84	2.50	1.25	0.34	Pass	758693	0	Pass
601.86	601.98	0.50	-0.12	Pass	2.88	2.50	1.25	0.38	Pass	2036963	0	Pass
1033.88	1033.99	0.50	-0.11	Pass	2.81	2.50	1.25	0.31	Pass	1535373	0	Pass
1333.92	1333.97	0.50	-0.05	Pass	2.74	2.50	1.25	0.24	Pass	3085514	0	Pass
1633.95	1633.95	0.50	0.00	Pass	2.60	2.50	1.25	0.10	Pass	3218866	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.88	112.99	0.50	-0.11	Pass	2.53	2.50	1.25	0.03	Pass	469127	0	Pass
301.92	302.00	0.50	-0.08	Pass	2.58	2.50	1.25	0.08	Pass	662737	0	Pass
601.90	601.98	0.50	-0.08	Pass	2.55	2.50	1.25	0.05	Pass	1337975	0	Pass
1033.99	1033.99	0.50	0.00	Pass	2.43	2.50	1.25	-0.07	Pass	1053802	0	Pass
1333.93	1333.97	0.50	-0.04	Pass	2.51	2.50	1.25	0.01	Pass	2595054	0	Pass
1634.01	1633.95	0.50	0.06	Pass	2.42	2.50	1.25	-0.08	Pass	2387726	0	Pass

' NOTE: 1) Actual abundances depend on many factors and are instrument specific.
To change the minimum abundance, edit the values on the "Options" sheet.

TestAmerica West Sacramento (916) 373-5600
Page 1223 of 1265
05/30/2012 83 of 120

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

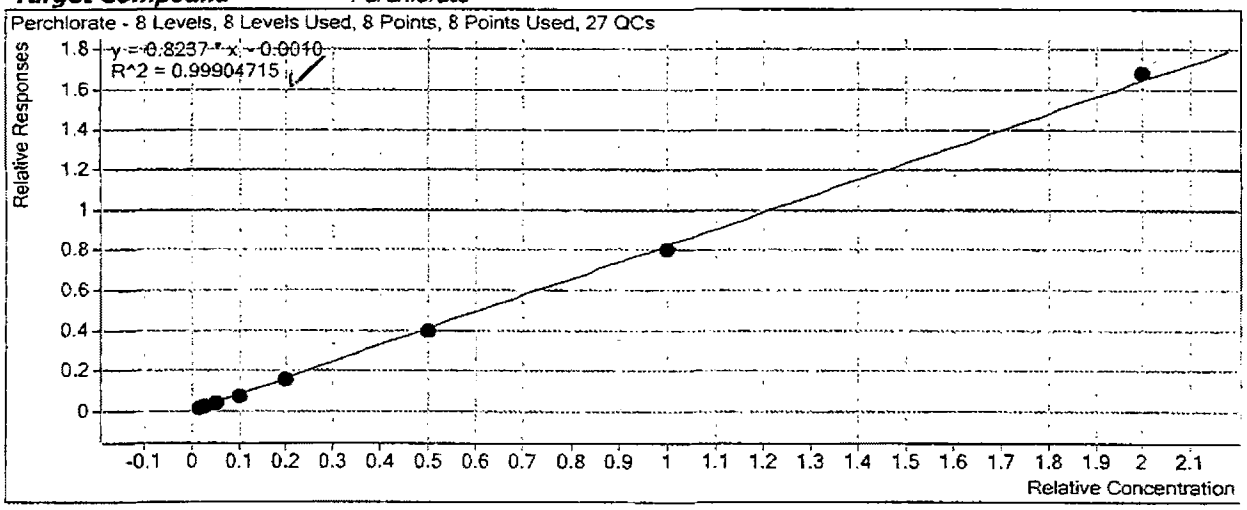
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml		
Analysis Time	5/21/2012 8:47 AM	**Analyst Name**	lores
Report Time	5/21/2012 8:52 AM	**Reporter Name**	lores
Last Calib Update	5/21/2012 8:45 AM	**Batch State**	processed

Calibration Info Linear Fit, 1/x weighting, and origin ignored.

mr 5/23/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
18MAY12-perc-005.d	1	☑	3969	0.8513	0.1500
18MAY12-perc-006.d	2	☑	6053	0.8368	0.3000
18MAY12-perc-007.d	3	☑	9177	0.7700	0.5000
18MAY12-perc-008.d	4	☑	17610	0.7457	1.0000
18MAY12-perc-009.d	5	☑	37167	0.8020	2.0000
18MAY12-perc-010.d	6	☑	88075	0.7932	5.0000
18MAY12-perc-011.d	7	☑	170558	0.8063	10.0000
18MAY12-perc-012.d	8	☑	316326	0.8429	20.0000
18MAY12-perc-016.d	CCV3	☑	10056	0.8085	0.5000
18MAY12-perc-031.d	CCV3	☑	8693	0.7663	0.5000
18MAY12-perc-055.d	CCV3	☑	7816	0.7912	0.5000
18MAY12-perc-086.d	CCV3	☑	8158	0.7883	0.5000
18MAY12-perc-030.d	CCV5	☑	34512	0.7684	2.0000
18MAY12-perc-054.d	CCV5	☑	22242	0.7998	2.0000
18MAY12-perc-079.d	CCV5	☑	27020	0.7886	2.0000
18MAY12-perc-015.d	CCV6	☑	86568	0.7831	5.0000
18MAY12-perc-043.d	CCV6	☑	77174	0.7977	5.0000
18MAY12-perc-068.d	CCV6	☑	71153	0.7956	5.0000
18MAY12-perc-085.d	CCV6	☑	65750	0.7871	5.0000
18MAY12-perc-014.d	ICV	☑	96145	0.8125	5.0000
18MAY12-perc-035.d	LCS_0.5	☑	6648	0.6891	0.5000
18MAY12-perc-036.d	LCS_0.5	☑	6940	0.7513	0.5000
18MAY12-perc-047.d	LCS_0.5	☑	5210	0.7880	0.5000
18MAY12-perc-048.d	LCS_0.5	☑	5803	0.8101	0.5000
18MAY12-perc-059.d	LCS_5	☑	55828	0.7622	5.0000
18MAY12-perc-060.d	LCS_5	☑	63429	0.8007	5.0000
18MAY12-perc-032.d	LODV	☑	2461	0.7245	0.1500
18MAY12-perc-044.d	LODV	☑	2601	0.7890	0.1500
18MAY12-perc-056.d	LODV	☑	1992	0.7088	0.1500
18MAY12-perc-038.d	MS_0.5	☑	6338	0.7206	0.5000
18MAY12-perc-039.d	MS_0.5	☑	6249	0.7113	0.5000
18MAY12-perc-050.d	MS_0.5	☑	3393	0.8015	0.5000
18MAY12-perc-051.d	MS_0.5	☑	2826	0.7462	0.5000
18MAY12-perc-062.d	MS_5	☑	57289	0.8140	5.0000
18MAY12-perc-063.d	MS_5	☑	57079	0.7808	5.0000

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate_batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 12:13
Analyst	lores
Data File	18MAY12-perc-014.d
Acquisition Method	PercMRM_2.m
Sample Name	LCS850IC_00001 12LCMS0073, 5.0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5 00
Injection Volume	50

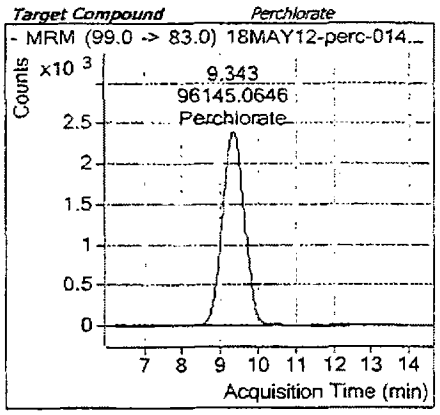
Quantitation Results

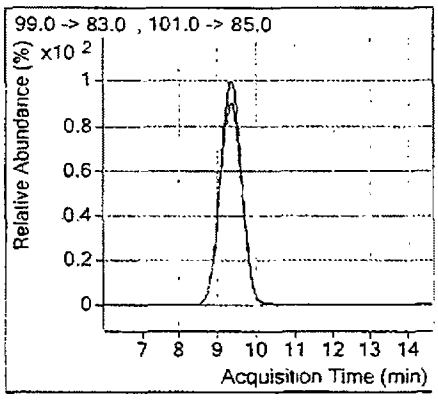
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.343	96145	99	83		4.94469	4.94469	1
Perchlorate-(35Cl18O4)	ISTD	9.334	236660	107	89				1
								-1.1 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	30302	101	85	3 17	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	73853	109	91	3.20	2 30	3.80	In Control

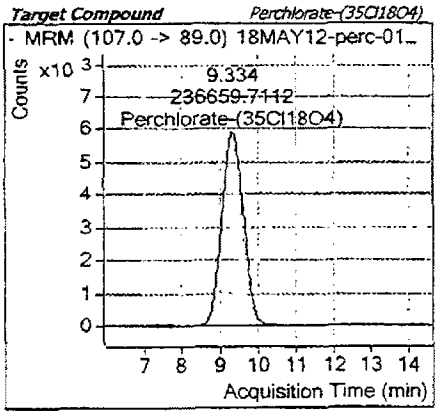
Compound Graphics

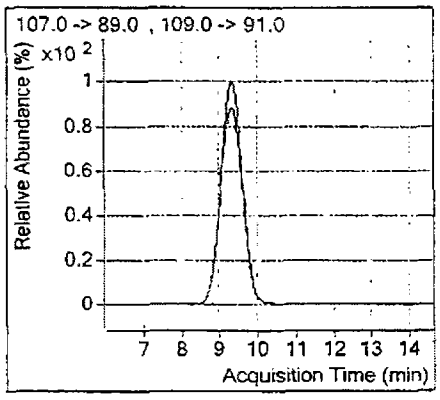
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MS 5/23/12

Sample Data

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

18MAY12-perc-029.d	LC6850L9_00001 Blank + IS		P2-C1		Sample	5/18/2012 16:16
18MAY12-perc-030.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL		P2-C6	CCV5	QC	5/18/2012 16:32
18MAY12-perc-031.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL		P2-C4	CCV3	QC	5/18/2012 16:48
18MAY12-perc-032.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL		P2-C3	LODV	QC	5/18/2012 17:05
18MAY12-perc-033.d	LC6850L9_00001 Blank + IS		P2-C1		Sample	5/18/2012 17:21
18MAY12-perc-034.d	G2E090000-MB, 2130107, 2.00mL/2.00mL, 6850-DOD-L		P1-B4		Sample	5/18/2012 17:37
18MAY12-perc-035.d	G2E090000-LCS, 2130107, 2.00mL/2.00mL		P1-B5	LCS_0.5	QC	5/18/2012 17:53
18MAY12-perc-036.d	G2E090000-SMCS, 2130107, 2.00mL/2.00mL		P1-B6	LCS_0.5	QC	5/18/2012 18:09
18MAY12-perc-037.d	G2E080459-1, 2130107, 2.00mL/2.00mL		P1-B7		Sample	5/18/2012 18:26
18MAY12-perc-038.d	G2E080459-1MS, 2130107, 2.00mL/2.00mL		P1-B8	MS_0.5	QC	5/18/2012 18:42
18MAY12-perc-039.d	G2E080459-1SD, 2130107, 2.00mL/2.00mL		P1-B9	MS_0.5	QC	5/18/2012 18:58
18MAY12-perc-040.d	G2E080459-2, 2130107, 2.00mL/2.00mL — interference		P1-C1		Sample	5/18/2012 19:14
18MAY12-perc-041.d	G2E080459-3, 2130107, 2.00mL/2.00mL		P1-C2		Sample	5/18/2012 19:31
18MAY12-perc-042.d	G2E080459-4, 2130107, 2.00mL/2.00mL		P1-C3		Sample	5/18/2012 19:47
18MAY12-perc-043.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL		P2-C7	CCV6	QC	5/18/2012 20:03
18MAY12-perc-044.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL		P2-C3	LODV	QC	5/18/2012 20:19
18MAY12-perc-045.d	LC6850L9_00001 Blank + IS		P2-C1		Sample	5/18/2012 20:35
18MAY12-perc-046.d	G2E080000-MB, 2129078, 2.00mL/2.00mL, 6850-DOD-L		P1-C4		Sample	5/18/2012 20:52
18MAY12-perc-047.d	G2E080000-LCS, 2129078, 2.00mL/2.00mL		P1-C5	LCS_0.5	QC	5/18/2012 21:08
18MAY12-perc-048.d	G2E080000-SMCS, 2129078, 2.00mL/2.00mL		P1-C6	LCS_0.5	QC	5/18/2012 21:24
18MAY12-perc-049.d	G2E020423-2, 2129078, 2.00mL/2.00mL	IS LOW	P1-C7		Sample	5/18/2012 21:40
18MAY12-perc-050.d	G2E020423-2MS, 2129078, 2.00mL/2.00mL	IS LOW	P1-C8	MS_0.5	QC	5/18/2012 21:57
18MAY12-perc-051.d	G2E020423-2SD, 2129078, 2.00mL/2.00mL	IS LOW	P1-C9	MS_0.5	QC	5/18/2012 22:13
18MAY12-perc-052.d	G2E020423-3, 2129078, 2.00mL/2.00mL	IS LOW	P1-D1		Sample	5/18/2012 22:29
18MAY12-perc-053.d	G2E030474-2, 2129078, 2.00mL/2.00mL	OSR & IS LOW	P1-D2		Sample	5/18/2012 22:45
18MAY12-perc-054.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	RATIO HIGH	P2-C6	CCV5	QC	5/18/2012 23:01
18MAY12-perc-055.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	RATIO HIGH	P2-C4	CCV3	QC	5/18/2012 23:18
18MAY12-perc-056.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL (NA)	RATIO LOW	P2-C3	LODV	QC	5/18/2012 23:34
18MAY12-perc-057.d	LC6850L9_00001 Blank + IS		P2-C1		Sample	5/18/2012 23:50
18MAY12-perc-058.d	G2E100000-MB, 2131072, 2.00mL/2.00mL, 6850-L		P1-D3		Sample	5/19/2012 00:06

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373-5600 Page 1173 of 1265
05/30/2012 33 of 120

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

18MAY12-perc-029.d	Perchlorate	Sample				
18MAY12-perc-030.d	Perchlorate	QC	2.0000	34512	93.9	
18MAY12-perc-031.d	Perchlorate	QC	0.5000	8693	95.5	
18MAY12-perc-032.d	Perchlorate	QC	0.1500	2461	96.2	
18MAY12-perc-033.d	Perchlorate	Sample				
18MAY12-perc-034.d	Perchlorate	Sample				
18MAY12-perc-035.d	Perchlorate	QC	0.5000	6648	86.1	
18MAY12-perc-036.d	Perchlorate	QC	0.5000	6940	93.7	
18MAY12-perc-037.d	Perchlorate	Sample				
18MAY12-perc-038.d	Perchlorate	QC	0.5000	6338	90.0	
18MAY12-perc-039.d	Perchlorate	QC	0.5000	6249	88.8	
18MAY12-perc-040.d	Perchlorate	Sample		4625		
18MAY12-perc-041.d	Perchlorate	Sample				
18MAY12-perc-042.d	Perchlorate	Sample		201		
18MAY12-perc-043.d	Perchlorate	QC	5.0000	77174	97.1	
18MAY12-perc-044.d	Perchlorate	QC	0.1500	2601	104.0	
18MAY12-perc-045.d	Perchlorate	Sample				
18MAY12-perc-046.d	Perchlorate	Sample				
18MAY12-perc-047.d	Perchlorate	QC	0.5000	5210	98.1	
18MAY12-perc-048.d	Perchlorate	QC	0.5000	5803	100.8	
18MAY12-perc-049.d	Perchlorate	Sample		322		
18MAY12-perc-050.d	Perchlorate	QC	0.5000	3393	99.8	
18MAY12-perc-051.d	Perchlorate	QC	0.5000	2826	93.1	
18MAY12-perc-052.d	Perchlorate	Sample		25336		
18MAY12-perc-053.d	Perchlorate	Sample		3408589		Result OSR
18MAY12-perc-054.d	Perchlorate	QC	2.0000	22242	97.7	
18MAY12-perc-055.d	Perchlorate	QC	0.5000	7816	98.5	
18MAY12-perc-056.d	Perchlorate	QC	0.1500	1992	94.3	
18MAY12-perc-057.d	Perchlorate	Sample				
18MAY12-perc-058.d	Perchlorate	Sample				

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373-5600 Page 1244 of 1265
05/30/2012 104 of 120

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

18MAY12-perc-059.d	G2E100000-LCS, 2131072, 2.00mL/2.00mL	P1-D4	LCS_5	QC	5/19/2012 00:23
18MAY12-perc-060.d	G2E100000-SMCS, 2131072, 2.00mL/2.00mL	P1-D5	LCS_5	QC	5/19/2012 00:39
18MAY12-perc-061.d	G2E040502-1, 2131072, 2.00mL/2.00mL,	P1-D6		Sample	5/19/2012 00:55
18MAY12-perc-062.d	G2E040502-1MS, 2131072, 2.00mL/2.00mL,	P1-D7	MS_5	QC	5/19/2012 01:11
18MAY12-perc-063.d	G2E040502-1SD, 2131072, 2.00mL/2.00mL,	P1-D8	MS_5	QC	5/19/2012 01:27
18MAY12-perc-064.d	G2E040502-2, 2131072, 2.00mL/2.00mL,	P1-D9		Sample	5/19/2012 01:44
18MAY12-perc-065.d	G2E040502-3, 2131072, 2.00mL/2.00mL,	P1-E1		Sample	5/19/2012 02:00
18MAY12-perc-066.d	G2E040502-4, 2131072, 2.00mL/2.00mL,	P1-E2		Sample	5/19/2012 02:16
18MAY12-perc-067.d	G2E040502-5, 2131072, 2.00mL/2.00mL,	P1-E3		Sample	5/19/2012 02:32
18MAY12-perc-068.d	LC6850L6_00001-12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/19/2012 02:48
18MAY12-perc-069.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/19/2012 03:05
18MAY12-perc-070.d	G2E040502-6, 2131072, 2.00mL/2.00mL,	P1-E4		Sample	5/19/2012 03:21
18MAY12-perc-071.d	G2E050430-1, 2131072, 2.00mL/2.00mL,	P1-E5		Sample	5/19/2012 03:37
18MAY12-perc-072.d	G2E050430-2, 2131072, 2.00mL/2.00mL,	P1-E6		Sample	5/19/2012 03:53
18MAY12-perc-073.d	G2E050430-3, 2131072, 2.00mL/2.00mL,	P1-E7		Sample	5/19/2012 04:10
18MAY12-perc-074.d	G2E050430-4, 2131072, 2.00mL/2.00mL,	P1-E8		Sample	5/19/2012 04:26
18MAY12-perc-075.d	G2E050430-5, 2131072, 2.00mL/2.00mL,	P1-E9		Sample	5/19/2012 04:42
18MAY12-perc-076.d	G2E050430-6, 2131072, 2.00mL/2.00mL,	P1-F1		Sample	5/19/2012 04:58
18MAY12-perc-077.d	G2E050430-7, 2131072, 2.00mL/2.00mL,	P1-F2		Sample	5/19/2012 05:14
18MAY12-perc-078.d	G2E050430-8, 2131072, 2.00mL/2.00mL,	P1-F3		Sample	5/19/2012 05:31
18MAY12-perc-079.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/19/2012 05:47
18MAY12-perc-080.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/19/2012 06:03
18MAY12-perc-081.d	G2E080483-1, 2131072, 2.00mL/2.00mL,	P1-F4		Sample	5/19/2012 06:19
18MAY12-perc-082.d	G2E080483-2, 2131072, 2.00mL/2.00mL,	P1-F5		Sample	5/19/2012 06:36
18MAY12-perc-083.d	G2E080483-3, 2131072, 2.00mL/2.00mL,	P1-F6		Sample	5/19/2012 06:52
18MAY12-perc-084.d	G2E080483-4, 2131072, 2.00mL/2.00mL,	P1-F7		Sample	5/19/2012 07:08
18MAY12-perc-085.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/19/2012 07:24
18MAY12-perc-086.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/19/2012 07:40
18MAY12-perc-087.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/19/2012 07:57

TestAmerica West Sacramento (916) 373-5600 Page 174 of 1265
05/30/2012 34 of 120

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

18MAY12-perc-059.d	Perchlorate	QC	5.0000	55828	92.8
18MAY12-perc-060.d	Perchlorate	QC	5.0000	63429	97.5
18MAY12-perc-061.d	Perchlorate	Sample		205	
18MAY12-perc-062.d	Perchlorate	QC	5.0000	57289	99.1
18MAY12-perc-063.d	Perchlorate	QC	5.0000	57079	95.0
18MAY12-perc-064.d	Perchlorate	Sample		528	
18MAY12-perc-065.d	Perchlorate	Sample		403	
18MAY12-perc-066.d	Perchlorate	Sample		765	
18MAY12-perc-067.d	Perchlorate	Sample		123	
18MAY12-perc-068.d	Perchlorate	QC	5.0000	71153	96.8
18MAY12-perc-069.d	Perchlorate	Sample			
18MAY12-perc-070.d	Perchlorate	Sample			
18MAY12-perc-071.d	Perchlorate	Sample			
18MAY12-perc-072.d	Perchlorate	Sample		130	
18MAY12-perc-073.d	Perchlorate	Sample		1522	
18MAY12-perc-074.d	Perchlorate	Sample		337	
18MAY12-perc-075.d	Perchlorate	Sample		14484	
18MAY12-perc-076.d	Perchlorate	Sample		55391	
18MAY12-perc-077.d	Perchlorate	Sample		454	
18MAY12-perc-078.d	Perchlorate	Sample		1420	
18MAY12-perc-079.d	Perchlorate	QC	2.0000	27020	96.4
18MAY12-perc-080.d	Perchlorate	Sample			
18MAY12-perc-081.d	Perchlorate	Sample		8919	
18MAY12-perc-082.d	Perchlorate	Sample		248	
18MAY12-perc-083.d	Perchlorate	Sample		135	
18MAY12-perc-084.d	Perchlorate	Sample		845	
18MAY12-perc-085.d	Perchlorate	QC	5.0000	65750	95.8
18MAY12-perc-086.d	Perchlorate	QC	0.5000	8158	98.2
18MAY12-perc-087.d	Perchlorate	Sample			

TestAmerica West Sacramento (916) 373-5600 Page 1245 of 1265
05/30/2012 105 of 120

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 23:18
Analyst	lores
Data File	18MAY12-perc-055.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coli=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

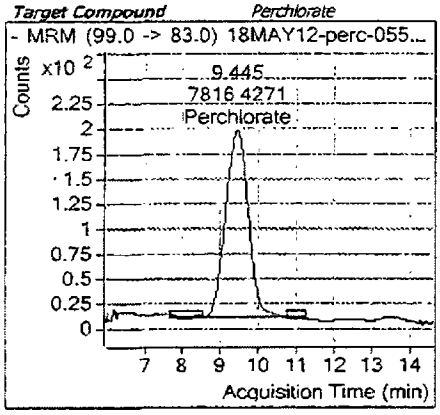
Quantitation Results

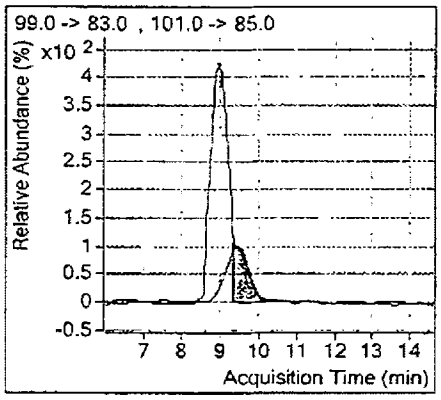
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.445	7816	99	83	0.49266	0.49266	1
Perchlorate-(35Cl18O4)	ISTD	9.426	197583	107	89			1
							-1.5 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max		
Perchlorate	1632	101	85	4.79	2.30	3.80	MI	High
Perchlorate-(35Cl18O4)	61753	109	91	3.20	2.30	3.80		In Control

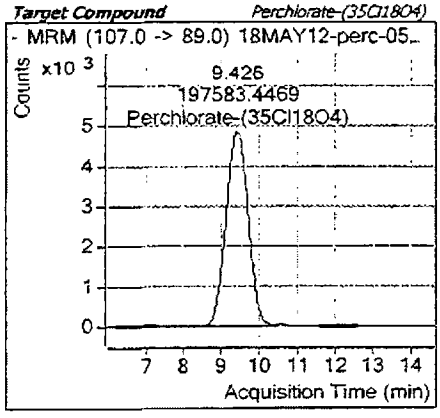
Compound Graphics

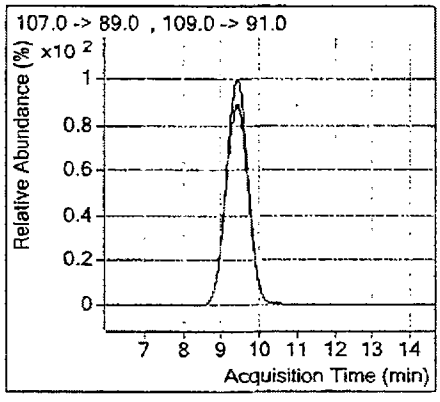
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/23/12

Ratio High.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 02:48
Analyst	lores
Data File	18MAY12-perc-068.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5.0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5.00
Injection Volume	50

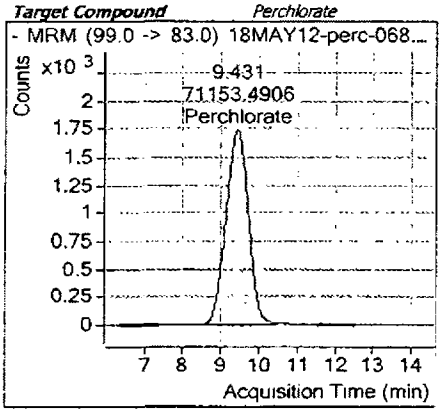
Quantitation Results

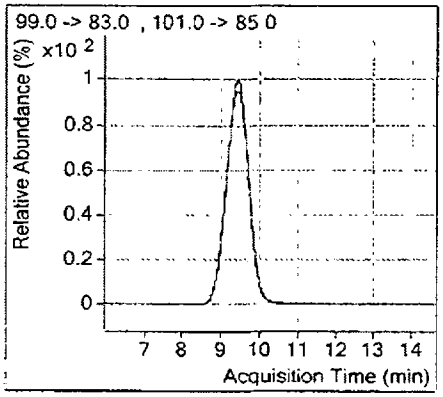
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.431	71153	99	83	4.84183	4.84183	1
Perchlorate-(35Cl18O4)	ISTD	9.420	178874	107	89			1
							-3.2 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	23444	101	85	3.04	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	56050	109	91	3.19	2.30	3.80	In Control

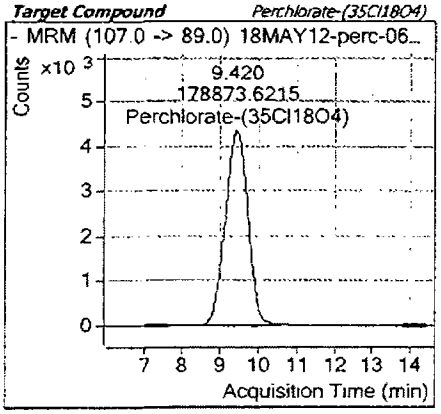
Compound Graphics

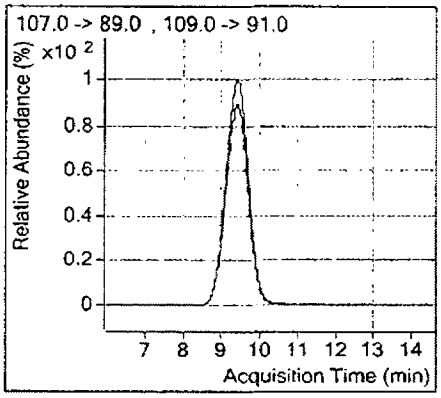
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 05:47
Analyst	lores
Data File	18MAY12-perc-079.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2 00
Injection Volume	50

Quantitation Results

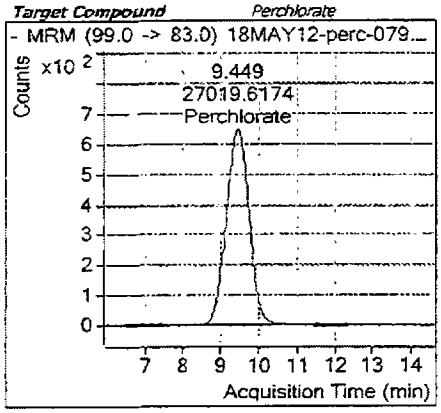
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 449	27020	99	83	1.92723	1.92723	1
Perchlorate-(35Cl18O4)	ISTD	9.439	171313	107	89			1
							-3.6 % Deviation	

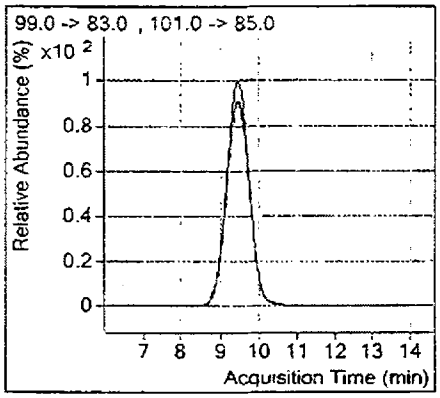
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8572	101	85	3 15	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	54012	109	91	3 17	2.30	3.80	In Control

Compound Graphics

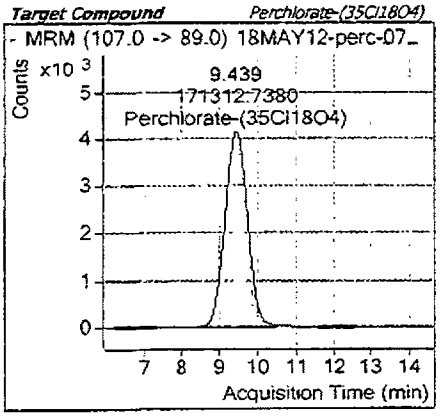
5/23/12

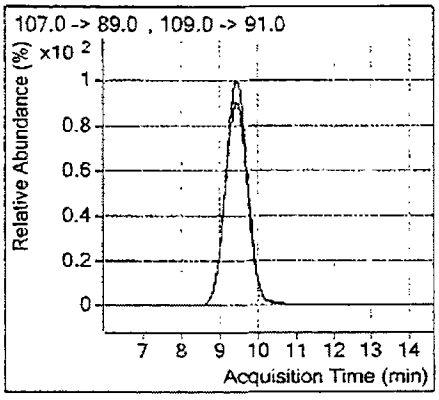
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E040502 Work Order #...: MTGXH1AA Matrix.....: WATER
MB Lot-Sample #: G2E100000-072

Prep Date.....: 05/10/12
Analysis Date..: 05/19/12 Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E040502 Work Order #...: MTGXH1AC Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	93	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E040502 Work Order #...: MTGXH1AC Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.64	ug/L	93	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E040502 Work Order #...: MTGXH1AD Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	97	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E040502 Work Order #...: MTGXH1AD Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.87	ug/L	97	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E040502 Work Order #...: MTEA11AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E040502-001 MTEA11AD-MSD
Date Sampled...: 05/02/12 Date Received..: 05/04/12
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	99	(80 - 120)			SW846 6850
	95	(80 - 120)	4.2	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E040502 Work Order #...: MTEA11AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E040502-001 MTEA11AD-MSD
Date Sampled...: 05/02/12 Date Received..: 05/04/12
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.95	ug/L	99		SW846 6850
	ND	5.00	4.75	ug/L	95	4.2	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

VOC CALCULATION	SAMPLE MSA-DMW1A-050212		
TARGET ANALYTE	trichloroethene		
ANALYTE RESPONSE	1000218		
INTERNAL STANDARD	fluorobenzene		
I.S. RESPONSE	1602071		
I.S. CONCENTRATION	10	µg/L	
ANALYTE CAL. RF	0.2745		
DILUTION FACTOR (DF)	100		
INITIAL SAMPLE VOLUME - V1	5	ml	
FINAL SAMPLE VOLUME - V2	5	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF / (I.S. RESPONSE) X (CAL. R.F.)	=	2274.42	µg/L

Report Date: 11-May-2012 10:46:36 Chrom Revision: 2.0 08-Feb-2012 11:07:54

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120510-9837.b\UXM5710.D		
Lims ID:	240-10925-C-5	Client ID:	MSA-DMW1A-050212
Inject. Date:	10-May-2012 17:42:30	Dil. Factor:	100.0000
Sample Type:	Client		
Sample ID:	240-0009837-020		
Misc. Info.:	M20510A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	19
Lims Batch ID:	43549	Lims Sample ID:	20
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120510-9837.b\8260_16.m		
Last Update:	11-May-2012 10:46:30	Calib Date:	09-May-2012 18:43:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120509-9809.b\UXM5665.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-15		

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1602071	10.0	
* 2 Chlorobenzene-d5	117	8.394	8.393	0.001	91	1193039	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	95	652748	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.109	5.109	0.0	58	375900	9.24	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	483889	9.45	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1497112	9.32	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	89	568606	9.21	
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62	1.954	1.942	0.012	83	915899	12.7	
15 Bromomethane	94		2.286					
16 Chloroethane	64		2.393					
18 Trichlorofluoromethane	101		2.654					
21 1,1-Dichloroethene	96		3.140					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.164					
22 Acetone	43		3.176					
26 Carbon disulfide	76		3.354					
30 Methylene Chloride	84	3.579	3.579	0.0	93	67341	0.4879	
31 2-Methyl-2-propanol	59		3.674					
34 Methyl tert-butyl ether	73		3.840					
33 trans-1,2-Dichloroethene	96	3.840	3.840	0.0	71	12316	0.2324	
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.267					
40 Tert-butyl ethyl ether	59		4.587					
41 2-Butanone (MEK)	43		4.706					
42 cis-1,2-Dichloroethene	96	4.717	4.706	0.011	73	1710886	30.6	
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.907					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97		5.156					
52 1,1-Dichloropropene	75		5.287					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
53 Carbon tetrachloride	117		5.298					
56 1,2-Dichloroethane	62	5.476	5.464	0.012	18	7967	0.1164	
55 Benzene	78	5.476	5.476	0.0	72	19975	0.1073	
57 Tert-amyl methyl ether	73		5.559					
60 Trichloroethene	130	6.022	6.022	0.0	93	1000218	22.7	
62 1,2-Dichloropropane	63		6.212					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91	7.137	7.137	0.001	94	82150	0.4265	
73 trans-1,3-Dichloropropene	75		7.314					
76 1,3-Dichloropropane	76		7.635					
77 Tetrachloroethene	164		7.646					
78 2-Hexanone	43		7.694					
79 Chlorodibromomethane	129		7.848					
123 Ethylene Dibromide	107		7.967					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
85 o-Xylene	106		9.010					
86 Styrene	104		9.010					
87 Bromoform	173		9.188					
88 Isopropylbenzene	105		9.354					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.840					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.243					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.575					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.658					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
109 1,2,4-Trichlorobenzene	180		12.639					
110 Hexachlorobutadiene	225		12.817					
111 Naphthalene	128		12.888					
112 1,2,3-Trichlorobenzene	180		13.149					
S 114 Xylenes, Total	106		16.530					

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2790	0.1000	9.62	10.0	-3.8	20.0
Chloromethane	Ave	0.6503	0.6113	0.1000	9.40	10.0	-6.0	20.0
Vinyl chloride	Ave	0.4512	0.4262	0.1000	9.45	10.0	-5.5	20.0
Bromomethane	Ave	0.1775	0.1770	0.0500	9.97	10.0	-0.3	20.0
Chloroethane	Ave	0.2524	0.2504	0.0500	9.92	10.0	-0.8	20.0
Trichlorofluoromethane	Ave	0.3195	0.3217	0.1000	10.1	10.0	0.7	20.0
Acrolein	Ave	0.0602	0.0539		89.5	100	-10.5	20.0
1,1-Dichloroethene	Ave	0.2733	0.2791	0.1000	10.2	10.0	2.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2017	0.0500	11.0	10.0	9.5	20.0
Acetone	Lin1		0.0988	0.0500	18.3	20.0	-8.5	20.0
Iodomethane	Ave	0.4830	0.4722		9.78	10.0	-2.2	20.0
Carbon disulfide	Ave	0.8906	0.9826	0.1000	11.0	10.0	10.3	20.0
Acetonitrile	Ave	0.0451	0.0445		98.8	100	-1.2	20.0
Methyl acetate	Ave	0.2598	0.2519	0.1000	19.4	20.0	-3.0	20.0
Methylene Chloride	Lin1		0.3834	0.1000	10.5	10.0	5.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0166		186	200	-7.1	20.0
Acrylonitrile	Ave	0.1429	0.1377		19.3	20.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.6763	0.1000	9.52	10.0	-4.8	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3410	0.1000	10.3	10.0	3.1	20.0
Hexane	Ave	0.0431	0.0483		11.2	10.0	12.1	20.0
1,1-Dichloroethane	Ave	0.6504	0.6517	0.1000	10.0	10.0	0.2	20.0
Vinyl acetate	Ave	0.0379	0.0403		10.6	10.0	6.2	20.0
2-Butanone	Ave	0.1434	0.1404	0.0500	19.6	20.0	-2.1	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3372	0.1000	9.66	10.0	-3.4	20.0
2,2-Dichloropropane	Ave	0.2584	0.2768		10.7	10.0	7.1	20.0
Bromochloromethane	Ave	0.1454	0.1447		9.95	10.0	-0.5	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5315	0.2000	10.2	10.0	1.7	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4191	0.1000	10.6	10.0	6.4	20.0
Cyclohexane	Ave	0.6493	0.6985	0.1000	10.8	10.0	7.6	20.0
1,1-Dichloropropene	Ave	0.3618	0.3859		10.7	10.0	6.6	20.0
Carbon tetrachloride	Lin1		0.3255	0.1000	9.86	10.0	-1.4	20.0
1,2-Dichloroethane	Ave	0.4273	0.4578	0.1000	10.7	10.0	7.1	20.0
Benzene	Ave	1.162	1.187	0.5000	10.2	10.0	2.2	20.0
Trichloroethene	Ave	0.2745	0.2912	0.2000	10.6	10.0	6.1	20.0
Methylcyclohexane	Ave	0.3471	0.3832	0.1000	11.0	10.0	10.4	20.0
1,2-Dichloropropane	Ave	0.3244	0.3319	0.1000	10.2	10.0	2.3	20.0
Dibromomethane	Ave	0.1369	0.1455		10.6	10.0	6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0018		457	500	-8.7	20.0
Bromodichloromethane	Ave	0.2830	0.3185	0.1000	11.3	10.0	12.6	20.0

SVOC CALCULATION LIQUIDS	SAMPLE MSA-DMW8D050212		
TARGET ANALYTE	1,4-dioxane		
ANALYTE RESPONSE	804484		
INTERNAL STANDARD	1,4-dichlorobenzene-d4		
I.S. RESPONSE	230515		
I.S. CONCENTRATION	4	ng	
ANALYTE CAL. RELATIVE RESPONSE FACTOR (RRF)	0.564		
VOLUME OF FINAL EXTRACT	2	ml	
VOLUME OF INITIAL EXTRACT	1040	ml	
DILUTION FACTOR (DF)	1		
INJECTION VOLUME - VOL inj.	0.001	ml	
(ANALYTE RESPONSE) X (I.S. CONCENTRATION) X DF X Vol final / (I.S. RESPONSE) X (CAL. RRF) X (vol. initial)	=	47.5988	ng/ml or ug/l

Report Date: 09-May-2012 09:26:21 Chrom Revision: 2.0 08-Feb-2012 11:07:54

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4HP7\20120508-9753.b\20508034.D		
Lims ID:	240-10925-G-3-A	Client ID:	MSA-DMW8D-050212
Inject. Date:	08-May-2012 18:58:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009753-034		
Misc. Info.:	240-10925-G-3-A		
Operator:	001710	Instrument ID:	A4HP7
Vol. Injected:	1.0000	ALS Bottle#:	34
Lims Batch ID:	43126	Lims Sample ID:	34
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4HP7\20120508-9753.b\8270_hp7.m		
Last Update:	09-May-2012 09:25:57	Calib Date:	02-May-2012 18:50:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4HP7\20120502-9598.b\20502028.D		
Limit Group:	MSS 8270C ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-17		

First Level Reviewer: gruberj Date: 09-May-2012 09:13:20

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	3.394	3.394	0.0	95	230515	4.00	
* 2 Naphthalene-d8	136	4.277	4.277	0.0	99	929849	4.00	
* 3 Acenaphthene-d10	164	5.534	5.539	-0.005	89	536871	4.00	
* 4 Phenanthrene-d10	188	6.609	6.614	-0.005	98	820756	4.00	
* 5 Chrysene-d12	240	8.561	8.556	0.005	93	778628	4.00	
* 6 Perylene-d12	264	9.861	9.856	0.005	96	626398	4.00	
$ 7 2-Fluorophenol	112	2.544	2.539	0.005	91	525885	7.04	
$ 8 Phenol-d5	99	3.116	3.116	0.0	86	718268	7.60	
$ 9 Nitrobenzene-d5	82	3.769	3.769	0.0	87	495206	5.45	
$ 10 2-Fluorobiphenyl (Surr)	172	5.031	5.036	-0.005	99	974272	5.22	
$ 11 2,4,6-Tribromophenol	330	6.106	6.106	0.0	85	139783	10.4	
$ 12 Terphenyl-d14	244	7.743	7.754	-0.011	98	1195892	7.46	
24 1,4-Dioxane	88	1.613	1.619	-0.006	86	804484	24.7	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Client Sample ID: MSA-DMW8D-050212 | Lab Sample ID: 240-10925-3

Matrix: Water | Lab File ID: 20508034.D

Analysis Method: 8270C | Date Collected: 05/02/2012 13:45

Extract. Method: 3520C | Date Extracted: 05/05/2012 09:23

Sample wt/vol: 1040(mL) | Date Analyzed: 05/08/2012 18:58

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43126 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	47		0.96	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		28-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	55		27-111
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	75		37-119

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: CCV 240-43126/2 Calibration Date: 05/08/2012 09:05

Instrument ID: A4HP7 Calib Start Date: 05/02/2012 10:23

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/02/2012 12:54

Lab File ID: 20508002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5640	0.5272		9.35	10.0	-6.5	50.0
N-Nitrosodimethylamine	Ave	0.8260	0.7907		9.57	10.0	-4.3	50.0
Pyridine	Ave	1.395	1.390		9.97	10.0	-0.3	50.0
Ethyl methacrylate	Ave	1.112	1.104		9.92	10.0	-0.8	50.0
3-Chloropropionitrile	Ave	0.9719	0.8004		8.24	10.0	-17.6	50.0
Malononitrile	Ave	1.337	1.340		10.0	10.0	0.2	50.0
Benzaldehyde	Ave	1.043	0.7144		6.85	10.0	-31.5	50.0
Phenol	Ave	1.680	1.721		10.2	10.0	2.4	20.0
Aniline	Ave	2.090	2.189		10.5	10.0	4.7	50.0
Bis(2-chloroethyl)ether	Ave	1.311	1.311		10.0	10.0	0.0	50.0
2-Chlorophenol	Ave	1.490	1.473		9.89	10.0	-1.1	50.0
1,3-Dichlorobenzene	Ave	1.593	1.599		10.0	10.0	0.4	50.0
1,4-Dichlorobenzene	Ave	1.646	1.662		10.1	10.0	1.0	50.0
Benzyl alcohol	Ave	0.8859	0.8606		9.71	10.0	-2.9	50.0
1,2-Dichlorobenzene	Ave	1.544	1.529		9.91	10.0	-0.9	50.0
2-Methylphenol	Ave	1.290	1.300		10.1	10.0	0.7	50.0
bis (2-chloroisopropyl) ether	Ave	1.740	1.634		9.39	10.0	-6.1	50.0
3 & 4 Methylphenol	Ave	1.324	1.360		10.3	10.0	2.7	50.0
N-Nitrosodi-n-propylamine	Ave	0.8988	0.9308	0.0500	10.4	10.0	3.6	50.0
Acetophenone	Ave	1.873	1.935		10.3	10.0	3.3	50.0
Hexachloroethane	Ave	0.5453	0.5619		10.3	10.0	3.0	50.0
Nitrobenzene	Ave	0.3636	0.3688		10.1	10.0	1.4	50.0
Isophorone	Ave	0.6461	0.6574		10.2	10.0	1.7	50.0
2-Nitrophenol	Ave	0.2067	0.2114		10.2	10.0	2.3	20.0
2,4-Dimethylphenol	Ave	0.3785	0.3801		10.0	10.0	0.4	50.0
1,3,5-Trichlorobenzene	Ave	0.3633	0.3290		9.06	10.0	-9.4	50.0
Bis(2-chloroethoxy)methane	Ave	0.3739	0.3772		10.1	10.0	0.9	50.0
Benzoic acid	Qua		0.1909		17.0	20.0	-15.0	50.0
2,4-Dichlorophenol	Ave	0.3173	0.2887		9.10	10.0	-9.0	20.0
1,2,4-Trichlorobenzene	Ave	0.3480	0.3214		9.23	10.0	-7.7	50.0
Naphthalene	Ave	1.144	1.081		9.45	10.0	-5.5	50.0
4-Chloroaniline	Ave	0.4747	0.4497		9.48	10.0	-5.2	50.0
Hexachlorobutadiene	Ave	0.1832	0.1595		8.71	10.0	-12.9	20.0
1,2,3-Trichlorobenzene	Ave	0.3305	0.2901		8.78	10.0	-12.2	50.0
Caprolactam	Qua		0.1216		10.6	10.0	6.0	50.0
4-Chloro-3-methylphenol	Ave	0.3023	0.3096		10.2	10.0	2.4	20.0
2-Methylnaphthalene	Ave	0.7358	0.7177		9.75	10.0	-2.5	50.0
1-Methylnaphthalene	Ave	0.7008	0.6679		9.53	10.0	-4.7	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5580	0.5324		9.54	10.0	-4.6	50.0
Hexachlorocyclopentadiene	Ave	0.3259	0.3328	0.0500	10.2	10.0	2.1	50.0

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. APANAVAGE** **DATE:** **June 5, 2012**

FROM: **MEGAN CARSON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION- SELECT TOTAL AND DISSOLVED METALS**
LOCKHEED-MSA
SDG 240-10925-1

SAMPLES: 6/Waters/

MSA-DMW1A-050212	MSA-DMW1B-050212
MSA-DMW8D-050212	MSA-DMW8I-050212
MSA-DMW8S-050212	MSA-MW32S-050212

Overview

The sample set for Lockheed MSA, SDG 240-10925-1, consists of six (6) aqueous environmental samples and one trip blank. This SDG contained no field duplicate pairs.

All samples were analyzed for total and dissolved metals. The samples were collected by Tetra Tech on May 2nd, 2012 and analyzed by TestAmerica. Metals analyses were conducted using methods 6020A. Mercury analyses were conducted using method 7470.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, MS tuning, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, ICP internal standard recoveries, laboratory control sample recoveries, matrix spike recoveries, laboratory duplicate results, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems-

- None.

Minor Problems-

- The following contaminants were detected in preparation and calibration blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Barium (1)	0.94 ug/L	4.7 ug/L
Copper (1)	0.64 ug/L	3.2 ug/L
Zinc (1)	3.41 ug/L	17.1 ug/L
Antimony (2)	0.13 ug/L	0.65 ug/L
Molybdenum (2)	0.58 ug/L	2.9 ug/L
Thallium (2)	0.55 ug/L	2.75 ug/L
Tungsten (2)	0.79 ug/L	3.95 ug/L

(1) Maximum concentration found in a preparation blank affecting sample in 43497
(2) Maximum concentration found in a calibration blank affecting samples analyzed on 5/11/12.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level were qualified (B) for blank contamination.

- The CRDL standard analyzed on 5/11/12 had percent recoveries > 110% for lead, nickel, thallium and had a percent recovery < 90% for barium. All samples were affected. Positive lead results < 2X CRDL were qualified as estimated (J). No other validation action was taken as sample results were either > 2X CRDL or qualified for blank contamination.

Notes

Positive results greater than MDL but less than the RL were qualified as estimated (J).

Executive Summary

Laboratory Performance: Preparation and calibration blank contamination resulted on the qualification of sample results. The CRDL standard non-compliances resulted in the qualification of sample results.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to the Region III modifications to the National Functional Guidelines for Inorganic Data Validation (April 1993).

Megan Carson

Tetra Tech
Megan Carson
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

APPENDIX A

QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A	=	Lab Blank Contamination
B	=	Field Blank Contamination
C	=	Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01	=	GC/MS Tuning Noncompliance
D	=	MS/MSD Recovery Noncompliance
E	=	LCS/LCSD Recovery Noncompliance
F	=	Lab Duplicate Imprecision
G	=	Field Duplicate Imprecision
H	=	Holding Time Exceedance
I	=	ICP Serial Dilution Noncompliance
J	=	ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K	=	ICP Interference - includes ICS % R Noncompliance
L	=	Instrument Calibration Range Exceedance
M	=	Sample Preservation Noncompliance
N	=	Internal Standard Noncompliance
N01	=	Internal Standard Recovery Noncompliance Dioxins
N02	=	Recovery Standard Noncompliance Dioxins
N03	=	Clean-up Standard Noncompliance Dioxins
O	=	Poor Instrument Performance (i.e., base-time drifting)
P	=	Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q	=	Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R	=	Surrogates Recovery Noncompliance
S	=	Pesticide/PCB Resolution
T	=	% Breakdown Noncompliance for DDT and Endrin
U	=	RPD between columns/detectors >40% for positive results determined via GC/HPLC
V	=	Non-linear calibrations; correlation coefficient $r < 0.995$
W	=	EMPC result
X	=	Signal to noise response drop
Y	=	Percent solids <30%
Z	=	Uncertainty at 2 sigma deviation is less than sample activity
Z1	=	Tentatively Identified Compound considered presumptively present
Z2	=	Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: 240-10925-1	LAB_ID	240-10925-5			240-10925-6			240-10925-3			240-10925-2		
FRACTION: M	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.15	J	P	0.13	U		1.3	U	
ARSENIC		6.3			16			2.6	J	P	20		
BARIUM		13			16			22			15	B	A
BERYLLIUM		0.48	J	P	0.2	U		3.3			6.5		
CADMIUM		1000			180			130			70		
CHROMIUM		130			29			4.2			90		
COBALT		49			33			100			150		
COPPER		11			16			40			66		
LEAD		0.46	J	CP	1.5	J	C	2.4			6.4	J	CP
MERCURY		0.2			0.87			0.12	U		0.31		
MOLYBDENUM		1.3	B	A	0.3	B	A	0.25	B	A	3.2	J	P
NICKEL		150			42			58			120		
SELENIUM		4.6	J	P	2.3	J	P	2.8	J	P	25		
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.34	B	A	0.21	B	A	0.45	B	A	1.4	U	
TUNGSTEN		0.37	U		0.37	U		0.37	U		3.7	U	
VANADIUM		0.44	U		3.4	J	P	1.4	J	P	10	J	P
ZINC		440			170			170			330		

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			MSA-MW32S-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-7		
FRACTION: M	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.2	J	P	0.13	U	
ARSENIC		6.6			7		
BARIUM		16			30		
BERYLLIUM		0.6	J	P	0.92	J	P
CADMIUM		0.13	U		0.19	J	P
CHROMIUM		3.5			3.3		
COBALT		9.7			120		
COPPER		7.8			1.4	B	A
LEAD		0.48	J	CP	0.97	J	CP
MERCURY		0.12	U		0.12	U	
MOLYBDENUM		0.74	B	A	0.41	B	A
NICKEL		17			45		
SELENIUM		1.8	J	P	4.2	J	P
SILVER		0.08	U		0.08	U	
THALLIUM		0.48	B	A	0.14	U	
TUNGSTEN		0.69	B	A	0.37	U	
VANADIUM		1.8	J	P	6.1	J	P
ZINC		45			380		

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: 240-10925-1	LAB_ID	240-10925-5			240-10925-6			240-10925-3			240-10925-2		
FRACTION: MF	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.13	U		1.3	U	
ARSENIC		6.6			11			2.4	J	P	19		
BARIUM		13			16			22			11	B	A
BERYLLIUM		0.46	J	P	0.2	U		3.2			6.7		
CADMIUM		1100			170			120			72		
CHROMIUM		86			9.9			1.6	J	P	17		
COBALT		51			35			100			160		
COPPER		9.6			9.5			38			37		
LEAD		0.46	J	CP	0.62	J	CP	2.3			5.6	J	CP
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.2	B	A	0.15	B	A	0.22	B	A	0.74	B	A
NICKEL		150			43			57			120		
SELENIUM		5			2	J	P	2.6	J	P	26		
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.28	B	A	0.19	B	A	0.4	B	A	1.6	B	A
TUNGSTEN		0.37	U		0.37	U		0.37	U		3.7	U	
VANADIUM		0.44	U		0.44	U		1.6	J	P	2.5	J	P
ZINC		460			160			170			330		

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			MSA-MW32S-050212		
SDG: 240-10925-1	LAB_ID	240-10925-1			240-10925-7		
FRACTION: MF	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U	
ARSENIC		5.4			6.6		
BARIUM		17			28		
BERYLLIUM		0.57	J	P	1		
CADMIUM		0.13	U		0.13	U	
CHROMIUM		1.4	J	P	2.1		
COBALT		9.7			130		
COPPER		1.8	B	A	0.33	B	A
LEAD		0.5	J	CP	0.18	U	
MERCURY		0.12	U		0.12	U	
MOLYBDENUM		0.36	B	A	0.28	B	A
NICKEL		18			49		
SELENIUM		1.6	J	P	4.3	J	P
SILVER		0.08	U		0.08	U	
THALLIUM		0.22	B	A	0.14	U	
TUNGSTEN		0.37	U		0.37	U	
VANADIUM		1	J	P	3.4	J	P
ZINC		52			240		

APPENDIX B

RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW1A-050212 Lab Sample ID: 240-10925-5

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 10:16

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	6.3	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	13	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.48	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1000	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	130	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	49	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	11	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.46	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	1.3	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	150	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	4.6	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.34	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	440	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW1B-050212 Lab Sample ID: 240-10925-6

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 11:15

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.15	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	16	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	16	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	180	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	29	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	33	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	16	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.5	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.30	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	42	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.3	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.21	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	3.4	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	170	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW8D-050212 Lab Sample ID: 240-10925-3

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 13:45

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	2.6	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	22	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	3.3	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	130	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	4.2	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	100	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	40	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.4	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.25	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	58	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.8	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.45	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	1.4	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	170	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW8I-050212 Lab Sample ID: 240-10925-2

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 12:40

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	20	20	1.3	ug/L	U		10	6020
7440-38-2	Arsenic	20	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	15	50	1.9	ug/L	J	B	10	6020
7440-41-7	Beryllium	6.5	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	70	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	90	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	150	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	66	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	6.4	10	1.8	ug/L	J		10	6020
7439-98-7	Molybdenum	3.2	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	120	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	25	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	20	20	1.4	ug/L	U		10	6020
7440-33-7	Tungsten	100	100	3.7	ug/L	U		10	6020
7440-62-2	Vanadium	10	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	330	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW8S-050212 Lab Sample ID: 240-10925-1

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 10:50

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.20	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	6.6	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	16	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.60	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	3.5	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	9.7	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	7.8	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.48	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.74	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	17	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	1.8	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.48	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	0.69	10	0.37	ug/L	J		1	6020
7440-62-2	Vanadium	1.8	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	45	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-MW32S-050212 Lab Sample ID: 240-10925-7

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 13:18

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	7.0	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	30	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.92	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.19	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	3.3	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	120	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.4	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.97	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.41	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	45	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	4.2	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	6.1	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	380	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW1A-050212 Lab Sample ID: 240-10925-5

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 10:16

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	6.6	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	13	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.46	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1100	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	86	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	51	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	9.6	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.46	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.20	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	150	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.28	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	460	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW1B-050212 Lab Sample ID: 240-10925-6

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 11:15

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	11	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	16	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	170	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	9.9	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	35	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	9.5	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.62	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.15	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	43	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.0	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.19	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	160	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW8D-050212 Lab Sample ID: 240-10925-3

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 13:45

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	2.4	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	22	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	3.2	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	120	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	1.6	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	100	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	38	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.3	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.22	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	57	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.6	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.40	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	1.6	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	170	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW8I-050212 Lab Sample ID: 240-10925-2

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 12:40

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	20	20	1.3	ug/L	U		10	6020
7440-38-2	Arsenic	19	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	11	50	1.9	ug/L	J	B	10	6020
7440-41-7	Beryllium	6.7	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	72	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	17	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	160	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	37	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	5.6	10	1.8	ug/L	J		10	6020
7439-98-7	Molybdenum	0.74	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	120	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	26	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	1.6	20	1.4	ug/L	J		10	6020
7440-62-2	Vanadium	2.5	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	330	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	100	100	3.7	ug/L	U		10	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW8S-050212 Lab Sample ID: 240-10925-1

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 10:50

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	5.4	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	17	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.57	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	1.4	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	9.7	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.8	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.50	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.36	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	18	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	1.6	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.22	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	1.0	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	52	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-MW32S-050212 Lab Sample ID: 240-10925-7

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 13:18

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	6.6	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	28	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.1	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	130	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.33	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.28	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	49	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	4.3	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	3.4	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	240	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW1A-050212 Lab Sample ID: 240-10925-5

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 10:16

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW1B-050212 Lab Sample ID: 240-10925-6

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 11:15

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.87	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW8S-050212 Lab Sample ID: 240-10925-1

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 10:50

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW8I-050212 Lab Sample ID: 240-10925-2

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 12:40

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.31	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW8D-050212 Lab Sample ID: 240-10925-3

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 13:45

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-MW32S-050212 Lab Sample ID: 240-10925-7

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG ID.:

Matrix: Water Date Sampled: 05/02/2012 13:18

Reporting Basis: WET Date Received: 05/03/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

APPENDIX C

SUPPORT DOCUMENTATION

Chain of Custody Record

TestAmerica

THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Aparicio	Site Contact: Stu Cameron	Lab Contact:	COC No: 006082
Address: 20251 Century Blvd Ste 240	Telephone: (301)528-5552	Telephone: (703)342-8384	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Aparicio@tetratech.com	Analysis Turnaround Time (in BUS days)		Analyses
Phone: (301)528-5552		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MSA GW Sampling	Method of Shipment/Carrier:			
Project Number: 112I(04021-03	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs	Total Metals	Dissolved Metals	1,4-Dioxane	Perchlorate	TPH GRO	TPH DRO	Sample Specific Notes / Special Instructions:
MSA-DMW8S-050212	5/2/12	1050		X					2	5			5				X	X	X	X	X	X	X	
MSA-DMW8I-050212		1240		X					2	3			3				X	X	X	X	X			
MSA-DMW8D-050212		1345		X					2	3			3				X	X	X	X	X			
TB-050212	↓	—		X						2							X							
MSA-DMW1A-050212		1016		X					2	3			3				X	X	X	X	X			
MSA-DMW1B-050212		1115		X					2	3			3				X	X	X	X	X			
MSA-MW32S-050212	↓	1318		X					2	5			5				X	X	X	X	X	X		

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For ____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	1503 / 5/2/12	[signature]	TestAmerica	5/2/12 / 1504
Relinquished by: [signature]	Company: TestAmerica	Date/Time: 1700 / 5/2/12	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TAL	Date/Time: 5/3/12 915

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TAL 0018-1 (04/10)

05/30/2012

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10925-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/03/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.4 and 3.0 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), TB-050212 (240-10925-4), MSA-DMW1A-050212 (240-10925-5) and MSA-DMW1B-050212 (240-10925-6) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/10/2012 and 05/11/2012.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43549/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43737/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

2-Butanone and 2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10837-5 in batch 240-43549.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-11065-2 in batch 240-43737.

Refer to the QC report for details.

Samples MSA-DMW8I-050212 (240-10925-2)[16.67X], MSA-DMW8D-050212 (240-10925-3)[16.67X], MSA-DMW1A-050212 (240-10925-5)[100X] and MSA-DMW1B-050212 (240-10925-6)[76.92X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/05/2012 and 05/07/2012 and analyzed on 05/08/2012, 05/09/2012 and 05/10/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2,4,6-Tribromophenol (Surr) failed the surrogate recovery criteria high for MSA-DMW1A-050212 (240-10925-5).

1,4-Dioxane failed the recovery criteria low for the MS/MSD of sample 240-10842-8 in batch 240-43665. 1,4-Dioxane exceeded the rpd limit.

Refer to the QC report for details.

Sample MSA-DMW1A-050212 (240-10925-5)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following sample contained one acid and/or one base surrogate outside acceptance limits: MSA-DMW1A-050212 (240-10925-5). The laboratory's SOP allows one acid surrogate and/or one base surrogate to be outside acceptance limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Samples MSA-DMW8S-050212 (240-10925-1) and MSA-MW32S-050212 (240-10925-7) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/07/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-42995/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples MSA-DMW8S-050212 (240-10925-1) and MSA-MW32S-050212 (240-10925-7) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/04/2012 and analyzed on 05/07/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

No difficulties were encountered during the DRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/10/2012 and analyzed on 05/11/2012.

The following sample was diluted due to the nature of the sample matrix: MSA-DMW8I-050212 (240-10925-2). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/10/2012 and analyzed on 05/11/2012.

Several analytes were detected in method blank MB 240-43497/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The following sample was diluted due to the nature of the sample matrix: MSA-DMW8I-050212 (240-10925-2). Elevated reporting limits

(RLs) are provided.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/07/2012 and 05/11/2012 and analyzed on 05/08/2012 and 05/15/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-DMW8S-050212 (240-10925-1), MSA-DMW8I-050212 (240-10925-2), MSA-DMW8D-050212 (240-10925-3), MSA-DMW1A-050212 (240-10925-5), MSA-DMW1B-050212 (240-10925-6) and MSA-MW32S-050212 (240-10925-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/07/2012 and 05/11/2012 and analyzed on 05/08/2012 and 05/15/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

MSA-DMW1A-050212

240-10925-e-5-a, 5/11/2012 10:00:08 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		96.652%	0.462	M 380.700
%RSD		14.336	7.430	M 7.748
Run	**Time**	**23Na**	**25Mg**	**27Al**
		ppb	ppb	ppb
x		T 57980.000	25690.000	834.300
%RSD		T 1.476	0.926	1.914
Run	**Time**	**35Cl**	**39K**	**43Ca**
		ppb	ppb	ppb
x		T 0.000	T 15940.000	23380.000
%RSD		T 0.000	T 0.309	1.003
Run	**Time**	**45Sc**	**45Sc**	**47Ti**
		ppb	ppb	ppb
x		T 94.528%	93.091%	0.195
%RSD		T 8.489	0.221	68.910
Run	**Time**	**51V**	**52Cr**	**53Cr O**
		ppb	ppb	ppb
x		-3.073	86.090	14.610
%RSD		9.333	0.679	12.490
Run	**Time**	**55Mn**	**56Fe**	**59Co**
		ppb	ppb	ppb
x		TM 2820.000	T 13000.000	50.530
%RSD		TM 2.444	T 1.305	1.091
Run	**Time**	**60Ni**	**65Cu**	**66Zn**
		ppb	ppb	ppb
x		149.800	9.647	M 462.900
%RSD		0.742	2.228	M 0.383
Run	**Time**	**72Ge**	**75As**	**77Ar Cl**
		ppb	ppb	ppb
x		93.574%	6.594	0.860
%RSD		1.129	2.031	16.260
Run	**Time**	**78Se**	**88Sr**	**95Mo**
		ppb	ppb	ppb
x		4.980	133.600	0.203
%RSD		9.726	0.587	10.070
Run	**Time**	**105Pd**	**107Ag**	**108Mo O**
		ppb	ppb	ppb
x		0.000	0.006	603.700
%RSD		0.000	39.690	25.700
Run	**Time**	**111Cd**	**115In**	**118Sn**
		ppb	ppb	ppb
x		M 1073.000	93.365%	0.011
%RSD		M 0.518	0.462	82.270
Run	**Time**	**121Sb**	**137Ba**	**159Tb**
		ppb	ppb	ppb
x		0.068	13.050	0.000
%RSD		7.490	2.763	0.000
Run	**Time**	**165Ho**	**182W**	**205Tl**
		ppb	ppb	ppb
x		110.047%	0.236	0.281
%RSD		0.883	4.523	3.805
Run	**Time**	**208Pb**	**209Bi**	
		ppb	ppb	
x		0.455	0.000	
%RSD		1.214	0.000	

1073 ug/L reported as 1100 ug/L

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 10925

Client Tetra Tech Site Name _____ By: [signature] (Signature)

Cooler Received on 5/3/12 Opened on 5/3/12

FedEx: 1st Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box Other Mult

Packing material used: Bubble Wrap Foam Plastic Bag None Other _____

COOLANT: Wet Ice Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C
IR GUN# 4G	(CF -1°C)	Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C
IR GUN# 5G	(CF -1°C)	Observed Sample Temp. 4.0 °C	Corrected Sample Temp. 3.0 °C
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp. ____ °C	Corrected Sample Temp. ____ °C

☒ Multiple on Back

MJ 5/3

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 2 Yes No
   - Were custody seals on the outside of the cooler(s) signed & dated? Yes No NA
   - Were custody seals on the bottle(s)? Yes No
3. Shippers' packing slip attached to the cooler(s)? Yes No
4. ~~Did custody papers accompany the sample(s)?~~ Yes No
5. Were the custody papers relinquished & signed in the appropriate place? Yes No
6. Did all bottles arrive in good condition (Unbroken)? MJ 5/3 Yes No
7. Could all bottle labels be reconciled with the COC? Yes No
8. Were correct bottle(s) used for the test(s) indicated? Yes No
9. Sufficient quantity received to perform indicated analyses? Yes No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? Yes No
12. Were air bubbles >6 mm in any VOA vials? Yes No NA
13. Was a trip blank present in the cooler(s)? Yes No

Contacted PM PJO Date 5-3-12 by NS via Verbal Voice Mail Other

Concerning #14+15

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

per PM broken vials listed below, will only log for GRO, client to possibly resample VOC's.

COC not marked for DRO on MW32S @1318. but did recieve volume, will log per PM.

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) 3 x 40mL sample MSA-MW32S-050212 were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

05/30/2012
SOP: NC-SC-0005, Sample Receiving
N:\QAQC\NARRATIVE\TestAmerica\Cooler Receipt TestAmerica\COOLER_TestAmerica_Rev 83_032612 jcs.doc

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)?

Client ID	pH	Date	Initials
8S	<2 <2	5/3/12	AL
8I	<2 <2		
8D	<2 <2		
1A	<2 <2		
1B	<2 <2		
325	<2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client	4.0	3.0	5G	ice
client	3.4	2.4	1	1

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10925-1

Login Number: 10925
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	False	MW32S not marked for TPH DRO on COC.
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	False	# VOC vials rec'd broken for MW32S.
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

HOLDTIME

SDG 240-10925-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HG	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HG	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HG	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/7/2012	5/8/2012	5	1	6
HG	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/7/2012	5/8/2012	5	1	6
HG	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
M	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
M	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
M	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
M	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
M	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
M	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
HGF	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HGF	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HGF	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/7/2012	5/8/2012	5	1	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HGF	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/11/2012	5/15/2012	9	4	13
HGF	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/7/2012	5/8/2012	5	1	6
MF	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
MF	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/10/2012	5/11/2012	8	1	9
PCL	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
PCL	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/10/2012	5/19/2012	8	9	17
OS	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/5/2012	5/8/2012	3	3	6
OS	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/5/2012	5/8/2012	3	3	6
OS	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/5/2012	5/8/2012	3	3	6

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/7/2012	5/10/2012	5	3	8
OS	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/5/2012	5/9/2012	3	4	7
OS	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/7/2012	5/10/2012	5	3	8
OV	UG/L	MSA-DMW8D-050212	240-10925-3	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	TB-050212	240-10925-4	TB	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	TB-050212	240-10925-4	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	MSA-DMW8I-050212	240-10925-2	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	MSA-DMW1B-050212	240-10925-6	NM	5/2/2012	5/11/2012	5/11/2012	9	0	9
OV	UG/L	MSA-DMW1A-050212	240-10925-5	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
OV	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/10/2012	5/10/2012	8	0	8
DRO	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/4/2012	5/7/2012	2	3	5
DRO	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/4/2012	5/7/2012	2	3	5
GRO	UG/L	MSA-MW32S-050212	240-10925-7	NM	5/2/2012	5/7/2012	5/7/2012	5	0	5
GRO	UG/L	MSA-DMW8S-050212	240-10925-1	NM	5/2/2012	5/7/2012	5/7/2012	5	0	5

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10925-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10925-1

SDG No.:

Instrument ID: I8 Date: 05/03/2012 17:05

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Antimony		1000	6020
Arsenic		10000	6020
Barium		10000	6020
Beryllium		10000	6020
Cadmium		10000	6020
Chromium		10000	6020
Cobalt		10000	6020
Copper		10000	6020
Lead		10000	6020
Molybdenum		1500	6020
Nickel		10000	6020
Selenium		10000	6020
Silver		1000	6020
Thallium		10000	6020
Vanadium		5000	6020
Tungsten		1000	6020
Zinc		10000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10925-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43054/1-A	05/07/2012 14:15	43054		100	100
LCS 240-43054/2-A	05/07/2012 14:15	43054		100	100
240-10837-N-5-B DU	05/07/2012 14:15	43054		100	100
240-10837-N-5-C MS	05/07/2012 14:15	43054		100	100
240-10837-M-5-B DU	05/07/2012 14:15	43054		100	100
240-10837-M-5-C MS	05/07/2012 14:15	43054		100	100
240-10925-1	05/07/2012 14:15	43054		100	100
240-10925-2	05/07/2012 14:15	43054		100	100
240-10925-1	05/07/2012 14:15	43054		100	100
240-10925-2	05/07/2012 14:15	43054		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43054/1-A

Instrument Code: H4 Batch No.: 43362

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-10837-N-5-C MS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.04		0.20	U	1.00	104	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10837-M-5-C MS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.921		0.12	J	1.00	92	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

6-IN
DUPLICATES
METALS

Client ID: _____ Lab ID: 240-10837-N-5-B DU

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATES
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-10837-M-5-B DU

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.12	J	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-43054/2-A

Lab Name: TestAmerica Canton Job No.: 240-10925-1

Sample Matrix: Water LCS Source: MTHGICVW_00291

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.81		96	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43597/1-A	05/11/2012 14:50	43597		100	100
LCS 240-43597/2-A	05/11/2012 14:50	43597		100	100
240-11146-C-1-B MS	05/11/2012 14:50	43597		100	100
240-11146-C-1-C MSD	05/11/2012 14:50	43597		100	100
240-10925-3	05/11/2012 14:50	43597		100	100
240-10925-5	05/11/2012 14:50	43597		100	100
240-10925-6	05/11/2012 14:50	43597		100	100
240-10925-7	05/11/2012 14:50	43597		100	100
240-10925-3	05/11/2012 14:50	43597		100	100
240-10925-5	05/11/2012 14:50	43597		100	100
240-10925-6	05/11/2012 14:50	43597		100	100
240-10925-7	05/11/2012 14:50	43597		100	100

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43597/1-A

Instrument Code: H4 Batch No.: 44211

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-11146-C-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.00		0.20	U	1.00	100	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-11146-C-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.915	1.00	91	69-134	9	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-43597/2-A

Lab Name: TestAmerica Canton Job No.: 240-10925-1

Sample Matrix: Water LCS Source: MTHGICVW_00295

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.79		96	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43497/1-A	05/10/2012 08:52	43497		50	50
LCS 240-43497/2-A	05/10/2012 08:52	43497		50	50
240-10925-1	05/10/2012 08:52	43497		50	50
240-10925-1 MS	05/10/2012 08:52	43497		50	50
240-10925-1 MSD	05/10/2012 08:52	43497		50	50
240-10925-1	05/10/2012 08:52	43497		50	50
240-10925-2	05/10/2012 08:52	43497		50	50
240-10925-2	05/10/2012 08:52	43497		50	50
240-10925-3	05/10/2012 08:52	43497		50	50
240-10925-3	05/10/2012 08:52	43497		50	50
240-10925-5	05/10/2012 08:52	43497		50	50
240-10925-5	05/10/2012 08:52	43497		50	50
240-10925-6	05/10/2012 08:52	43497		50	50
240-10925-6	05/10/2012 08:52	43497		50	50
240-10925-7	05/10/2012 08:52	43497		50	50
240-10925-7	05/10/2012 08:52	43497		50	50

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43497/1-A

Instrument Code: I8 Batch No.: 43857

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.940	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.642	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.153	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	3.41	J		6020

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MSA-DMW8S-050212 MS
Lab ID: 240-10925-1 MS
Lab Name: TestAmerica Canton
Job No.: 240-10925-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	97.1		0.20	J	100	97	44-153		6020
Arsenic	1000		6.6		1000	99	82-123		6020
Barium	960		16		1000	94	45-144		6020
Beryllium	970		0.60	J	1000	97	77-124		6020
Cadmium	967		1.0	U	1000	97	78-117		6020
Chromium	968		3.5		1000	96	72-110		6020
Cobalt	968		9.7		1000	96	67-114		6020
Copper	963		7.8		1000	96	60-123		6020
Lead	912		0.48	J	1000	91	73-115		6020
Molybdenum	97.8		0.74	J	100	97	80-110		6020
Nickel	973		17		1000	96	72-111		6020
Selenium	983		1.8	J	1000	98	72-148		6020
Silver	97.1		1.0	U	100	97	10-139		6020
Thallium	234		0.48	J	250	93	69-117		6020
Vanadium	965		1.8	J	1000	96	70-112		6020
Tungsten	92.0		0.69	J	100	91	43-133		6020
Zinc	1010		45		1000	96	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MSA-DMW8S-050212 MSD | Lab ID: 240-10925-1 MSD

Lab Name: TestAmerica Canton | Job No.: 240-10925-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	93.5	100	93	44-153	4	20		6020
Arsenic	970	1000	96	82-123	3	20		6020
Barium	932	1000	92	45-144	3	20		6020
Beryllium	933	1000	93	77-124	4	20		6020
Cadmium	933	1000	93	78-117	4	20		6020
Chromium	937	1000	93	72-110	3	20		6020
Cobalt	940	1000	93	67-114	3	20		6020
Copper	934	1000	93	60-123	3	20		6020
Lead	885	1000	88	73-115	3	20		6020
Molybdenum	93.9	100	93	80-110	4	20		6020
Nickel	942	1000	93	72-111	3	20		6020
Selenium	951	1000	95	72-148	3	20		6020
Silver	93.4	100	93	10-139	4	20		6020
Thallium	226	250	90	69-117	3	20		6020
Vanadium	933	1000	93	70-112	3	20		6020
Tungsten	88.9	100	88	43-133	3	20		6020
Zinc	980	1000	94	49-156	3	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-43497/2-A

Lab Name: TestAmerica Canton Job No.: 240-10925-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	90.4		90	80	120		6020
Arsenic	1000	917		92	80	120		6020
Barium	1000	896		90	80	120		6020
Beryllium	1000	857		86	80	120		6020
Cadmium	1000	926		93	80	120		6020
Chromium	1000	919		92	80	120		6020
Cobalt	1000	915		92	80	120		6020
Copper	1000	951		95	80	120		6020
Lead	1000	934		93	80	120		6020
Molybdenum	100	87.8		88	80	120		6020
Nickel	1000	929		93	80	120		6020
Selenium	1000	929		93	80	120		6020
Silver	100	94.3		94	80	120		6020
Thallium	250	234		94	80	120		6020
Vanadium	1000	900		90	80	120		6020
Tungsten	100	88.1		88	80	120		6020
Zinc	1000	969		97	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-10925-1

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10925-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.20	J	10	U	NC		6020
Arsenic	6.6		7.29	J	NC		6020
Barium	16		16.0	J	NC	OK D	6020
Beryllium	0.60	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Chromium	3.5		3.88	J	NC		6020
Cobalt	9.7		9.88		NC	1.8 OK	6020
Copper	7.8		8.14	J	NC		6020
Lead	0.48	J	5.0	U	NC		6020
Molybdenum	0.74	J	1.32	J	NC		6020
Nickel	17		18.6		NC	9.4 OK	6020
Selenium	1.8	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.48	J	1.16	J	NC		6020
Vanadium	1.8	J	2.40	J	NC		6020
Tungsten	0.69	J	50	U	NC		6020
Zinc	45		48.8	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/08/2012 14:30 End Date: 05/08/2012 17:03

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-43145/1-A			14:30	X																				
IC 240-43145/2-A			14:33	X																				
IC 240-43145/3-A			14:35	X																				
IC 240-43145/4-A			14:37	X																				
IC 240-43145/5-A			14:39	X																				
IC 240-43145/6-A			14:41	X																				
ICV 240-43145/7-A	1		14:43	X																				
ICB 240-43145/8-A	1		14:45	X																				
CRA 240-43145/9-A	1		14:47	X																				
CCVL 240-43145/10-A	1		14:49	X																				
CCB 240-43145/11-A			14:51																					
ZZZZZZ			14:53																					
ZZZZZZ			14:55																					
ZZZZZZ			14:57																					
ZZZZZZ			15:00																					
ZZZZZZ			15:01																					
ZZZZZZ			15:04																					
ZZZZZZ			15:06																					
ZZZZZZ			15:08																					
ZZZZZZ			15:09																					
ZZZZZZ			15:12																					
CCV 240-43145/12-A			15:13																					
CCB 240-43145/11-A			15:15																					
ZZZZZZ			15:18																					
ZZZZZZ			15:20																					
ZZZZZZ			15:22																					
ZZZZZZ			15:23																					
ZZZZZZ			15:25																					
ZZZZZZ			15:28																					
ZZZZZZ			15:30																					
ZZZZZZ			15:32																					
ZZZZZZ			15:34																					
ZZZZZZ			15:36																					
CCV 240-43145/12-A	1		15:39	X																				
CCB 240-43145/11-A	1		15:40	X																				
ZZZZZZ			15:42																					
ZZZZZZ			15:45																					
ZZZZZZ			15:47																					
ZZZZZZ			15:49																					
MB 240-43054/1-A	1	T	15:51	X																				
LCS 240-43054/2-A	1	T	15:54	X																				
ZZZZZZ			15:56																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/08/2012 14:30 End Date: 05/08/2012 17:03

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
240-10837-N-5-B DU	1	T	15:58	X																				
240-10837-N-5-C MS	1	T	16:00	X																				
ZZZZZZ			16:02																					
CCV 240-43145/12-A	1		16:04	X																				
CCB 240-43145/11-A	1		16:06	X																				
240-10837-M-5-B DU	1	D	16:08	X																				
240-10837-M-5-C MS	1	D	16:10	X																				
ZZZZZZ			16:13																					
ZZZZZZ			16:15																					
ZZZZZZ			16:16																					
ZZZZZZ			16:19																					
ZZZZZZ			16:21																					
ZZZZZZ			16:23																					
ZZZZZZ			16:25																					
240-10925-1	1	T	16:27	X																				
CCV 240-43145/12-A	1		16:29	X																				
CCB 240-43145/11-A	1		16:31	X																				
240-10925-2	1	T	16:33	X																				
ZZZZZZ			16:35																					
ZZZZZZ			16:37																					
ZZZZZZ			16:39																					
ZZZZZZ			16:41																					
ZZZZZZ			16:43																					
ZZZZZZ			16:45																					
ZZZZZZ			16:48																					
240-10925-2	1	D	16:50	X																				
240-10925-1	1	D	16:52	X																				
CCV 240-43145/12-A	1		16:55	X																				
CCB 240-43145/11-A	1		16:57	X																				
CRA 240-43145/9-A			16:59																					
CCV 240-43145/12-A			17:01																					
CCB 240-43145/11-A			17:03																					

Prep Types
D = Dissolved
T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICV Source: MTHGICVW_00292 Concentration Units: ug/L

CCV Source: MTHGCALW_00190

Analyte	ICV 240-43145/7-A 05/08/2012 14:43				CCVL 240-43145/10-A 05/08/2012 14:49				CCV 240-43145/12-A 05/08/2012 15:39			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.43		2.50	97	5.20		5.00	104	5.32		5.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICV Source: MTHGICVW_00292 Concentration Units: ug/L

CCV Source: MTHGCALW_00190

Analyte	CCV 240-43145/12-A 05/08/2012 16:04				CCV 240-43145/12-A 05/08/2012 16:29				CCV 240-43145/12-A 05/08/2012 16:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.31		5.00	106	5.11		5.00	102	5.12		5.00	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-43145/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00190

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.224		112	50-150

Lab Sample ID: CRA 240-43898/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00193

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.236		118	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-43145/8-A 05/08/2012 14:45		CCB 240-43145/11-A 05/08/2012 15:40		CCB 240-43145/11-A 05/08/2012 16:06		CCB 240-43145/11-A 05/08/2012 16:31	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-43145/11-A 05/08/2012 16:57							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-43898/1-A			10:13	X																				
IC 240-43898/2-A			10:15	X																				
IC 240-43898/3-A			10:17	X																				
IC 240-43898/4-A			10:19	X																				
IC 240-43898/5-A			10:21	X																				
IC 240-43898/6-A			10:23	X																				
ICV 240-43898/7-A	1		10:25	X																				
ICB 240-43898/8-A	1		10:27	X																				
CRA 240-43898/9-A	1		10:28	X																				
CCVL 240-43898/10-A	1		10:30	X																				
CCB 240-43898/11-A			10:33																					
ZZZZZZ			10:35																					
ZZZZZZ			10:36																					
ZZZZZZ			10:38																					
ZZZZZZ			10:40																					
ZZZZZZ			10:43																					
ZZZZZZ			10:44																					
ZZZZZZ			10:47																					
ZZZZZZ			10:49																					
ZZZZZZ			10:51																					
ZZZZZZ			10:53																					
CCV 240-43898/12-A			10:55																					
CCB 240-43898/11-A			10:57																					
ZZZZZZ			10:59																					
ZZZZZZ			11:01																					
ZZZZZZ			11:03																					
ZZZZZZ			11:05																					
ZZZZZZ			11:07																					
ZZZZZZ			11:09																					
ZZZZZZ			11:10																					
ZZZZZZ			11:12																					
ZZZZZZ			11:14																					
ZZZZZZ			11:16																					
CCV 240-43898/12-A			11:18																					
CCB 240-43898/11-A			11:20																					
ZZZZZZ			11:22																					
ZZZZZZ			11:24																					
ZZZZZZ			11:26																					
ZZZZZZ			11:28																					
ZZZZZZ			11:30																					
ZZZZZZ			11:31																					
ZZZZZZ			11:34																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			11:37	
ZZZZZZ			11:39	
ZZZZZZ			11:41	
CCV 240-43898/12-A			11:43	
CCB 240-43898/11-A			11:45	
ZZZZZZ			11:47	
ZZZZZZ			11:49	
ZZZZZZ			11:51	
ZZZZZZ			11:53	
ZZZZZZ			11:54	
ZZZZZZ			11:56	
ZZZZZZ			11:58	
ZZZZZZ			12:00	
ZZZZZZ			12:02	
ZZZZZZ			12:04	
CCV 240-43898/12-A	1		12:06	X
CCB 240-43898/11-A	1		12:09	X
MB 240-43597/1-A	1	T	12:10	X
LCS 240-43597/2-A	1	T	12:13	X
ZZZZZZ			12:14	
240-11146-C-1-B MS	1	T	12:16	X
240-11146-C-1-C MSD	1	T	12:18	X
ZZZZZZ			12:20	
240-10925-3	1	T	12:23	X
240-10925-5	1	T	12:24	X
240-10925-6	1	T	12:26	X
240-10925-7	1	T	12:29	X
CCV 240-43898/12-A	1		12:31	X
CCB 240-43898/11-A	1		12:33	X
ZZZZZZ			12:35	
ZZZZZZ			12:37	
ZZZZZZ			12:39	
ZZZZZZ			12:41	
ZZZZZZ			12:43	
240-10925-3	1	D	12:45	X
240-10925-5	1	D	12:47	X
240-10925-6	1	D	12:49	X
240-10925-7	1	D	12:51	X
ZZZZZZ			12:54	
CCV 240-43898/12-A	1		12:57	X
CCB 240-43898/11-A	1		12:59	X
ZZZZZZ			13:01	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			13:03																					
ZZZZZZ			13:05																					
ZZZZZZ			13:07																					
ZZZZZZ			13:09																					
ZZZZZZ			13:11																					
ZZZZZZ			13:14																					
ZZZZZZ			13:15																					
ZZZZZZ			13:18																					
ZZZZZZ			13:19																					
CCV 240-43898/12-A			13:22																					
CCB 240-43898/11-A			13:24																					
ZZZZZZ			13:26																					
ZZZZZZ			13:28																					
ZZZZZZ			13:29																					
ZZZZZZ			13:31																					
ZZZZZZ			13:33																					
ZZZZZZ			13:35																					
ZZZZZZ			13:37																					
ZZZZZZ			13:39																					
ZZZZZZ			13:41																					
ZZZZZZ			13:44																					
CCV 240-43898/12-A			13:46																					
CCB 240-43898/11-A			13:47																					
ZZZZZZ			13:49																					
ZZZZZZ			13:51																					
ZZZZZZ			13:53																					
ZZZZZZ			13:55																					
ZZZZZZ			13:57																					
ZZZZZZ			13:59																					
ZZZZZZ			14:01																					
ZZZZZZ			14:03																					
CCV 240-43898/12-A			14:05																					
CCB 240-43898/11-A			14:07																					
CCV 240-43898/12-A			16:01																					
CCB 240-43898/11-A			16:03																					
ZZZZZZ			16:05																					
ZZZZZZ			16:08																					
ZZZZZZ			16:10																					
ZZZZZZ			16:12																					
ZZZZZZ			16:14																					
ZZZZZZ			16:16																					
ZZZZZZ			16:18																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			16:20																					
ZZZZZZ			16:22																					
ZZZZZZ			16:24																					
CCV 240-43898/12-A			16:26																					
CCB 240-43898/11-A			16:28																					
ZZZZZZ			16:30																					
ZZZZZZ			16:32																					
ZZZZZZ			16:35																					
ZZZZZZ			16:37																					
ZZZZZZ			16:39																					
ZZZZZZ			16:41																					
ZZZZZZ			16:43																					
ZZZZZZ			16:45																					
ZZZZZZ			16:47																					
ZZZZZZ			16:49																					
CCV 240-43898/12-A			16:51																					
CCB 240-43898/11-A			16:54																					
ZZZZZZ			16:56																					
ZZZZZZ			16:58																					
ZZZZZZ			17:00																					
ZZZZZZ			17:02																					
ZZZZZZ			17:04																					
ZZZZZZ			17:06																					
CCV 240-43898/12-A			17:08																					
CCB 240-43898/11-A			17:10																					

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICV Source: MTHGICVW_00296 Concentration Units: ug/L

CCV Source: MTHGCALW_00193

Analyte	ICV 240-43898/7-A 05/15/2012 10:25				CCVL 240-43898/10-A 05/15/2012 10:30				CCV 240-43898/12-A 05/15/2012 12:06			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.37		2.50	95	5.22		5.00	104	5.38		5.00	108

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICV Source: MTHGICVW_00296 Concentration Units: ug/L

CCV Source: MTHGCALW_00193

Analyte	CCV 240-43898/12-A 05/15/2012 12:31				CCV 240-43898/12-A 05/15/2012 12:57							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.29		5.00	106	5.25		5.00	105				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-43898/8-A 05/15/2012 10:27		CCB 240-43898/11-A 05/15/2012 12:09		CCB 240-43898/11-A 05/15/2012 12:33		CCB 240-43898/11-A 05/15/2012 12:59	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/11/2012 05:49 End Date: 05/11/2012 14:51

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-43857/1			05:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-43857/2 IC	1		05:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-43857/3 IC	1		06:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-43857/4 IC	1		06:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-43857/5	1		06:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-43857/6	1		06:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-43857/7	1		06:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-43857/8	1		06:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-43857/9	1		06:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-43857/10			06:47																				
CCB 240-43857/11			06:54																				
ZZZZZZ			07:00																				
ZZZZZZ			07:05																				
ZZZZZZ			07:11																				
CCV 240-43857/15	1		07:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/16	1		07:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			07:30																				
ZZZZZZ			07:35																				
ZZZZZZ			07:41																				
ZZZZZZ			07:47																				
ZZZZZZ			07:52																				
ZZZZZZ			07:58																				
ZZZZZZ			08:04																				
ZZZZZZ			08:09																				
ZZZZZZ			08:15																				
MB 240-43497/1-A	1	R	08:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-43857/27	1		08:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/28	1		08:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-43497/2-A	1	R	08:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-1	1	R	08:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-1 SD	5	R	08:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-1 MS	1	R	08:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-1 MSD	1	R	09:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-2	1	D	09:13	X	X		X	X	X	X	X	X	X			X		X		X			
240-10925-2	1	R	09:18	X	X		X	X	X	X	X	X	X			X		X		X			
240-10925-1	1	D	09:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-3	1	R	09:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-3	1	D	09:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-43857/39	1		09:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/40	1		09:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-5	1	R	09:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-5	1	D	10:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/11/2012 05:49 End Date: 05/11/2012 14:51

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
240-10925-6	1	R	10:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-6	1	D	10:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-7	1	R	10:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-7	1	D	10:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:28																				
ZZZZZZ			10:33																				
ZZZZZZ			10:39																				
ZZZZZZ			10:45																				
CCV 240-43857/51	1		10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/52	1		10:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			11:03																				
ZZZZZZ			11:09																				
ZZZZZZ			11:15																				
ZZZZZZ			11:21																				
CCV 240-43857/57	1		11:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/58	1		11:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-2	10	D	11:39			X								X	X		X		X				
240-10925-2	10	R	11:45			X								X	X		X		X				
ZZZZZZ			11:51																				
ZZZZZZ			11:57																				
ZZZZZZ			12:04																				
ZZZZZZ			12:10																				
ZZZZZZ			12:15																				
ZZZZZZ			12:23																				
CCV 240-43857/67	1		12:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/68	1		12:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			12:43																				
ZZZZZZ			12:49																				
ZZZZZZ			12:54																				
ZZZZZZ			13:00																				
ZZZZZZ			13:06																				
ZZZZZZ			13:11																				
ZZZZZZ			13:17																				
ZZZZZZ			13:23																				
ZZZZZZ			13:28																				
ZZZZZZ			13:34																				
CCV 240-43857/79			13:40																				
CCB 240-43857/80			13:47																				
ZZZZZZ			13:53																				
ZZZZZZ			13:58																				
ZZZZZZ			14:04																				
ZZZZZZ			14:10																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/11/2012 05:49 End Date: 05/11/2012 14:51

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			14:15																					
ZZZZZZ			14:21																					
ZZZZZZ			14:27																					
ZZZZZZ			14:33																					
ZZZZZZ			14:38																					
CCV 240-43857/90			14:44																					
CCB 240-43857/91			14:51																					

Prep Types

D = Dissolved

R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	ICV 240-43857/5 05/11/2012 06:15				CCV 240-43857/15 X 05/11/2012 07:17				CCV 240-43857/27 05/11/2012 08:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	81.6		80.0	102	98.0		100	98	98.1		100	98
Arsenic	80.4		80.0	101	101		100	101	101		100	101
Barium	80.1		80.0	100	99.1		100	99	99.4		100	99
Beryllium	78.8		80.0	99	98.6		100	99	97.7		100	98
Cadmium	81.7		80.0	102	102		100	102	102		100	102
Chromium	80.4		80.0	100	100		100	100	101		100	101
Cobalt	81.1		80.0	101	101		100	101	101		100	101
Copper	82.5		80.0	103	103		100	103	103		100	103
Lead	84.4		80.0	106	105		100	105	105		100	105
Molybdenum	81.2		80.0	101	102		100	102	100		100	100
Nickel	82.8		80.0	104	102		100	102	102		100	102
Selenium	80.2		80.0	100	101		100	101	101		100	101
Silver	83.0		80.0	104	103		100	103	102		100	102
Thallium	84.2		80.0	105	106		100	106	105		100	105
Tungsten	80.3		80.0	100	102		100	102	101		100	101
Vanadium	80.1		80.0	100	99.5		100	100	100		100	100
Zinc	82.3		80.0	103	102		100	102	102		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	CCV 240-43857/39 05/11/2012 09:41				CCV 240-43857/51 05/11/2012 10:50				CCV 240-43857/57 05/11/2012 11:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	98.2		100	98	99.5		100	100	100		100	100
Arsenic	101		100	101	99.8		100	100	101		100	101
Barium	99.1		100	99	99.8		100	100	101		100	101
Beryllium	96.8		100	97	97.9		100	98	99.4		100	99
Cadmium	102		100	102	103		100	103	104		100	104
Chromium	100		100	100	101		100	101	102		100	102
Cobalt	101		100	101	102		100	102	102		100	102
Copper	102		100	102	102		100	102	103		100	103
Lead	106		100	106	107		100	107	106		100	106
Molybdenum	101		100	101	102		100	102	101		100	101
Nickel	102		100	102	102		100	102	102		100	102
Selenium	101		100	101	99.0		100	99	101		100	101
Silver	102		100	102	103		100	103	103		100	103
Thallium	107		100	107	106		100	106	105		100	105
Tungsten	102		100	102	102		100	102	102		100	102
Vanadium	100		100	100	99.9		100	100	101		100	101
Zinc	102		100	102	102		100	102	103		100	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	CCV 240-43857/67 05/11/2012 12:30											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	99.1		100	99								
Arsenic	100		100	100								
Barium	99.6		100	100								
Beryllium	96.7		100	97								
Cadmium	102		100	102								
Chromium	101		100	101								
Cobalt	101		100	101								
Copper	101		100	101								
Lead	106		100	106								
Molybdenum	101		100	101								
Nickel	101		100	101								
Selenium	101		100	101								
Silver	102		100	102								
Thallium	106		100	106								
Tungsten	102		100	102								
Vanadium	99.8		100	100								
Zinc	102		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-43857/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.90	J	95	50-150
Arsenic	2.00	1.97	J	99	50-150
Barium	1.00	0.883	J	88	50-150
Beryllium	1.00	0.973	J	97	50-150
Cadmium	0.500	0.471	J	94	50-150
Chromium	2.00	2.12		106	50-150
Cobalt	1.00	1.02		102	50-150
Copper	2.00	2.18		109	50-150
Lead	1.00	1.37		137	50-150
Molybdenum	10.0	9.62	J	96	50-150
Nickel	2.00	2.31		116	50-150
Selenium	2.00	2.11	J	106	50-150
Silver	0.500	0.521	J	104	50-150
Thallium	1.00	1.14	J	114	50-150
Vanadium	5.00	4.76	J	95	50-150
Tungsten	10.0	9.37	J	94	50-150
Zinc	10.0	9.70	J	97	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-43857/6 05/11/2012 06:23		CCB 240-43857/16 05/11/2012 07:24		CCB 240-43857/28 05/11/2012 08:34		CCB 240-43857/40 05/11/2012 09:48	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.540	J	0.784	J	0.519	J	0.515	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.317	J	0.280	J	0.267	J	0.372	J
Tungsten	10	0.711	J	0.610	J	0.513	J	0.593	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-43857/52 05/11/2012 10:58		CCB 240-43857/58 05/11/2012 11:34		CCB 240-43857/68 05/11/2012 12:37			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	0.139	J		
Arsenic	5.0	5.0	U	5.0	U	5.0	U		
Barium	5.0	5.0	U	5.0	U	5.0	U		
Beryllium	1.0	1.0	U	1.0	U	1.0	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	1.0	U	1.0	U	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	10	0.504	J	0.497	J	0.584	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	5.0	5.0	U	5.0	U	5.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	2.0	0.315	J	0.328	J	0.551	J		
Tungsten	10	0.557	J	0.579	J	0.794	J		
Vanadium	20	20	U	20	U	20	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICSA 240-43857/8 Instrument ID: I8

Lab File ID: I8051112A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.179**	
Arsenic		**0.525**	
Barium		**0.114**	
Beryllium		**0.0140**	
Cadmium		**-0.0100**	
Chromium		**0.630**	
Cobalt		**0.0910**	
Copper		**0.521**	
Lead		**0.135**	
Molybdenum	**1000**	**994**	**99**
Nickel		**0.424**	
Selenium		**0.137**	
Silver		**0.0450**	
Thallium		**0.146**	
Tungsten		**0.409**	
Vanadium		**0.301**	
Zinc		**1.01**	
Aluminum	*50000*	*51300*	*103*
Boron		*1.07*	
Calcium	*50000*	*52190*	*104*
Iron	*50000*	*51150*	*102*
Magnesium	*50000*	*51950*	*104*
Manganese		*0.0880*	
Potassium	*50000*	*52560*	*105*
Sodium	*50000*	*51930*	*104*
Strontium		*0.298*	
Tin		*0.0630*	
Titanium	*1000*	*1044*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

Lab Sample ID: ICSAB 240-43857/9 Instrument ID: I8

Lab File ID: I8051112A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Found Percent Recovery
Antimony	**100**	**100**	**100**
Arsenic	**100**	**101**	**101**
Barium	**100**	**102**	**102**
Beryllium	**100**	**101**	**101**
Cadmium	**100**	**101**	**101**
Chromium	**100**	**108**	**108**
Cobalt	**100**	**101**	**101**
Copper	**100**	**102**	**102**
Lead	**100**	**109**	**109**
Molybdenum	**1100**	**1124**	**102**
Nickel	**100**	**106**	**106**
Selenium	**100**	**101**	**101**
Silver	**100**	**102**	**102**
Thallium	**100**	**110**	**110**
Tungsten	**100**	**101**	**101**
Vanadium	**100**	**102**	**102**
Zinc	**100**	**104**	**104**
Aluminum	*50000*	*51280*	*103*
Boron	*100*	*104*	*104*
Calcium	*50000*	*52530*	*105*
Iron	*50000*	*51620*	*103*
Magnesium	*50000*	*52600*	*105*
Manganese	*100*	*106*	*106*
Potassium	*50000*	*53190*	*106*
Sodium	*50000*	*52220*	*104*
Strontium	*100*	*96.3*	*96*
Tin	*100*	*99.5*	*99*
Titanium	*1100*	*1161*	*106*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/11/2012 End Date: 05/11/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-43857/2 IC	05:55	90		91		98		95		95	
STD3 240-43857/3 IC	06:02	79		87		97		93		94	
STD4 240-43857/4 IC	06:10	106		104		99		99		98	
ICV 240-43857/5	06:15	98		99		100		97		97	
ICB 240-43857/6	06:23	110		108		98		98		98	
CRI 240-43857/7	06:28	114		112		100		98		99	
ICSA 240-43857/8	06:34	89		88		93		94		95	
ICSAB 240-43857/9	06:40	87		88		97		96		97	
CCV 240-43857/15	07:17	87		86		105		101		101	
CCB 240-43857/16	07:24	101		100		102		102		102	
MB 240-43497/1-A	08:21	119		113		99		99		99	
CCV 240-43857/27	08:26	98		95		95		93		94	
CCB 240-43857/28	08:34	113		106		95		94		95	
LCS 240-43497/2-A	08:39	108		102		93		92		96	
240-10925-1	08:46	89		93		94		92		93	
240-10925-1 SD	08:52	103		98		97		96		97	
240-10925-1 MS	08:58	77		82		95		93		95	
240-10925-1 MSD	09:05	73		80		98		96		98	
240-10925-2	09:13	81		92		105		101		97	
240-10925-2	09:18	84		94		105		102		97	
240-10925-1	09:24	82		88		98		96		97	
240-10925-3	09:30	98		94		96		95		95	
240-10925-3	09:35	98		92		92		92		93	
CCV 240-43857/39	09:41	94		92		95		92		94	
CCB 240-43857/40	09:48	105		100		93		92		94	
240-10925-5	09:54	101		97		92		91		92	
240-10925-5	10:00	97		95		93		94		93	
240-10925-6	10:05	92		91		93		91		93	
240-10925-6	10:11	88		88		92		91		93	
240-10925-7	10:16	87		87		91		92		93	
240-10925-7	10:22	88		87		92		93		94	
CCV 240-43857/51	10:50	88		91		94		93		94	
CCB 240-43857/52	10:58	106		102		91		92		94	
CCV 240-43857/57	11:26	89		92		94		92		93	
CCB 240-43857/58	11:34	105		103		91		92		93	
240-10925-2	11:39	103		104		91		92		93	
240-10925-2	11:45	110		106		91		91		91	
CCV 240-43857/67	12:30	95		96		90		88		90	
CCB 240-43857/68	12:37	108		104		88		88		91	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10925-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/11/2012 End Date: 05/11/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-43857/2 IC	05:55			97							
STD3 240-43857/3 IC	06:02			95							
STD4 240-43857/4 IC	06:10			99							
ICV 240-43857/5	06:15			97							
ICB 240-43857/6	06:23			97							
CRI 240-43857/7	06:28			99							
ICSA 240-43857/8	06:34			93							
ICSAB 240-43857/9	06:40			94							
CCV 240-43857/15	07:17			100							
CCB 240-43857/16	07:24			100							
MB 240-43497/1-A	08:21			98							
CCV 240-43857/27	08:26			95							
CCB 240-43857/28	08:34			95							
LCS 240-43497/2-A	08:39			95							
240-10925-1	08:46			98							
240-10925-1 SD	08:52			98							
240-10925-1 MS	08:58			102							
240-10925-1 MSD	09:05			104							
240-10925-2	09:13			183	*						
240-10925-2	09:18			180	*						
240-10925-1	09:24			102							
240-10925-3	09:30			104							
240-10925-3	09:35			101							
CCV 240-43857/39	09:41			95							
CCB 240-43857/40	09:48			94							
240-10925-5	09:54			107							
240-10925-5	10:00			110							
240-10925-6	10:05			102							
240-10925-6	10:11			101							
240-10925-7	10:16			110							
240-10925-7	10:22			112							
CCV 240-43857/51	10:50			97							
CCB 240-43857/52	10:58			94							
CCV 240-43857/57	11:26			97							
CCB 240-43857/58	11:34			94							
240-10925-2	11:39			102							
240-10925-2	11:45			101							
CCV 240-43857/67	12:30			93							
CCB 240-43857/68	12:37			92							

FORM XV - IN

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE: JUNE 28, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **RADIOCHEMISTRY DATA VALIDATION – TOTAL RADIUM, RADIUM-228**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-10949-1

SAMPLES: 3/Aqueous/

MSA-DMW6D-050312 MSA-DMW6I-050312
MSA-DMW6S-050312

Overview

The sample set for Martin State Airport – Groundwater, SDG 240-10949-1, consists of three (3) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for Total Radium and Radium-228. The samples were collected by Tetra Tech on May 3, 2012 and analyzed by Test America – Richland. Analyses were conducted using EPA methods 903.0 and 904.0.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration verification results, background results, laboratory method blank results, laboratory control sample recoveries, laboratory duplicate results, yield recoveries and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The positive results below the reporting limit were qualified as estimated, "J".

Notes

The uncertainty for the sample results are reported at 2–sigma (95% confidence). The EDD does not contain the uncertainty result.

Total radium is a combination of Radium-226 and Radium-224.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: The positive results below the reporting limit were qualified as estimated.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312		
SDG: 240-10949-1	LAB_ID	9MTEHP10			9MTEHN10			9MTEHJ10		
FRACTION: RAD	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	PCI/L			PCI/L			PCI/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
RADIUM-228		9.16			15.4			0.987	J	P
TOTAL RADIUM		8.84			15.4			1.19		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

FORM I

SAMPLE RESULTS

Date: 31-May-12

Lab Name: TestAmerica **SDG:** 44952 **Collection Date:** 5/3/2012 1:00:00 PM

Lot-Sample No.: J2E060401-3 **Report No. :** 51853 **Received Date:** 5/6/2012 10:00:00 AM

Client Sample ID: MSA-DMW6D-050312 **COC No. :** **Matrix:** WATER AQ

240-10949 Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2128091	EPA 903.0			Work Order: MTEHP1AA		Report DB ID: 9MTEHP10						
TOTAL ALPHA RA	**8.84E+00**		8.3E-01	2.0E+00	2.15E-01	pCi/L	96%	*(41.)*	5/10/12 08:20 a		0.5011	GPC10B
						8.17E-02	5.00E-01	*(9.1)*			L	
Batch: 2142121	EPA 904.0			Work Order: MTEHP3AC		Report DB ID: 9MTEHP30						
RA-228	**9.16E+00**		7.8E-01	1.3E+00	5.71E-01	pCi/L	73%	*(16.1)*	5/29/12 01:39 p		1.0024	GPC3D
						2.50E-01	1.00E+00	*(14.1)*			L	

No. of Results: 2 Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-May-12

Lab Name: TestAmerica SDG: 44952 Collection Date: 5/3/2012 11:25:00 AM

Lot-Sample No.: J2E060401-2 Report No. : 51853 Received Date: 5/6/2012 10:00:00 AM

Client Sample ID: MSA-DMW6I-050312 COC No. : Matrix: WATER AQ

240-10949 Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2128091	EPA 903.0			Work Order: MTEHN1AA			Report DB ID: 9MTEHN10					
TOTAL ALPHA RA	**1.54E+01**		1.1E+00	3.5E+00	2.42E-01	pCi/L	100%	*(63.5)*	5/10/12 06:11 a		0.5	GPC10D
						9.47E-02	5.00E-01	*(8.7)*			L	
Batch: 2142121	EPA 904.0			Work Order: MTEHN3AC			Report DB ID: 9MTEHN30					
RA-228	**1.54E+01**		1.3E+00	2.2E+00	1.12E+00	pCi/L	88%	*(13.8)*	5/29/12 01:39 p		0.4836	GPC3B
						5.00E-01	1.00E+00	*(14.1)*			L	

No. of Results: 2 Comments:

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 31-May-12

Lab Name:	TestAmerica	**SDG:**	44952	**Collection Date:**	5/3/2012 9:40:00 AM
Lot-Sample No.:	J2E060401-1	**Report No. :**	51853	**Received Date:**	5/6/2012 10:00:00 AM
Client Sample ID:	MSA-DMW6S-050312	**COC No. :**		**Matrix:**	WATER AQ
240-10949					Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2128091	EPA 903.0			**Work Order:** MTEHJ1AA		**Report DB ID:** 9MTEHJ10						
TOTAL ALPHA RA	**1.19E+00**		3.4E-01	4.2E-01	2.53E-01	pCi/L	82%	*(4.7)*	5/10/12 06:11 a		0.5038	GPC10B
						9.61E-02	5.00E-01	*(5.7)*			L	
Batch: 2142121	EPA 904.0			**Work Order:** MTEHJ3AC		**Report DB ID:** 9MTEHJ30						
RA-228	**9.87E-01**	J	3.2E-01	3.4E-01	5.19E-01	pCi/L	85%	*(1.9)*	5/29/12 01:39 p		0.9387	GPC3A
						2.26E-01	1.00E+00	*(5.8)*			L	

No. of Results: 2 **Comments:**

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

APPENDIX C
SUPPORT DOCUMENTATION

Analytical Data Package Prepared For

TestAmerica NORTH CANTON

240-10949

Radiochemical Analysis By

TestAmerica

2800 G.W. Way, Richland Wa, 99354, (509)-375-3131.

Assigned Laboratory Code: TARL

Data Package Contains 363 *Pages*

Report No.: 51853

Results in this report relate only to the sample(s) analyzed.

SDG No.	Order No.	Client Sample ID (List Order)	Lot-Sa No.	Work Order	Report DB ID	Batch No.
44952		MSA-DMW6D-050312	J2E060401-3	MTEHP1AA	9MTEHP10	2128091
		MSA-DMW6D-050312	J2E060401-3	MTEHP3AC	9MTEHP30	2142121
		MSA-DMW6I-050312	J2E060401-2	MTEHN1AA	9MTEHN10	2128091
		MSA-DMW6I-050312	J2E060401-2	MTEHN3AC	9MTEHN30	2142121
		MSA-DMW6S-050312	J2E060401-1	MTEHJ1AA	9MTEHJ10	2128091
		MSA-DMW6S-050312	J2E060401-1	MTEHJ3AC	9MTEHJ30	2142121

Certificate of Analysis

TestAmerica Laboratories, Inc.

May 31, 2012

TestAmerica Laboratory North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Attention: Pat O'Meara

Date Received	:	May 6, 2012
Sample Number/Matrix	:	Three (3) Waters
SDG Number	:	44952
Project Name	:	MSA GW Monitoring

CASE NARRATIVE

I. Introduction

On May 6, 2012, three water samples were received at the TestAmerica Richland laboratory for radiochemical analysis. Upon receipt, the samples were assigned the TestAmerica identification numbers as described on the cover page of the Analytical Data Package. The samples were assigned to Lot Number J2E060401.

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information; analytical results and the appropriate associated statistical uncertainties.

The requested analyses were:

Gas Proportional Counting
Radium-228 by method RL-RA-001
Radium-226 by method RL-RA-002

IV. Quality Control

The analytical result for each analysis performed includes a minimum of one laboratory control sample (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments" section.

V. Comments

Gas Proportional Counting

Radium-228 by method RL-RA-001:

Upon initial count, the sample and sample duplicate were outside of agreement criteria. The sample and sample duplicate were re-analyzed in batch 2142121 using the remaining sample volume, results are within acceptance criteria. The achieved MDA of sample MSA-DMW6I-050312 and sample duplicate exceeds the CRDL due to limited sample volume. The sample and sample duplicate activity exceeds the achieved MDA/CRDL. Data is accepted. Except as noted, The LCS, batch blank, sample, and sample duplicate results are within acceptance limits.

Radium-226 by method RL-RA-002:

The LCS, batch blank, sample, and sample duplicate results are within acceptance limits.

I certify that this Certificate of Analysis is in compliance with the SOW and/or NELAC, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:



Christi Hayes
Project Manager

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/?n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location:
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact:	COC No: 006083
Address: 20251 Century Blvd Ste 200	Telephone: (301) 528-5552	Telephone: (703) 342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apanavage@tetratech.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: (301) 528-5551		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client: ☐ Lab sampling: ☐ Job/SDG No.:
Project Name: MSA GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04021-03	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite/Grab	VOCs	Total Metals	Dissolved Metals	Perchlorate	1,4-Dioxane	TPH-DRO + GRO	Radium 224, 226, 228	Sample Specific Notes / Special Instructions:
MSA-DMW6S-050312	5/3/12	0940		X					5	5			5				X	X	X	X	X	X	X	
MSA-DMW6I-050312		1125		X					5	3			3				X	X	X	X	X		X	
MSA-DMW6D-050312		1300		X					5	3			3				X	X	X	X	X		X	
MSA-DMW7S-050312		1415		X					2	5			5				X	X	X	X	X	X		
TB-050312		—																						
MSA-DMW4I-050312		0934		X					2	3			2				X	X	X	X	X			
MSA-DMW4D-050312		1046		X					2	3			2				X	X	X	X	X			
MSA-DMW4S-050312		1202		X					2	5			5				X	X	X	X	X	X		
MSA-DMW2A-050312		1340		X					2	3			2				X	X	X	X	X			

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	5/3/12 - 1645			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL	Date/Time: 5-4-12 915

Page 1824 of 1827

06/08/2012

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TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler:	Lab PM: O'Meara, Patrick J	Carrier Tracking No(s):	COC No: 240-5685.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: patrick.omeara@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 240-10949-1
Address: 2800 George Washington Way,	Due Date Requested: 5/22/2012			
City: Richland	TAT Requested (days):			
State, Zip: WA, 99352				
Phone: 509-375-3131(Tel) 509-375-5590(Fax)	PO #:			
Email:	WO #:			
Project Name: MSA Groundwater Sampling	Project #: 24005772			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL, B - NaOH, C - Zn Acetate, D - Nitric Acid, E - NaHSO4, F - MeOH, G - Amchlor, H - Ascorbic Acid, I - Ice, J - DI Water, K - EDTA, L - EDA, M - Hexane, N - None, O - AsNaO2, P - Na2O4S, Q - Na2SO3, R - Na2S2SO3, S - H2SO4, T - TSP Dodecahydrate, U - Acetone, V - MCAA, W - ph 4-5, Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (Wwater, Ssolid, Owaste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ Radium-Richland 903.0/904.0	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MSA-DMW6S-050312 (240-10949-1) MTEHJ	5/3/12	09:40 Eastern		Water			X	3	
MSA-DMW6I-050312 (240-10949-2) MTEHN	5/3/12	11:25 Eastern		Water			X	3	SOG# 44952
MSA-DMW6D-050312 (240-10949-3) MTEHP	5/3/12	13:00 Eastern		Water			X	3	Lot# J2E060401

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* ____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:
Relinquished by:	Date/Time: 5-4-12-1130	Company: TAL-XC	Received by: Lynn Carreon Triumpa
Relinquished by:	Date/Time:	Company:	Received by:
Relinquished by:	Date/Time:	Company:	Received by:

Custody Seals Intact:	Custody Seal No.:	Cooler Temperature(s) °C and Other Remarks:

Page 145 of 1627
600-45052-1

HOLDTIME

SDG 240-10949-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
RAD	PCI/L	MSA-DMW6S-050312	9MTEHJ30	NM	5/3/2012	5/22/2012	5/29/2012	19	7	26
RAD	PCI/L	MSA-DMW6S-050312	9MTEHJ10	NM	5/3/2012	5/8/2012	5/10/2012	5	2	7
RAD	PCI/L	MSA-DMW6I-050312	9MTEHN30	NM	5/3/2012	5/22/2012	5/29/2012	19	7	26
RAD	PCI/L	MSA-DMW6I-050312	9MTEHN10	NM	5/3/2012	5/8/2012	5/10/2012	5	2	7
RAD	PCI/L	MSA-DMW6D-050312	9MTEHP30	NM	5/3/2012	5/22/2012	5/29/2012	19	7	26
RAD	PCI/L	MSA-DMW6D-050312	9MTEHP10	NM	5/3/2012	5/8/2012	5/10/2012	5	2	7

FORM II

BLANK RESULTS

Date: 31-May-12

Lab Name: TestAmerica **SDG:** 44952

Matrix: WATER **Report No. :** 51853

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2128091	EPA 903.0			**Work Order:** MTEM31AA		**Report DB ID:** MTEM31AB						
TOTAL ALPHA RA	1.43E-02	U	1.4E-01	1.4E-01	3.29E-01	pCi/L	84%	0.04	5/10/12 08:20 a		0.5002	GPC10C
					1.35E-01	5.00E-01		0.21			L	
Batch: 2142121	EPA 904.0			**Work Order:** MTNL71AA		**Report DB ID:** MTNL71AB						
RA-228	-1.23E-01	U	2.3E-01	2.4E-01	6.04E-01	pCi/L	84%	-0.2	5/29/12 01:40 p		1.0017	GPC4A
					2.71E-01	1.00E+00		-(1.)			L	

No. of Results: 2 **Comments:**

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

LCS RESULTS

Date: 31-May-12

Lab Name: TestAmerica **SDG:** 44952

Matrix: WATER **Report No. :** 51853

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 2128091	EPA 903.0			**Work Order:**	MTEM31AC		**Report DB ID:**	MTEM31CS					
TOTAL ALPHA RA	6.90E+00		7.9E-01	1.6E+00	2.72E-01	pCi/L	84%	6.42E+00	6.64E-02	107%	5/10/12 08:20 a	0.5006	GPC10D
							Rec Limits:			0.1		L	
Batch: 2142121	EPA 904.0			**Work Order:**	MTNL71AC		**Report DB ID:**	MTNL71CS					
RA-228	5.45E+00		6.0E-01	8.8E-01	5.72E-01	pCi/L	81%	4.97E+00	5.77E-02	110%	5/29/12 01:40 p	1.0008	GPC4B
							Rec Limits:	70	130	0.1		L	

No. of Results: 2 **Comments:**

Bias - (Result/Expected)-1 as defined by ANSI N13.30.

FORM II

Date: 31-May-12

DUPLICATE RESULTS

Lab Name: TestAmerica SDG: 44952 Collection Date: 5/3/2012 9:40:00 AM

Lot-Sample No.: J2E060401-1 Report No. : 51853 Received Date: 5/6/2012 10:00:00 AM

Client Sample ID: MSA-DMW6S-050312 DUP COC No. : Matrix: WATER AQ

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2128091	EPA 903.0			Work Order: MTEHJ1AD		Report DB ID: MTEHJ1DR			Orig Sa DB ID: 9MTEHJ10			
TOTAL ALPHA RA	7.47E-01		3.0E-01	3.4E-01	3.61E-01	pCi/L	93%	(2.1)	5/10/12 06:11 a		0.4284	GPC10C
	1.19E+00		RER2 1.7			5.00E-01		(4.4)			L	

No. of Results: 1 Comments:

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

FORM II

Date: 31-May-12

DUPLICATE RESULTS

Lab Name: TestAmerica SDG: 44952 Collection Date: 5/3/2012 1:00:00 PM

Lot-Sample No.: J2E060401-3 Report No. : 51853 Received Date: 5/6/2012 10:00:00 AM

Client Sample ID: MSA-DMW6D-050312 DUP COC No. : Matrix: WATER AQ

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2142121	EPA 904.0			Work Order: MTEHP1AD		Report DB ID: MTEHP1DR			Orig Sa DB ID: 9MTEHP30			
RA-228	9.06E+00		1.1E+00	1.6E+00	1.18E+00	pCi/L	74%	(7.7)	5/29/12 01:39 p		0.5082	GPC3C
	9.16E+00		RER2 0.1			1.00E+00		(11.7)			L	

No. of Results: 1 Comments:

TestAmerica rptSTLRchDupV5.2.20 A2002

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE_____ OF_____

CLIENT		JOB NUMBER	
Lockheed - MSA Groundwater			
SUBJECT			
Sample Dup			
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE
TLS			

Sample MSA - DMW65
TOTAL Alpha (2-sigma)
Original result 1.19 ± 0.34 pCi/L
Duplicate result 0.747 ± 0.30 pCi/L

$$\text{mean diff of 1sigma} = \frac{|1.19 - 0.747|}{\sqrt{(0.17)^2 + (0.15)^2}} = \frac{0.443}{0.227} = 1.95$$

Sample MSA - DMW6D
RA-228 (2-sigma)
Original result 9.16 ± 0.78 pCi/L
Duplicate result 9.06 ± 1.1 pCi/L

$$\text{mean diff of 1sigma} = \frac{|9.16 - 9.06|}{\sqrt{(0.39)^2 + (0.55)^2}} = \frac{0.10}{0.674} = 0.148$$

Batch Nbr: 2128091

Alpha Beta, RaTot by GPC , Calculated Results

5/10/2012 10:00:48 AM

sample MSA-DMW6S 050312 Detailed Report

rep result total Ra 1.19 pCi/L

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TD	WATER	*STLE	TotalRAWoBS	MTEHJ1AA	pCi/L		05/03/12 09:40	05/10/12 06:11	05/09/12 09:20	RATC16378	1	g	
240,MSA-DMW6S-050312					,J2E060401-1		WATER			14.0		RATC16378 Alq		503.80 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/10/12 07:01	RA	56	10	GPC10B	1.5	N	N	3.3396E-01	1.0000E+00	N	82%	N		6.9580E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.110E-02)	(0.000E+00)		7%			(0.000E+00)	0.001985		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/10/12	RA	R	**1.191322**		5.26667E-01	1.332418	1.332418	0.5038 L	82%		0.253338		
				(0.208378)		(7.5572E-02)	(0.223332)	(0.223332)	(0.173205)			0.096076		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TD	WATER	*STLE	TotalRAWoBS	MTEHJ1AD	pCi/L	R	05/03/12 09:40	05/10/12 06:11	05/09/12 09:20	RATC16379	1	g	
240,MSA-DMW6S-050312 DUP					,J2E060401-1		WATER			15.8		RATC16379 Alq		428.40 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/10/12 07:01	RA	39	22	GPC10C	1.5	N	N	3.3354E-01	1.0000E+00	N	93%	N		6.9580E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.145E-02)	(0.000E+00)		7%			(0.000E+00)	0.002334		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/10/12	RA	R	**0.747349**		3.16667E-01	0.710764	0.710764	0.4284 L	93%		0.361141		
				(0.169449)		(6.4377E-02)	(0.157187)	(0.157187)	(0.173205)			0.14868		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TD	WATER	*STLE	TotalRAWoBS	MTEHN1AA	pCi/L		05/03/12 11:25	05/10/12 06:11	05/09/12 09:20	RATC16380	1	g	
240,MSA-DMW6I-050312					,J2E060401-2		WATER			19.2		RATC16380 Alq		500.00 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/10/12 07:01	RA	791	13	GPC10D	1.5	N	N	3.2068E-01	1.0000E+00	N	100%	N		6.9580E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.153E-02)	(0.000E+00)		9%			(0.000E+00)	0.002		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/10/12	RA	R	**15.377425**		7.86667E+00	17.068942	17.068942	0.50 L	100%		0.242189		
				(1.769186)		(2.8150E-01)	(1.76864)	(1.76864)	(0.173205)			0.094664		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TD	WATER	*STLE	TotalRAWoBS	MTEHP1AA	pCi/L		05/03/12 13:00	05/10/12 08:20	05/09/12 09:20	RATC16381	1	g	
240,MSA-DMW6D-050312					,J2E060401-3		WATER			16.3		RATC16381 Alq		501.10 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/10/12 09:10	RA	463	10	GPC10B	1.5	N	N	3.2956E-01	1.0000E+00	N	96%	N		6.7635E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.095E-02)	(0.000E+00)		8%			(0.000E+00)	0.001996		

Batch Nbr: 2128091 — # Alpha Beta, RaTot by GPC , Calculated Results — 5/10/2012 10:00:48 AM

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/10/12	RA	R	**8.844318**		4.59667E+00	9.838791	9.838791	0.5011 L	96%		0.21549		
				(0.976949)		(2.1543E-01)	(0.969079)	(0.969079)	(0.173205)			0.081722		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TD	WATER	*STLE	TotalRAWoBS	**MTEM31AA**	**pCi/L**	B	05/03/12 09:40	05/10/12 08:20	05/09/12 09:20	RATC16382	1	g	
0,INTRA-LAB BLANK					,J2E070000-91 v4.8.34		WATER			14.3		RATC16382 Alq		500.20 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/10/12 09:10	RA	8	22	GPC10C	15	N	N	3.3672E-01	1.0000E+00	N	84%	N		6.7635E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.156E-02)	(0.000E+00)		7%			(0.000E+00)	0.001999		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/10/12	RA	R	**0.014336**	U4	6.66667E-03	0.015919	0.015919	0.5002 L	84%		0.329056		
				(0.06951)		(3.2318E-02)	(0.077183)	(0.077183)	(0.173205)			0.135471		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TD	WATER	*STLE	TotalRAWoBS	**MTEM31AC**	**pCi/L**	S	05/03/12 09:40	05/10/12 08:20	05/09/12 09:20	RTSA2701	1	g	
0,INTRA-LAB CHECK					,J2E070000-91 v4.8.34		WATER			14.3		RTSA2701 Alq		500.60 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/10/12 09:10	RA	318	13	GPC10D	15	N	N	3.2905E-01	1.0000E+00	N	84%	N		6.7635E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.183E-02)	(0.000E+00)		7%			(0.000E+00)	0.001998		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/10/12	RA	R	**6.896783**		3.13667E+00	7.664616	7.664616	0.5006 L	84%	107%	0.272421		
				(0.799532)		(1.7873E-01)	(0.801648)	(0.801648)	(0.173205)			0.106481		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU — Page 2 — RecCnt:6 — RADCALC v4.8.34
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration — TestAmerica
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Quality Assurance Report. Generated 7-JUN-2012 14:20:57.18

QA Filename : RDND07$DKA100:[QUAD10.QA]CHK.QAF;3

total Radium Daily calibrations Blank

-- Multi-Test Full Report --

Description : Quad10A (Hex 1) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 45.588001 Upper Bound : 50.386879

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 47.987499 Std Deviation : 0.805231

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
2-APR-2012 04:48	CHK		47.7000				
3-APR-2012 05:33	CHK		49.0000				
4-APR-2012 04:11	CHK		48.1000				
5-APR-2012 10:14	CHK		49.5000				
6-APR-2012 04:28	CHK		48.3000				
9-APR-2012 04:32	CHK		48.4000				
10-APR-2012 05:34	CHK		49.4000				
11-APR-2012 05:33	CHK		48.8000				
12-APR-2012 05:18	CHK		47.9000				
13-APR-2012 05:11	CHK		48.4000				
16-APR-2012 04:54	CHK		48.4000				
17-APR-2012 04:47	CHK		48.2000				
18-APR-2012 04:59	CHK		48.4000				
19-APR-2012 05:13	CHK		47.8000				
20-APR-2012 03:55	CHK		48.7000				
23-APR-2012 04:16	CHK		48.9000				
24-APR-2012 06:39	CHK		48.0000				
25-APR-2012 04:55	CHK		48.1000				
26-APR-2012 05:37	CHK		48.7000				
27-APR-2012 06:19	CHK		48.5000				
30-APR-2012 04:55	CHK		48.1000				
1-MAY-2012 04:31	CHK		48.5000				

2-MAY-2012 04:12	CHK		48.4000	|	|	|
3-MAY-2012 05:08	CHK		48.7000	|	|	|
4-MAY-2012 04:21	CHK		48.7000	|	|	|
7-MAY-2012 04:36	CHK		48.3000	|	|	|
8-MAY-2012 05:12	CHK		48.1000	|	|	|
9-MAY-2012 04:49	CHK		48.2000	|	|	|
10-MAY-2012 04:40	CHK		48.3000	|	|	|
11-MAY-2012 04:38	CHK		48.5000	|	|	|
14-MAY-2012 05:08	CHK		48.1000	|	|	|
15-MAY-2012 04:07	CHK		47.9000	|	|	|
16-MAY-2012 04:11	CHK		48.5000	|	|	|
17-MAY-2012 04:46	CHK		48.4000	|	|	|
18-MAY-2012 06:03	CHK		48.8000	|	|	|
21-MAY-2012 04:48	CHK		48.2000	|	|	|
22-MAY-2012 05:02	CHK		48.7000	|	|	|
23-MAY-2012 06:35	CHK		48.6000	|	|	|

♀Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
24-MAY-2012 04:43	CHK		48.4000	|	|	|	
25-MAY-2012 05:51	CHK		48.3000	|	|	|	
29-MAY-2012 05:26	CHK		48.5000	|	|	|	
30-MAY-2012 05:40	CHK		48.3000	|	|	|	
31-MAY-2012 05:28	CHK		48.4000	|	|	|	
1-JUN-2012 05:40	CHK		49.3000	|	|	|	
4-JUN-2012 04:30	CHK		48.4000	|	|	|	
5-JUN-2012 04:15	CHK		48.7000	|	|	|	
6-JUN-2012 05:04	CHK		48.9000	|	|	|	

-- Multi-Test Full Report --

Description : Quad10B (Hex 2) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 39.499199 Upper Bound : 43.657001

10-MAY-2012 04:40	CHK		41.0000			

♀Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
11-MAY-2012 04:38	CHK		41.8000				
14-MAY-2012 05:08	CHK		41.4000				
15-MAY-2012 04:07	CHK		42.1000				
16-MAY-2012 04:11	CHK		41.8000				
17-MAY-2012 04:46	CHK		41.3000				
18-MAY-2012 06:03	CHK		42.8000	In			
21-MAY-2012 04:48	CHK		41.9000				
22-MAY-2012 05:02	CHK		41.8000				
23-MAY-2012 06:35	CHK		41.9000				
24-MAY-2012 04:43	CHK		41.9000				
25-MAY-2012 05:51	CHK		41.3000				
29-MAY-2012 05:26	CHK		41.6000				
30-MAY-2012 05:40	CHK		42.0000				
31-MAY-2012 05:28	CHK		41.7000				
1-JUN-2012 05:40	CHK		41.4000				
4-JUN-2012 04:30	CHK		41.2000				
5-JUN-2012 04:15	CHK		41.8000				
6-JUN-2012 05:04	CHK		41.9000				

-- Multi-Test Full Report --

Description : Quad10C (Hex 3) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 46.298698 Upper Bound : 51.172279

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 48.735485 Std Deviation : 0.415877

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
2-APR-2012 04:48	CHK		48.5000				
3-APR-2012 05:33	CHK		49.1000				

4-APR-2012 04:11	CHK		48.8000	| |	|
5-APR-2012 10:14	CHK		49.5000	| |	|
6-APR-2012 04:28	CHK		48.9000	| |	|
9-APR-2012 04:32	CHK		49.1000	| |	|
10-APR-2012 05:34	CHK		48.8000	| |	|
11-APR-2012 05:33	CHK		48.8000	| |	|
12-APR-2012 05:18	CHK		48.7000	| |	|
13-APR-2012 05:11	CHK		48.3000	| |	|
16-APR-2012 04:54	CHK		48.5000	| |	|
17-APR-2012 04:47	CHK		48.3000	| |	|
18-APR-2012 04:59	CHK		48.6000	| |	|
19-APR-2012 05:13	CHK		49.0000	| |	|
20-APR-2012 03:55	CHK		48.8000	| |	|
23-APR-2012 04:16	CHK		48.8000	| |	|
24-APR-2012 06:39	CHK		49.3000	| |	|
25-APR-2012 04:55	CHK		48.5000	| |	|
26-APR-2012 05:37	CHK		49.0000	| |	|
27-APR-2012 06:19	CHK		48.1000	| |	|

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
30-APR-2012 04:55	CHK		48.3000	| | | |
1-MAY-2012 04:31	CHK		48.7000	| | | |
2-MAY-2012 04:12	CHK		48.8000	| | | |
3-MAY-2012 05:08	CHK		48.8000	| | | |
4-MAY-2012 04:21	CHK		48.6000	| | | |
7-MAY-2012 04:36	CHK		48.4000	| | | |
8-MAY-2012 05:12	CHK		49.3000	| | | |
9-MAY-2012 04:49	CHK		48.2000	| | | |
10-MAY-2012 04:40	CHK		48.8000	| | | |
11-MAY-2012 04:38	CHK		49.1000	| | | |
14-MAY-2012 05:08	CHK		49.0000	| | | |
15-MAY-2012 04:07	CHK		48.8000	| | | |

16-MAY-2012 04:11	CHK	48.7000			
17-MAY-2012 04:46	CHK	48.6000			
18-MAY-2012 06:03	CHK	48.7000			
21-MAY-2012 04:48	CHK	48.6000			
22-MAY-2012 05:02	CHK	48.8000			
23-MAY-2012 06:35	CHK	47.9000	In		
24-MAY-2012 04:43	CHK	48.7000			
25-MAY-2012 05:51	CHK	48.7000			
29-MAY-2012 05:26	CHK	48.9000			
30-MAY-2012 05:40	CHK	48.1000			
31-MAY-2012 05:28	CHK	48.7000			
1-JUN-2012 05:40	CHK	49.3000			
4-JUN-2012 04:30	CHK	48.9000			
5-JUN-2012 04:15	CHK	48.9000			
6-JUN-2012 05:04	CHK	49.0000			

-- Multi-Test Full Report --

Description : Quad10D (Hex 4) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 46.094002 Upper Bound : 50.945999

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 48.520000 Std Deviation : 0.421716

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
2-APR-2012 04:48	CHK		48.6000				
3-APR-2012 05:33	CHK		48.1000				
4-APR-2012 04:11	CHK		49.0000				
5-APR-2012 10:14	CHK		49.2000				
6-APR-2012 04:28	CHK		47.9000				
9-APR-2012 04:32	CHK		48.2000				
10-APR-2012 05:34	CHK		48.9000				
11-APR-2012 05:33	CHK		49.6000	In			

12-APR-2012 05:18	CHK		48.5000	|	|	|
13-APR-2012 05:11	CHK		48.5000	|	|	|
16-APR-2012 04:54	CHK		49.0000	|	|	|

♀Quality Assurance Multi-Test Full Report (continued) Page : 5

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
17-APR-2012 04:47	CHK		48.2000	|	|	|	
18-APR-2012 04:59	CHK		48.4000	|	|	|	
19-APR-2012 05:13	CHK		48.0000	|	|	|	
20-APR-2012 03:55	CHK		48.5000	|	|	|	
23-APR-2012 04:16	CHK		48.9000	|	|	|	
24-APR-2012 06:39	CHK		49.1000	|	|	|	
25-APR-2012 04:55	CHK		48.7000	|	|	|	
26-APR-2012 05:37	CHK		48.7000	|	|	|	
27-APR-2012 06:19	CHK		48.5000	|	|	|	
30-APR-2012 04:55	CHK		48.6000	|	|	|	
1-MAY-2012 04:31	CHK		48.3000	|	|	|	
2-MAY-2012 04:12	CHK		48.4000	|	|	|	
3-MAY-2012 05:08	CHK		48.9000	|	|	|	
4-MAY-2012 04:21	CHK		48.5000	|	|	|	
7-MAY-2012 04:36	CHK		48.5000	|	|	|	
8-MAY-2012 05:12	CHK		48.9000	|	|	|	
9-MAY-2012 04:49	CHK		48.7000	|	|	|	
10-MAY-2012 04:40	CHK		48.4000	|	|	|	
11-MAY-2012 04:38	CHK		48.0000	|	|	|	
14-MAY-2012 05:08	CHK		48.6000	|	|	|	
15-MAY-2012 04:07	CHK		48.6000	|	|	|	
16-MAY-2012 04:11	CHK		48.6000	|	|	|	
17-MAY-2012 04:46	CHK		48.2000	|	|	|	
18-MAY-2012 06:03	CHK		48.2000	|	|	|	
21-MAY-2012 04:48	CHK		48.5000	|	|	|	
22-MAY-2012 05:02	CHK		49.0000	|	|	|	
23-MAY-2012 06:35	CHK		48.4000	|	|	|	

26-APR-2012 05:37	CHK		46.0000	|In|	|
27-APR-2012 06:19	CHK		46.8000	Ab|In|	|
30-APR-2012 04:55	CHK		46.3000	|In|	|
1-MAY-2012 04:31	CHK		45.8000	| |	|
2-MAY-2012 04:12	CHK		46.1000	|In|	|
3-MAY-2012 05:08	CHK		47.0000	Ab|Ac|	|
4-MAY-2012 04:21	CHK		46.6000	Ab|In|	|
7-MAY-2012 04:36	CHK		47.4000	Ab|Ac|	|
8-MAY-2012 05:12	CHK		46.8000	Ab|In|	|
9-MAY-2012 04:49	CHK		46.1000	|In|	|
10-MAY-2012 04:40	CHK	✓	45.9000	| |	|
11-MAY-2012 04:38	CHK		46.5000	Ab|In|	|
14-MAY-2012 05:08	CHK		46.7000	Ab|In|	|
15-MAY-2012 04:07	CHK		46.1000	|In|	|
16-MAY-2012 04:11	CHK		46.5000	Ab|In|	|
17-MAY-2012 04:46	CHK		46.2000	|In|	|
18-MAY-2012 06:03	CHK		46.7000	Ab|In|	|
21-MAY-2012 04:48	CHK		46.4000	|In|	|
22-MAY-2012 05:02	CHK		46.0000	|In|	|
23-MAY-2012 06:35	CHK		46.8000	Ab|In|	|
24-MAY-2012 04:43	CHK		46.8000	Ab|In|	|
25-MAY-2012 05:51	CHK		46.3000	|In|	|
29-MAY-2012 05:26	CHK		47.0000	Ab|Ac|	|
30-MAY-2012 05:40	CHK		46.8000	Ab|In|	|
31-MAY-2012 05:28	CHK		46.9000	Ab|Ac|	|
1-JUN-2012 05:40	CHK		46.5000	Ab|In|	|
4-JUN-2012 04:30	CHK		46.5000	Ab|In|	|
5-JUN-2012 04:15	CHK		46.9000	Ab|Ac|	|
6-JUN-2012 05:04	CHK		45.8000	| |	|

♀
Quality Assurance Report. Generated 7-JUN-2012 14:20:57.89

QA Filename : RDND07$DKA100:[QUAD10.QA]BKG_15.QAF;3

-- Multi-Test Full Report --

qa1_gpc10_7-jun-2012-14205844.txt

Description : Quad10A (Hex 1) alph bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.025810 Std Deviation : 0.011983

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
3-APR-2012 04:53	BKG		0.0200				
4-APR-2012 03:06	BKG		0.0200				
5-APR-2012 09:39	BKG		0.0100				
6-APR-2012 03:16	BKG		0.0400				
7-APR-2012 01:50	BKG		0.0200				
10-APR-2012 03:01	BKG		0.0500		In		
11-APR-2012 04:04	BKG		0.0100				
12-APR-2012 03:39	BKG		0.0400				
13-APR-2012 04:34	BKG		0.0100				
14-APR-2012 00:07	BKG		0.0300				
14-APR-2012 16:25	BKG		0.0300				
17-APR-2012 03:13	BKG		0.0300				
18-APR-2012 03:26	BKG		0.0200				
19-APR-2012 03:58	BKG		0.0200				
20-APR-2012 03:09	BKG		0.0200				
21-APR-2012 05:37	BKG		0.0100				
24-APR-2012 06:02	BKG		0.0100				
25-APR-2012 04:13	BKG		0.0300				
26-APR-2012 03:46	BKG		0.0300				
27-APR-2012 03:39	BKG		0.0600		In		
28-APR-2012 01:00	BKG		0.0100				
29-APR-2012 02:56	BKG		0.0300				
29-APR-2012 09:35	BKG		0.0300				
1-MAY-2012 03:26	BKG		0.0400				
2-MAY-2012 03:27	BKG		0.0300				
3-MAY-2012 03:47	BKG		0.0200				
4-MAY-2012 03:40	BKG		0.0100				

5-MAY-2012 01:23	BKG		0.0200	| |	|
5-MAY-2012 18:05	BKG		0.0400	| |	|
8-MAY-2012 03:29	BKG		0.0100	| |	|
9-MAY-2012 02:59	BKG		0.0400	| |	|
10-MAY-2012 03:13	BKG	✓	0.0200	| |	|
11-MAY-2012 03:41	BKG		0.0100	| |	|
12-MAY-2012 04:36	BKG		0.0200	| |	|
12-MAY-2012 15:52	BKG		0.0300	| |	|
15-MAY-2012 03:35	BKG		0.0200	| |	|
16-MAY-2012 03:02	BKG		0.0300	| |	|
17-MAY-2012 04:06	BKG		0.0200	| |	|
18-MAY-2012 05:24	BKG		0.0200	| |	|
19-MAY-2012 04:56	BKG		0.0200	| |	|
19-MAY-2012 16:54	BKG		0.0200	| |	|

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
22-MAY-2012 03:10	BKG		0.0200	| | | |
23-MAY-2012 03:33	BKG		0.0300	| | | |
24-MAY-2012 04:19	BKG		0.0200	| | | |
25-MAY-2012 04:20	BKG		0.0200	| | | |
26-MAY-2012 03:56	BKG		0.0400	| | | |
27-MAY-2012 19:48	BKG		0.0300	| | | |
30-MAY-2012 04:56	BKG		0.0200	| | | |
31-MAY-2012 04:50	BKG		0.0200	| | | |
1-JUN-2012 04:56	BKG		0.0200	| | | |
2-JUN-2012 03:53	BKG		0.0100	| | | |
2-JUN-2012 03:53	BKG		0.0100	| | | |
3-JUN-2012 11:40	BKG		0.0200	| | | |
5-JUN-2012 03:31	BKG		0.0300	| | | |
6-JUN-2012 01:39	BKG		0.0300	| | | |
6-JUN-2012 04:39	BKG		0.0500	|In| | |

-- Multi-Test Full Report --

Description : Quad10B (Hex 2) alpha bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.044078 Std Deviation : 0.015992

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
3-APR-2012 04:53	BKG		0.0500				
4-APR-2012 03:06	BKG		0.0300				
5-APR-2012 09:39	BKG		0.0400				
6-APR-2012 03:16	BKG		0.0400				
7-APR-2012 01:50	BKG		0.0200				
10-APR-2012 03:01	BKG		0.0300				
11-APR-2012 04:04	BKG		0.0400				
12-APR-2012 03:39	BKG		0.0400				
13-APR-2012 04:34	BKG		0.0300				
14-APR-2012 00:07	BKG		0.0500				
14-APR-2012 16:25	BKG		0.0400				
17-APR-2012 03:13	BKG		0.0300				
18-APR-2012 03:26	BKG		0.0300				
19-APR-2012 03:58	BKG		0.0200				
20-APR-2012 03:09	BKG		0.0500				
21-APR-2012 05:37	BKG		0.0300				
24-APR-2012 06:02	BKG		0.0600				
25-APR-2012 04:13	BKG		0.0500				
26-APR-2012 03:46	BKG		0.0300				
27-APR-2012 03:39	BKG		0.0500				
28-APR-2012 01:00	BKG		0.0200				
29-APR-2012 02:56	BKG		0.0400				
29-APR-2012 09:35	BKG		0.0400				
1-MAY-2012 03:26	BKG		0.0200				
2-MAY-2012 03:27	BKG		0.0400				
3-MAY-2012 03:47	BKG		0.0200				

♀Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
4-MAY-2012 03:40	BKG		0.0600				
5-MAY-2012 01:23	BKG		0.0300				
5-MAY-2012 18:05	BKG		0.0200				
8-MAY-2012 03:29	BKG		0.0200				
9-MAY-2012 02:59	BKG		0.0300				
10-MAY-2012 03:13	BKG		0.0300				
11-MAY-2012 03:41	BKG		0.0200				
12-MAY-2012 04:36	BKG		0.0500				
12-MAY-2012 15:52	BKG		0.0200				
15-MAY-2012 03:35	BKG		0.0300				
16-MAY-2012 03:02	BKG		0.0500				
17-MAY-2012 04:06	BKG		0.0400				
18-MAY-2012 05:24	BKG		0.0100		In		
19-MAY-2012 04:56	BKG		0.0800		In		
19-MAY-2012 16:54	BKG		0.0500				
22-MAY-2012 03:10	BKG		0.0300				
23-MAY-2012 03:33	BKG		0.0200				
24-MAY-2012 04:19	BKG		0.0500				
25-MAY-2012 04:20	BKG		0.0100		In		
26-MAY-2012 03:56	BKG		0.8000		Ac		
27-MAY-2012 19:48	BKG		0.0300				
30-MAY-2012 04:56	BKG		0.0400				
31-MAY-2012 04:50	BKG		0.0400				
1-JUN-2012 04:56	BKG		0.0400				
2-JUN-2012 03:53	BKG		0.0300				
2-JUN-2012 03:53	BKG		0.0300				
3-JUN-2012 11:40	BKG		0.0300				
5-JUN-2012 03:31	BKG		0.0400				
6-JUN-2012 01:39	BKG		0.0300				
6-JUN-2012 04:39	BKG		0.0300				

-- Multi-Test Full Report --

Description : Quad10C (Hex 3) alpha bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.067095 Std Deviation : 0.020236

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
3-APR-2012 04:53	BKG		0.0500				
4-APR-2012 03:06	BKG		0.0700				
5-APR-2012 09:39	BKG		0.0600				
6-APR-2012 03:16	BKG		0.0700				
7-APR-2012 01:50	BKG		0.0500				
10-APR-2012 03:01	BKG		0.0500				
11-APR-2012 04:04	BKG		0.0600				
12-APR-2012 03:39	BKG		0.0700				
13-APR-2012 04:34	BKG		0.0700				
14-APR-2012 00:07	BKG		0.0900				
14-APR-2012 16:25	BKG		0.0300				

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
17-APR-2012 03:13	BKG		0.0500				
18-APR-2012 03:26	BKG		0.0900				
19-APR-2012 03:58	BKG		0.1000				
20-APR-2012 03:09	BKG		0.0500				
21-APR-2012 05:37	BKG		0.0900				
24-APR-2012 06:02	BKG		0.0600				
25-APR-2012 04:13	BKG		0.0600				
26-APR-2012 03:46	BKG		0.0800				
27-APR-2012 03:39	BKG		0.0600				
28-APR-2012 01:00	BKG		0.0600				
29-APR-2012 02:56	BKG		0.0900				

29-APR-2012 09:35	BKG		0.1100	In	
1-MAY-2012 03:26	BKG		0.0900		
2-MAY-2012 03:27	BKG		0.0600		
3-MAY-2012 03:47	BKG		0.0400		
4-MAY-2012 03:40	BKG		0.0500		
5-MAY-2012 01:23	BKG		0.0900		
5-MAY-2012 18:05	BKG		0.0700		
8-MAY-2012 03:29	BKG		0.0700		
9-MAY-2012 02:59	BKG		0.0500		
10-MAY-2012 03:13	BKG		0.0700		
11-MAY-2012 03:41	BKG		0.0700		
12-MAY-2012 04:36	BKG		0.0700		
12-MAY-2012 15:52	BKG		0.0800		
15-MAY-2012 03:35	BKG		0.0800		
16-MAY-2012 03:02	BKG		0.0400		
17-MAY-2012 04:06	BKG		0.0200	In	
18-MAY-2012 05:24	BKG		0.0500		
19-MAY-2012 04:56	BKG		0.0700		
19-MAY-2012 16:54	BKG		0.0600		
22-MAY-2012 03:10	BKG		0.0600		
23-MAY-2012 03:33	BKG		0.0700		
24-MAY-2012 04:19	BKG		0.0800		
25-MAY-2012 04:20	BKG		0.0700		
26-MAY-2012 03:56	BKG		0.0600		
27-MAY-2012 19:48	BKG		0.0600		
30-MAY-2012 04:56	BKG		0.0900		
31-MAY-2012 04:50	BKG		0.0500		
1-JUN-2012 04:56	BKG		0.0500		
2-JUN-2012 03:53	BKG		0.0500		
2-JUN-2012 03:53	BKG		0.0500		
3-JUN-2012 11:40	BKG		0.0500		
5-JUN-2012 03:31	BKG		0.0700		
6-JUN-2012 01:39	BKG		0.0700		

6-JUN-2012 04:39 BKG 0.0600 | | |

-- Multi-Test Full Report --

Description : Quad10D (Hex 4) alpha bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.058222 Std Deviation : 0.028386

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
3-APR-2012 04:53	BKG		0.0500				
4-APR-2012 03:06	BKG		0.0400				
5-APR-2012 09:39	BKG		0.0500				
6-APR-2012 03:16	BKG		0.0600				
7-APR-2012 01:50	BKG		0.0500				
10-APR-2012 03:01	BKG		0.0800				
11-APR-2012 04:04	BKG		0.0200				
12-APR-2012 03:39	BKG		0.0500				
13-APR-2012 04:34	BKG		0.0500				
14-APR-2012 00:07	BKG		0.0300				
14-APR-2012 16:25	BKG		0.0800				
17-APR-2012 03:13	BKG		0.0600				
18-APR-2012 03:26	BKG		0.0500				
19-APR-2012 03:58	BKG		0.0400				
20-APR-2012 03:09	BKG		0.0400				
21-APR-2012 05:37	BKG		0.0600				
24-APR-2012 06:02	BKG		0.0600				
25-APR-2012 04:13	BKG		0.0500				
26-APR-2012 03:46	BKG		0.0500				
27-APR-2012 03:39	BKG		0.0400				
28-APR-2012 01:00	BKG		0.0500				

29-APR-2012 02:56	BKG		0.0500		
29-APR-2012 09:35	BKG		0.0300		
1-MAY-2012 03:26	BKG		0.0300		
2-MAY-2012 03:27	BKG		0.0900		
3-MAY-2012 03:47	BKG		0.0400		
4-MAY-2012 03:40	BKG		0.0400		
5-MAY-2012 01:23	BKG		0.0500		
5-MAY-2012 18:05	BKG		0.0400		
8-MAY-2012 03:29	BKG		0.0500		
9-MAY-2012 02:59	BKG		0.0400		
10-MAY-2012 03:13	BKG		0.0400		
11-MAY-2012 03:41	BKG		0.0500		
12-MAY-2012 04:36	BKG		0.0700		
12-MAY-2012 15:52	BKG		0.0400		
15-MAY-2012 03:35	BKG		0.0600		
16-MAY-2012 03:02	BKG		0.0300		
17-MAY-2012 04:06	BKG		0.0400		
18-MAY-2012 05:24	BKG		0.0500		
19-MAY-2012 04:56	BKG		0.0500		
19-MAY-2012 16:54	BKG		0.0700		
22-MAY-2012 03:10	BKG		0.0600		
23-MAY-2012 03:33	BKG		0.0500		
24-MAY-2012 04:19	BKG		0.0500		
25-MAY-2012 04:20	BKG		0.0400		
26-MAY-2012 03:56	BKG		2.6100	Ac	
27-MAY-2012 19:48	BKG		0.0600		
30-MAY-2012 04:56	BKG		0.0600		
31-MAY-2012 04:50	BKG		0.0600		
1-JUN-2012 04:56	BKG		0.0400		
2-JUN-2012 03:53	BKG		0.0600		
2-JUN-2012 03:53	BKG		0.0600		
3-JUN-2012 11:40	BKG		0.0600		
5-JUN-2012 03:31	BKG		0.0400		

Batch Nbr: 2142121

Alpha Beta, Ra-228 by GPC , Calculated Results

Detailed Report

5/29/2012 8:18:06 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TF	WATER	*STLE	Ra228WoBS	MTEHJ3AC	pCi/L		05/03/12 09:40	05/29/12 13:39	05/23/12 15:55	RATA45972	1	g	
240,MSA-DMW6S-050312					,J2E060401-1		WATER			29.3	05/29/12 07:30	RATA45972 Alq	100%	938.70 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/29/12 11:49	RA-228	38	94	GPC3A	1	N	N	4.6115E-01	1.0000E+00	N	85%	N		1.5547E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		7%			(0.000E+00)	0.001065		
1	05/29/12 12:44	RA-228	35	94	GPC3A	1	N	N	4.6115E-01	1.0000E+00	N	85%	N		1.7254E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		7%			(0.000E+00)	0.001065		
2	05/29/12 13:39	RA-228	43	94	GPC3A	1	N	N	4.6115E-01	1.0000E+00	N	85%	N		1.9147E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		7%			(0.000E+00)	0.001065		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/29/12	RA-228	R	0.854113		4.46667E-01	1.768035	1.768035	0.9387 L	85%		0.807528		
				(0.257722)		(1.2745E-01)	(0.526116)	(0.526116)	(0.173205)			0.352153		
	05/29/12	RA-228	R	0.820518		3.86667E-01	1.698494	1.698494	0.9387 L	85%		0.896143		
				(0.272446)		(1.2266E-01)	(0.55754)	(0.55754)	(0.173205)			0.390797		
	05/29/12	RA-228	R	1.287343		5.46667E-01	2.664832	2.664832	0.9387 L	85%		0.994483		
				(0.342243)		(1.3507E-01)	(0.695809)	(0.695809)	(0.173205)			0.433681		
	05/29/12	RA-228	A	0.987325		4.60000E-01	2.043787	2.043787	0.9387 L	85%		0.51926		
				(0.169239)		(7.4187E-02)	(0.345092)	(0.345092)	(0.10)			0.226443		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TF	WATER	*STLE	Ra228WoBS	MTEHN3AC	pCi/L		05/03/12 11:25	05/29/12 13:39	05/23/12 15:55	RATA45973	1	g	
240,MSA-DMW6I-050312					,J2E060401-2		WATER			30.1	05/29/12 07:30	RATA45973 Alq	100%	483.60 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/29/12 11:49	RA-228	255	136	GPC3B	1	N	N	4.7436E-01	1.0000E+00	N	88%	N		1.5547E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		7%			(0.000E+00)	0.002068		
1	05/29/12 12:44	RA-228	222	136	GPC3B	1	N	N	4.7436E-01	1.0000E+00	N	88%	N		1.7254E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		7%			(0.000E+00)	0.002068		
2	05/29/12 13:39	RA-228	190	136	GPC3B	1	N	N	4.7436E-01	1.0000E+00	N	88%	N		1.9147E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		7%			(0.000E+00)	0.002068		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/29/12	RA-228	R	16.320845		4.64667E+00	17.405574	17.405574	0.4836 L	88%		1.745541		
				(1.943359)		(3.2173E-01)	(1.880935)	(1.880935)	(0.173205)			0.778047		
	05/29/12	RA-228	R	15.539285		3.98667E+00	16.572069	16.572069	0.4836 L	88%		1.937091		
				(1.907373)		(3.0052E-01)	(1.857718)	(1.857718)	(0.173205)			0.863427		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.34
TestAmerica

Batch Nbr: 2142121

Alpha Beta, Ra-228 by GPC , Calculated Results

5/29/2012 8:18:06 PM

05/29/12	RA-228	R	14.476165	3.34667E+00	15.438291	15.438291	0.4836 L	88%	2.149661
			(1.848457)	(2.7841E-01)	(1.813886)	(1.813886)	(0.173205)		0.958177
05/29/12	RA-228	A	15.445432	3.99333E+00	16.471978	16.471978	0.4836 L	88%	1.122425
			(1.097042)	(1.7363E-01)	(1.068707)	(1.068707)	(0.10)		0.500303

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TF	WATER	*STLE	Ra228WoBS	MTEHP1AD	pCi/L	R	05/03/12 13:00	05/29/12 13:39	05/23/12 15:55	RATA45975	1	g	
240,MSA-DMW6D-050312 DUP					,J2E060401-3		WATER			30.1	05/29/12 07:30	RATA45975 Alq	85%	508.20 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/29/12 11:49	RA-228	123	115	GPC3C	1	N	N	4.7120E-01	1.0000E+00	N	74%	N		1.5547E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.504E-02)	(0.000E+00)		6%			(0.000E+00)	0.001968		
1	05/29/12 12:44	RA-228	118	115	GPC3C	1	N	N	4.7120E-01	1.0000E+00	N	74%	N		1.7254E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.504E-02)	(0.000E+00)		6%			(0.000E+00)	0.001968		
2	05/29/12 13:39	RA-228	124	115	GPC3C	1	N	N	4.7120E-01	1.0000E+00	N	74%	N		1.9147E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.504E-02)	(0.000E+00)		6%			(0.000E+00)	0.001968		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/29/12	RA-228	R	8.240756		2.07667E+00	9.235716	9.235716	0.5082 L	74%		1.830764		
				(1.21179)		(2.2467E-01)	(1.277174)	(1.277174)	(0.173205)			0.808322		
	05/29/12	RA-228	R	8.704698		1.97667E+00	9.755672	9.755672	0.5082 L	74%		2.031666		
				(1.300635)		(2.2018E-01)	(1.373629)	(1.373629)	(0.173205)			0.897025		
	05/29/12	RA-228	R	10.24636		2.09667E+00	11.48347	11.48347	0.5082 L	74%		2.254615		
				(1.502131)		(2.2556E-01)	(1.582548)	(1.582548)	(0.173205)			0.995461		
	05/29/12	RA-228	A	9.063938		2.05000E+00	10.158286	10.158286	0.5082 L	74%		1.177226		
				(0.775778)		(1.2903E-01)	(0.818025)	(0.818025)	(0.10)			0.519771		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TF	WATER	*STLE	Ra228WoBS	MTEHP3AC	pCi/L		05/03/12 13:00	05/29/12 13:39	05/23/12 15:55	RATA45974	1	g	
240,MSA-DMW6D-050312					,J2E060401-3		WATER			29.3	05/29/12 07:30	RATA45974 Alq	85%	1002.40 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/29/12 11:49	RA-228	212	99	GPC3D	1	N	N	4.7172E-01	1.0000E+00	N	73%	N		1.5547E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		6%			(0.000E+00)	0.000998		
1	05/29/12 12:44	RA-228	234	99	GPC3D	1	N	N	4.7172E-01	1.0000E+00	N	73%	N		1.7254E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		6%			(0.000E+00)	0.000998		
2	05/29/12 13:39	RA-228	205	99	GPC3D	1	N	N	4.7172E-01	1.0000E+00	N	73%	N		1.9147E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		6%			(0.000E+00)	0.000998		

() - (1s Uncertainities), Q - Qualifier, U Result Is Less Than Lc = 1.645 * TPU

RecCnt:4

RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

TestAmerica

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 2142121

Alpha Beta, Ra-228 by GPC , Calculated Results

5/29/2012 8:18:06 PM

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/29/12	RA-228	R	**8.031382**		3.91000E+00	17.754162	17.754162	1.0024 L	73%		0.887289		
				(0.989199)		(2.9309E-01)	(1.998429)	(1.998429)	(0.173205)			0.38821		
	05/29/12	RA-228	R	**9.915686**		4.35000E+00	21.919602	21.919602	1.0024 L	73%		0.984657		
				(1.196307)		(3.0773E-01)	(2.406758)	(2.406758)	(0.173205)			0.430811		
	05/29/12	RA-228	R	**9.536627**		3.77000E+00	21.081656	21.081656	1.0024 L	73%		1.09271		
				(1.183391)		(2.8827E-01)	(2.394237)	(2.394237)	(0.173205)			0.478086		
	05/29/12	RA-228	A	**9.161232**		4.01000E+00	20.251807	20.251807	1.0024 L	73%		0.570548		
				(0.650648)		(1.7117E-01)	(1.313121)	(1.313121)	(0.10)			0.249628		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TF	WATER	*STLE	Ra228WoBS	MTNL71AA	pCi/L	B	05/03/12 09:40	05/29/12 13:40	05/23/12 15:55	RATA45976	1	g	
0,INTRA-LAB BLANK					,J2E210000-121		WATER			29.0	05/29/12 07:30	RATA45976 Alq	100%	1001.70 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/29/12 11:50	RA-228	23	151	GPC4A	1	N	N	4.6389E-01	1.0000E+00	N	84%	N		1.5572E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.446E-02)	(0.000E+00)		7%			(0.000E+00)	0.000998		
1	05/29/12 12:45	RA-228	17	151	GPC4A	1	N	N	4.6389E-01	1.0000E+00	N	84%	N		1.7281E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.446E-02)	(0.000E+00)		7%			(0.000E+00)	0.000998		
2	05/29/12 13:40	RA-228	26	151	GPC4A	1	N	N	4.6389E-01	1.0000E+00	N	84%	N		1.9177E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.446E-02)	(0.000E+00)		7%			(0.000E+00)	0.000998		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/29/12	RA-228	R	**-0.078115**	U4	-4.33333E-02	-0.172553	-0.172553	1.0017 L	84%		0.93873		
				(0.188171)		(1.0430E-01)	(0.415572)	(0.415572)	(0.173205)			0.420763		
	05/29/12	RA-228	R	**-0.326745**	U4	-1.63333E-01	-0.721764	-0.721764	1.0017 L	84%		1.041744		
				(0.187033)		(9.2075E-02)	(0.411567)	(0.411567)	(0.173205)			0.466936		
	05/29/12	RA-228	R	**0.036999**	U4	1.66667E-02	0.081729	0.081729	1.0017 L	84%		1.156025		
				(0.243996)		(1.0990E-01)	(0.538961)	(0.538961)	(0.173205)			0.51816		
	05/29/12	RA-228	A	**-0.12262**	U4	-6.33333E-02	-0.270863	-0.270863	1.0017 L	84%		0.603619		
				(0.12015)		(5.9098E-02)	(0.265114)	(0.265114)	(0.10)			0.270558		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TF	WATER	*STLE	Ra228WoBS	MTNL71AC	pCi/L	S	05/03/12 09:40	05/29/12 13:40	05/23/12 15:55	RASF3744	1	g	
0,INTRA-LAB CHECK					,J2E210000-121		WATER			29.6	05/29/12 07:30	RASF3744 Alq	94%	1000.80 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/29/12 11:50	RA-228	168	116	GPC4B	1	N	N	4.5386E-01	1.0000E+00	N	81%	N		1.5572E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		
1	05/29/12 12:45	RA-228	145	116	GPC4B	1	N	N	4.5386E-01	1.0000E+00	N	81%	N		1.7281E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:6

RADCALC v4.8.34
TestAmerica

Batch Nbr: 2142121

Alpha Beta, Ra-228 by GPC , Calculated Results

5/29/2012 8:18:06 PM

2	05/29/12 13:40	RA-228	131	116	GPC4B	1	N	N	4.5386E-01	1.0000E+00	N	81%	N		1.9177E+00	4.5045E+02	1.0067E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/29/12	RA-228	R	**5.712009**		2.97333E+00	12.606227	12.606227	1.0008 L	81%	115%	0.889687		
				(0.76323)		(2.6170E-01)	(1.562046)	(1.562046)	(0.173205)			0.393015		
	05/29/12	RA-228	R	**5.358156**		2.51333E+00	11.825284	11.825284	1.0008 L	81%	108%	0.987318		
				(0.748086)		(2.4349E-01)	(1.541498)	(1.541498)	(0.173205)			0.436144		
	05/29/12	RA-228	R	**5.283541**		2.23333E+00	11.660613	11.660613	1.0008 L	81%	106%	1.095628		
				(0.763302)		(2.3171E-01)	(1.580474)	(1.580474)	(0.173205)			0.483989		
	05/29/12	RA-228	A	**5.451235**		2.57333E+00	12.030708	12.030708	1.0008 L	81%	110%	0.572083		
				(0.43777)		(1.4200E-01)	(0.901486)	(0.901486)	(0.10)			0.252716		

Batch Nbr: 2128092

Alpha Beta, Ra-228 by GPC , Calculated Results

5/15/2012 10:05:10 AM

Detailed Report

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TF	WATER	*STLE	Ra228WoBS	**MTEHJ1AC**	pCi/L		05/03/12 09:40	05/14/12 14:57	05/09/12 13:15	RATA45760	1	g	
240,MSA-DMW6S-050312					,J2E060401-1		WATER			30.1	05/14/12 09:15	RATA45760 Alq	79%	996.20 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/14/12 13:06	RA-228	62	84	GPC2B	1	N	N	4.5833E-01	1.0000E+00	N	69%	N		1.4765E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.070E-02)	(0.000E+00)		5%			(0.000E+00)	0.001004		
1	05/14/12 14:02	RA-228	49	84	GPC2B	1	N	N	4.5833E-01	1.0000E+00	N	69%	N		1.6385E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.070E-02)	(0.000E+00)		5%			(0.000E+00)	0.001004		
2	05/14/12 14:57	RA-228	38	84	GPC2B	1	N	N	4.5833E-01	1.0000E+00	N	69%	N		1.8182E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.070E-02)	(0.000E+00)		5%			(0.000E+00)	0.001004		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/14/12	RA-228	R	**2.039695**		9.60000E-01	4.50177	4.50177	0.9962 L	69%		0.854492		
				(0.394288)		(1.6042E-01)	(0.840611)	(0.840611)	(0.173205)			0.369887		
	05/14/12	RA-228	R	**1.650487**		7.00000E-01	3.642756	3.642756	0.9962 L	69%		0.948262		
				(0.374009)		(1.4329E-01)	(0.805123)	(0.805123)	(0.173205)			0.410477		
	05/14/12	RA-228	R	**1.255919**		4.80000E-01	2.771913	2.771913	0.9962 L	69%		1.052288		
				(0.354045)		(1.2702E-01)	(0.769017)	(0.769017)	(0.173205)			0.455507		
	05/14/12	RA-228	A	**1.6487**		7.13333E-01	3.638813	3.638813	0.9962 L	69%		0.549453		
				(0.216203)		(8.3267E-02)	(0.465025)	(0.465025)	(0.10)			0.237844		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TF	WATER	*STLE	Ra228WoBS	**MTEHN1AC**	pCi/L		05/03/12 11:25	05/14/12 14:57	05/09/12 13:15	RATA45761	1	g	
240,MSA-DMW6I-050312					,J2E060401-2		WATER			31.4	05/14/12 09:15	RATA45761 Alq	80%	1001.80 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/14/12 13:06	RA-228	234	91	GPC2C	1	N	N	4.4236E-01	1.0000E+00	N	73%	N		1.4765E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.397E-02)	(0.000E+00)		6%			(0.000E+00)	0.000998		
1	05/14/12 14:02	RA-228	213	91	GPC2C	1	N	N	4.4236E-01	1.0000E+00	N	73%	N		1.6385E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.397E-02)	(0.000E+00)		6%			(0.000E+00)	0.000998		
2	05/14/12 14:57	RA-228	187	91	GPC2C	1	N	N	4.4236E-01	1.0000E+00	N	73%	N		1.8182E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.397E-02)	(0.000E+00)		6%			(0.000E+00)	0.000998		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/14/12	RA-228	R	**9.041062**		4.37667E+00	20.067002	20.067002	1.0018 L	73%		0.86014		
				(1.101225)		(3.0759E-01)	(2.228779)	(2.228779)	(0.173205)			0.37431		
	05/14/12	RA-228	R	**9.070379**		3.95667E+00	20.132071	20.132071	1.0018 L	73%		0.954529		
				(1.125734)		(2.9362E-01)	(2.286876)	(2.286876)	(0.173205)			0.415386		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:2

RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

TestAmerica

Batch Nbr: 2128092 # Alpha Beta, Ra-228 by GPC , Calculated Results 5/15/2012 10:05:10 AM

05/14/12	RA-228	R	**8.742582**	3.43667E+00	19.404513	19.404513	1.0018 L	73%	1.059242
			(1.116711)	(2.7534E-01)	(2.280796)	(2.280796)	(0.173205)		0.460955
05/14/12	RA-228	A	**8.951341**	3.92333E+00	19.867862	19.867862	1.0018 L	73%	0.553084
			(0.643516)	(1.6886E-01)	(1.308064)	(1.308064)	(0.10)		0.240688

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TF	WATER	*STLE	Ra228WoBS	**MTEHN1AD**	**pCi/L**	R	05/03/12 11:25	05/14/12 14:57	05/09/12 13:15	RATA45762	1	g	
240,MSA-DMW6I-050312 DUP					,J2E060401-2		WATER			31.1	05/14/12 09:15	RATA45762 Alq	90%	993.30 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/14/12 13:06	RA-228	433	100	GPC2D	1	N	N	4.4290E-01	1.0000E+00	N	81%	N		1.4765E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.416E-02)	(0.000E+00)		6%			(0.000E+00)	0.001007		
1	05/14/12 14:02	RA-228	370	100	GPC2D	1	N	N	4.4290E-01	1.0000E+00	N	81%	N		1.6385E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.416E-02)	(0.000E+00)		6%			(0.000E+00)	0.001007		
2	05/14/12 14:57	RA-228	333	100	GPC2D	1	N	N	4.4290E-01	1.0000E+00	N	81%	N		1.8182E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.416E-02)	(0.000E+00)		6%			(0.000E+00)	0.001007		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/14/12	RA-228	R	**15.581269**		8.32667E+00	34.289826	34.289826	0.9933 L	81%		0.811881		
				(1.737588)		(4.1751E-01)	(3.418024)	(3.418024)	(0.173205)			0.355441		
	05/14/12	RA-228	R	**14.674599**		7.06667E+00	32.294509	32.294509	0.9933 L	81%		0.900974		
				(1.667234)		(3.8615E-01)	(3.294676)	(3.294676)	(0.173205)			0.394445		
	05/14/12	RA-228	R	**14.579174**		6.32667E+00	32.084507	32.084507	0.9933 L	81%		0.999812		
				(1.679939)		(3.6648E-01)	(3.330863)	(3.330863)	(0.173205)			0.437717		
	05/14/12	RA-228	A	**14.945014**		7.24000E+00	32.889614	32.889614	0.9933 L	81%		0.522053		
				(0.978722)		(2.2552E-01)	(1.933116)	(1.933116)	(0.10)			0.228554		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TF	WATER	*STLE	Ra228WoBS	**MTEHP1AC**	**pCi/L**		05/03/12 13:00	05/14/12 14:43	05/09/12 13:15	RATA45763	1	g	
240,MSA-DMW6D-050312					,J2E060401-3		WATER			29.7	05/14/12 09:15	RATA45763 Alq	60%	1000.40 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/14/12 13:03	RA-228	416	107	GPC3A	1	N	N	4.6118E-01	1.0000E+00	N	52%	N		1.4658E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		4%			(0.000E+00)	0.001		
1	05/14/12 13:53	RA-228	351	107	GPC3A	1	N	N	4.6118E-01	1.0000E+00	N	52%	N		1.6113E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		4%			(0.000E+00)	0.001		
2	05/14/12 14:43	RA-228	341	107	GPC3A	1	N	N	4.6118E-01	1.0000E+00	N	52%	N		1.7713E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		4%			(0.000E+00)	0.001		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU Page 2 RecCnt:4 RADCALC v4.8.34
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration TestAmerica
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 2128092 # Alpha Beta, Ra-228 by GPC , Calculated Results 5/15/2012 10:05:10 AM

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/15/12	RA-228	R	22.050654		7.96333E+00	48.874985	48.874985	1.0004 L	52%		1.237572		
				(2.442567)		(4.0938E-01)	(4.830997)	(4.830997)	(0.173205)			0.544069		
	05/15/12	RA-228	R	20.282999		6.66333E+00	44.956999	44.956999	1.0004 L	52%		1.360456		
				(2.296224)		(3.7628E-01)	(4.56625)	(4.56625)	(0.173205)			0.598092		
	05/15/12	RA-228	R	21.627743		6.46333E+00	47.937608	47.937608	1.0004 L	52%		1.495542		
				(2.458439)		(3.7093E-01)	(4.893624)	(4.893624)	(0.173205)			0.657479		
	05/15/12	RA-228	A	21.320465		7.03000E+00	47.256531	47.256531	1.0004 L	52%		0.787808		
				(1.385749)		(2.2280E-01)	(2.751499)	(2.751499)	(0.10)			0.346341		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TF	WATER	*STLE	Ra228WoBS	MTEM41AA	pCi/L	B	05/03/12 09:40	05/14/12 14:43	05/09/12 13:15	RATA45764	1	g	
0,INTRA-LAB BLANK					,J2E070000-92 v4.8.34		WATER			29.9	05/14/12 09:15	RATA45764 Alq	100%	1001.00 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/14/12 13:03	RA-228	38	133	GPC3B	1	N	N	4.7435E-01	1.0000E+00	N	87%	N		1.4658E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		
1	05/14/12 13:53	RA-228	30	133	GPC3B	1	N	N	4.7435E-01	1.0000E+00	N	87%	N		1.6113E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		
2	05/14/12 14:43	RA-228	21	133	GPC3B	1	N	N	4.7435E-01	1.0000E+00	N	87%	N		1.7713E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/14/12	RA-228	R	0.50764		3.16667E-01	1.125801	1.125801	1.001 L	87%		0.788805		
				(0.212785)		(1.2914E-01)	(0.468528)	(0.468528)	(0.173205)			0.351168		
	05/14/12	RA-228	R	0.276086	U4	1.56667E-01	0.61228	0.61228	1.001 L	87%		0.867129		
				(0.206327)		(1.1609E-01)	(0.456549)	(0.456549)	(0.173205)			0.386037		
	05/14/12	RA-228	R	-0.045202	U4	-2.33333E-02	-0.100245	-0.100245	1.001 L	87%		0.95323		
				(0.192585)		(9.9387E-02)	(0.42707)	(0.42707)	(0.173205)			0.424368		
	05/14/12	RA-228	A	0.246175		1.50000E-01	0.545945	0.545945	1.001 L	87%		0.502134		
				(0.117822)		(6.6694E-02)	(0.260415)	(0.260415)	(0.10)			0.223545		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TF	WATER	*STLE	Ra228WoBS	MTEM41AC	pCi/L	S	05/03/12 09:40	05/14/12 14:43	05/09/12 13:15	RASF3707	1	g	
0,INTRA-LAB CHECK					,J2E070000-92 v4.8.34		WATER			30.5	05/14/12 09:15	RASF3707 Alq	80%	1000.30 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/14/12 13:03	RA-228	152	108	GPC3C	1	N	N	4.7114E-01	1.0000E+00	N	71%	N		1.4658E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.503E-02)	(0.000E+00)		6%			(0.000E+00)	0.001		
1	05/14/12 13:53	RA-228	142	108	GPC3C	1	N	N	4.7114E-01	1.0000E+00	N	71%	N		1.6113E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.503E-02)	(0.000E+00)		6%			(0.000E+00)	0.001		

() - (1s Uncertainties), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:6 RADCALC v4.8.34 TestAmerica

Batch Nbr: 2128092

Alpha Beta, Ra-228 by GPC , Calculated Results

5/15/2012 10:05:11 AM

2	05/14/12 14:43	RA-228	119	108	GPC3C	1	N	N	4.7114E-01	1.0000E+00	N	71%	N		1.7713E+00	4.5045E+02	1.0020E+00		
			50	300			Y		(1.503E-02)	(0.000E+00)		6%			(0.000E+00)	0.001			

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/14/12	RA-228	R	**5.334211**		2.68000E+00	11.821484	11.821484	1.0003 L	71%	109%	0.893213		
				(0.72652)		(2.4900E-01)	(1.497669)	(1.497669)	(0.173205)			0.3929		
	05/14/12	RA-228	R	**5.426266**		2.48000E+00	12.025494	12.025494	1.0003 L	71%	110%	0.981904		
				(0.754789)		(2.4083E-01)	(1.560932)	(1.560932)	(0.173205)			0.431913		
	05/14/12	RA-228	R	**4.858641**		2.02000E+00	10.767544	10.767544	1.0003 L	71%	99%	1.079401		
				(0.71865)		(2.2091E-01)	(1.498889)	(1.498889)	(0.173205)			0.4748		
	05/14/12	RA-228	A	**5.206373**		2.39333E+00	11.538174	11.538174	1.0003 L	71%	106%	0.568597		
				(0.423477)		(1.3695E-01)	(0.877255)	(0.877255)	(0.10)			0.250111		

() - (1s Uncertainities), Q - Qualifier, U Result Is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:6

RADCALC v4.8.34

TestAmerica

Batch Nbr: 2136097

Alpha Beta, Ra-228 by GPC , Calculated Results

Detailed Report

5/17/2012 10:49:28 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TF	WATER	*STLE	Ra228WoBS	MTEHJ2AC	pCi/L		05/03/12 09:40	05/17/12 14:41	05/15/12 10:50		1	g	
240,MSA-DMW6S-050312					,J2E060401-1		WATER			31.4	05/17/12 08:40			996.20 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:50	RA-228	45	106	GPC3D	1	N	N	4.7159E-01	1.0000E+00	N	91%	N		1.5387E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		7%			(0.000E+00)	0.001004		
1	05/17/12 13:46	RA-228	41	106	GPC3D	1	N	N	4.7159E-01	1.0000E+00	N	91%	N		1.7075E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		7%			(0.000E+00)	0.001004		
2	05/17/12 14:41	RA-228	46	106	GPC3D	1	N	N	4.7159E-01	1.0000E+00	N	91%	N		1.8949E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		7%			(0.000E+00)	0.001004		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**0.887074**		5.46667E-01	1.954034	1.954034	0.9962 L	91%		0.722254		
				(0.241024)		(1.3848E-01)	(0.521491)	(0.521491)	(0.009962)			0.31734		
	05/17/12	RA-228	R	**0.840357**		4.66667E-01	1.851127	1.851127	0.9962 L	91%		0.801512		
				(0.252619)		(1.3258E-01)	(0.548401)	(0.548401)	(0.009962)			0.352164		
	05/17/12	RA-228	R	**1.132412**		5.66667E-01	2.494464	2.494464	0.9962 L	91%		0.889467		
				(0.300932)		(1.3992E-01)	(0.650573)	(0.650573)	(0.009962)			0.39081		
	05/17/12	RA-228	A	**0.953281**		5.26667E-01	2.099875	2.099875	0.9962 L	91%		0.464427		
				(0.153648)		(7.9115E-02)	(0.332656)	(0.332656)	(0.005752)			0.204058		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TF	WATER	*STLE	Ra228WoBS	MTEHN2AC	pCi/L		05/03/12 11:25	05/17/12 14:41	05/15/12 10:50		1	g	
240,MSA-DMW6I-050312					,J2E060401-2		WATER			30.7	05/17/12 08:40		61%	1001.80 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:51	RA-228	252	173	GPC4A	1	N	N	4.6411E-01	1.0000E+00	N	54%	N		1.5402E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.447E-02)	(0.000E+00)		4%			(0.000E+00)	0.000998		
1	05/17/12 13:46	RA-228	198	173	GPC4A	1	N	N	4.6411E-01	1.0000E+00	N	54%	N		1.7092E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.447E-02)	(0.000E+00)		4%			(0.000E+00)	0.000998		
2	05/17/12 14:41	RA-228	207	173	GPC4A	1	N	N	4.6411E-01	1.0000E+00	N	54%	N		1.8968E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.447E-02)	(0.000E+00)		4%			(0.000E+00)	0.000998		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**12.323226**		4.46333E+00	27.298694	27.298694	1.0018 L	54%		1.528427		
				(1.515705)		(3.2050E-01)	(3.055498)	(3.055498)	(0.010018)			0.6898		
	05/17/12	RA-228	R	**10.366445**		3.38333E+00	22.963988	22.963988	1.0018 L	54%		1.696152		
				(1.353937)		(2.8482E-01)	(2.761258)	(2.761258)	(0.010018)			0.765497		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:2 RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

TestAmerica

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 2136097

Alpha Beta, Ra-228 by GPC , Calculated Results

5/17/2012 10:49:28 PM

05/17/12	RA-228	R	**12.116062**	3.56333E+00	26.83978	26.83978	1.0018 L	54%	1.882282
			(1.563113)	(2.9107E-01)	(3.180713)	(3.180713)	(0.010018)		0.8495
05/17/12	RA-228	A	**11.601911**	3.80333E+00	25.700821	25.700821	1.0018 L	54%	0.982816
			(0.854649)	(1.7274E-01)	(1.734536)	(1.734536)	(0.005784)		0.443558

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TF	WATER	*STLE	Ra228WoBS	**MTEHN2AD**	**pCi/L**	**R**	05/03/12 11:25	05/17/12 14:41	05/15/12 10:50		1	g	
240,MSA-DMW6I-050312 DUP					,J2E060401-2		WATER			29.6	05/17/12 08:40		76%	993.30 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:51	RA-228	382	126	GPC4B	1	N	N	4.5386E-01	1.0000E+00	N	66%	N		1.5402E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		5%			(0.000E+00)	0.001007		
1	05/17/12 13:46	RA-228	385	126	GPC4B	1	N	N	4.5386E-01	1.0000E+00	N	66%	N		1.7092E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		5%			(0.000E+00)	0.001007		
2	05/17/12 14:41	RA-228	321	126	GPC4B	1	N	N	4.5386E-01	1.0000E+00	N	66%	N		1.8968E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		5%			(0.000E+00)	0.001007		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**16.968984**		7.22000E+00	37.271144	37.271144	0.9933 L	66%		1.129024		
				(1.946998)		(3.9268E-01)	(3.830949)	(3.830949)	(0.009933)			0.501117		
	05/17/12	RA-228	R	**18.987597**		7.28000E+00	41.704881	41.704881	0.9933 L	66%		1.252919		
				(2.176465)		(3.9421E-01)	(4.281414)	(4.281414)	(0.009933)			0.556108		
	05/17/12	RA-228	R	**17.366402**		6.00000E+00	38.144044	38.144044	0.9933 L	66%		1.390411		
				(2.041008)		(3.6028E-01)	(4.039024)	(4.039024)	(0.009933)			0.617134		
	05/17/12	RA-228	A	**17.774328**		6.83333E+00	39.040023	39.040023	0.9933 L	66%		0.72599		
				(1.187599)		(2.2096E-01)	(2.340949)	(2.340949)	(0.005735)			0.32223		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TF	WATER	*STLE	Ra228WoBS	**MTEHP2AC**	**pCi/L**		05/03/12 13:00	05/17/12 14:41	05/15/12 10:50		1	g	
240,MSA-DMW6D-050312					,J2E060401-3		WATER			30.2	05/17/12 08:40		99%	1004.00 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:51	RA-228	431	225	GPC4C	1	N	N	4.6079E-01	1.0000E+00	N	87%	N		1.5402E+00	4.5045E+02	1.0039E+00	
			50	300			Y		(1.378E-02)	(0.000E+00)		7%			(0.000E+00)	0.000996		
1	05/17/12 13:46	RA-228	402	225	GPC4C	1	N	N	4.6079E-01	1.0000E+00	N	87%	N		1.7092E+00	4.5045E+02	1.0039E+00	
			50	300			Y		(1.378E-02)	(0.000E+00)		7%			(0.000E+00)	0.000996		
2	05/17/12 14:41	RA-228	349	225	GPC4C	1	N	N	4.6079E-01	1.0000E+00	N	87%	N		1.8968E+00	4.5045E+02	1.0039E+00	
			50	300			Y		(1.378E-02)	(0.000E+00)		7%			(0.000E+00)	0.000996		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:4

RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

TestAmerica

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 2136097

Alpha Beta, Ra-228 by GPC , Calculated Results

5/17/2012 10:49:28 PM

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	13.663259		7.87000E+00	30.334295	30.334295	1.004 L	87%		1.082829		
				(1.540889)		(4.1821E-01)	(3.051342)	(3.051342)	(0.01004)			0.494659		
	05/17/12	RA-228	R	14.045172		7.29000E+00	31.182194	31.182194	1.004 L	87%		1.201655		
				(1.599386)		(4.0410E-01)	(3.174982)	(3.174982)	(0.01004)			0.548942		
	05/17/12	RA-228	R	13.320102		6.23000E+00	29.572441	29.572441	1.004 L	87%		1.33352		
				(1.550849)		(3.7696E-01)	(3.095341)	(3.095341)	(0.01004)			0.609181		
	05/17/12	RA-228	A	13.676178		7.13000E+00	30.362977	30.362977	1.004 L	87%		0.696285		
				(0.902928)		(2.3101E-01)	(1.794199)	(1.794199)	(0.005797)			0.318078		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TF	WATER	*STLE	Ra228WoBS	MTEM42AA	pCi/L	B	05/03/12 09:40	05/17/12 14:41	05/15/12 10:50		1	g	
0,INTRA-LAB BLANK					,J2E070000-92 v4.8.34		WATER			30.2	05/17/12 08:40		100%	1001.00 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:51	RA-228	23	143	GPC4D	1	N	N	4.4914E-01	1.0000E+00	N	88%	N		1.5402E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.267E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		
1	05/17/12 13:46	RA-228	28	143	GPC4D	1	N	N	4.4914E-01	1.0000E+00	N	88%	N		1.7092E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.267E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		
2	05/17/12 14:41	RA-228	26	143	GPC4D	1	N	N	4.4914E-01	1.0000E+00	N	88%	N		1.8968E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(1.267E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	-0.029413	U4	-1.66667E-02	-0.065103	-0.065103	1.001 L	88%		0.896894		
				(0.18333)		(1.0387E-01)	(0.405768)	(0.405768)	(0.01001)			0.40086		
	05/17/12	RA-228	R	0.163203	U4	8.33333E-02	0.361234	0.361234	1.001 L	88%		0.995317		
				(0.222064)		(1.1309E-01)	(0.491171)	(0.491171)	(0.01001)			0.444849		
	05/17/12	RA-228	R	0.094178	U4	4.33333E-02	0.208455	0.208455	1.001 L	88%		1.10454		
				(0.238151)		(1.0949E-01)	(0.527015)	(0.527015)	(0.01001)			0.493665		
	05/17/12	RA-228	A	0.075989	U4	3.66667E-02	0.168195	0.168195	1.001 L	88%		0.576725		
				(0.12456)		(6.2864E-02)	(0.275609)	(0.275609)	(0.005779)			0.257763		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TF	WATER	*STLE	Ra228WoBS	MTEM42AC	pCi/L	S	05/03/12 09:40	05/17/12 14:42	05/15/12 10:50	RASF3707	1	g	
0,INTRA-LAB CHECK					,J2E070000-92 v4.8.34		WATER			30.4	05/17/12 08:40		86%	1000.30 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:51	RA-228	242	301	GPC5A	1.5	N	N	5.8807E-01	1.0000E+00	N	76%	N		1.5408E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(8.204E-03)	(0.000E+00)		6%			(0.000E+00)	0.001		
1	05/17/12 13:46	RA-228	207	301	GPC5A	1.5	N	N	5.8807E-01	1.0000E+00	N	76%	N		1.7098E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(8.204E-03)	(0.000E+00)		6%			(0.000E+00)	0.001		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:6

RADCALC v4.8.34

TestAmerica

Batch Nbr: 2136097

Alpha Beta, Ra-228 by GPC , Calculated Results

5/17/2012 10:49:28 PM

2	05/17/12 14:42	RA-228	204	301	GPC5A	1.5	N	N	5.8807E-01	1.0000E+00	N	76%	N		1.8975E+00	4.5045E+02	1.0040E+00	
			50	300			Y		(8.204E-03)	(0.000E+00)		6%			(0.000E+00)	0.001		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**5.964567**		3.83667E+00	13.192745	13.192745	1.0003 L	76%	121%	1.108297		
				(0.754415)		(3.1646E-01)	(1.52705)	(1.52705)	(0.010003)			0.512322		
	05/17/12	RA-228	R	**5.411444**		3.13667E+00	11.969319	11.969319	1.0003 L	76%	110%	1.229918		
				(0.725018)		(2.9350E-01)	(1.482954)	(1.482954)	(0.010003)			0.568543		
	05/17/12	RA-228	R	**5.890406**		3.07667E+00	13.028712	13.028712	1.0003 L	76%	120%	1.364885		
				(0.793968)		(2.9145E-01)	(1.625634)	(1.625634)	(0.010003)			0.630933		
	05/17/12	RA-228	A	**5.755472**		3.35000E+00	12.730259	12.730259	1.0003 L	76%	117%	0.712662		
				(0.43782)		(1.7360E-01)	(0.892794)	(0.892794)	(0.005775)			0.329436		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:6

RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

TestAmerica

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 2121091

Alpha Beta, Ra-228 by GPC , Calculated Results

Detailed Report

5/17/2012 10:53:13 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TF	WATER	*STLE	Ra228WoBS	MR8251AF	pCi/L		04/25/12 11:45	05/17/12 14:40	05/02/12 11:35	RATA45720	1	g	
384121,GW-126					,J2D270484-1 v4.8.34		WATER			30.9	05/17/12 08:40	RATA45720 Alq	99%	505.10 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:50	RA-228	59	108	GPC2B	1	N	N	4.5834E-01	1.0000E+00	N	89%	N		1.5275E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.070E-02)	(0.000E+00)		7%			(0.000E+00)	0.00198		
1	05/17/12 13:45	RA-228	60	108	GPC2B	1	N	N	4.5834E-01	1.0000E+00	N	89%	N		1.6952E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.070E-02)	(0.000E+00)		7%			(0.000E+00)	0.00198		
2	05/17/12 14:40	RA-228	38	108	GPC2B	1	N	N	4.5834E-01	1.0000E+00	N	89%	N		1.8812E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.070E-02)	(0.000E+00)		7%			(0.000E+00)	0.00198		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**2.743945**		8.20000E-01	3.069753	3.069753	0.5051 L	89%		1.501693		
				(0.590606)		(1.5748E-01)	(0.642657)	(0.642657)	(0.173205)			0.660555		
	05/17/12	RA-228	R	**3.119327**		8.40000E-01	3.489706	3.489706	0.5051 L	89%		1.666484		
				(0.662882)		(1.5875E-01)	(0.72077)	(0.72077)	(0.173205)			0.733042		
	05/17/12	RA-228	R	**1.648396**		4.00000E-01	1.844122	1.844122	0.5051 L	89%		1.849358		
				(0.551524)		(1.2806E-01)	(0.610082)	(0.610082)	(0.173205)			0.813483		
	05/17/12	RA-228	A	**2.503889**		6.86667E-01	2.801194	2.801194	0.5051 L	89%		0.965625		
				(0.348394)		(8.5894E-02)	(0.380747)	(0.380747)	(0.10)			0.424753		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TF	WATER	*STLE	Ra228WoBS	MR83F1AF	pCi/L		04/25/12 12:41	05/17/12 14:40	05/02/12 11:35	RATA45725	1	g	
384121,GW-127					,J2D270484-2 v4.8.34		WATER			30.1	05/17/12 08:40	RATA45725 Alq	94%	500.20 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:50	RA-228	53	101	GPC2C	1	N	N	4.4251E-01	1.0000E+00	N	82%	N		1.5275E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.397E-02)	(0.000E+00)		7%			(0.000E+00)	0.001999		
1	05/17/12 13:45	RA-228	50	101	GPC2C	1	N	N	4.4251E-01	1.0000E+00	N	82%	N		1.6952E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.397E-02)	(0.000E+00)		7%			(0.000E+00)	0.001999		
2	05/17/12 14:40	RA-228	39	101	GPC2C	1	N	N	4.4251E-01	1.0000E+00	N	82%	N		1.8812E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.397E-02)	(0.000E+00)		7%			(0.000E+00)	0.001999		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**2.751581**		7.23333E-01	3.048472	3.048472	0.5002 L	82%		1.657661		
				(0.630831)		(1.4941E-01)	(0.682072)	(0.682072)	(0.173205)			0.726173		
	05/17/12	RA-228	R	**2.800243**		6.63333E-01	3.102384	3.102384	0.5002 L	82%		1.839568		
				(0.67381)		(1.4533E-01)	(0.730218)	(0.730218)	(0.173205)			0.80586		

() - (1s Uncertainities), Q - Qualifier, U Result Is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level In Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.34
TestAmerica

Batch Nbr: 2121091

Alpha Beta, Ra-228 by GPC , Calculated Results

5/17/2012 10:53:13 PM

05/17/12	RA-228	R	**2.076893**	4.43333E-01	2.300987	2.300987	0.5002 L	82%	2.041436
			(0.640067)	(1.2931E-01)	(0.699734)	(0.699734)	(0.173205)		0.894293
05/17/12	RA-228	A	**2.542906**	6.10000E-01	2.817281	2.817281	0.5002 L	82%	1.065916
			(0.374411)	(8.1763E-02)	(0.406621)	(0.406621)	(0.10)		0.466947

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TF	WATER	*STLE	Ra228WoBS	**MR83H1AF**	**pCi/L**		04/26/12 10:20	05/17/12 14:40	05/02/12 11:35	RATA45726	1	g	
384121,GW-26					,J2D270484-3 v4.8.34		WATER			30.3	05/17/12 08:40	RATA45726 Alq	89%	500.70 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:50	RA-228	42	81	GPC2D	1	N	N	4.4305E-01	1.0000E+00	N	78%	N		1.5275E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.416E-02)	(0.000E+00)		6%			(0.000E+00)	0.001997		
1	05/17/12 13:45	RA-228	45	81	GPC2D	1	N	N	4.4305E-01	1.0000E+00	N	78%	N		1.6952E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.416E-02)	(0.000E+00)		6%			(0.000E+00)	0.001997		
2	05/17/12 14:40	RA-228	28	81	GPC2D	1	N	N	4.4305E-01	1.0000E+00	N	78%	N		1.8812E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.416E-02)	(0.000E+00)		6%			(0.000E+00)	0.001997		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**2.271827**		5.70000E-01	2.520219	2.520219	0.5007 L	78%		1.577938		
				(0.576527)		(1.3304E-01)	(0.627025)	(0.627025)	(0.173205)			0.681362		
	05/17/12	RA-228	R	**2.786512**		6.30000E-01	3.091178	3.091178	0.5007 L	78%		1.751096		
				(0.668422)		(1.3748E-01)	(0.725216)	(0.725216)	(0.173205)			0.756133		
	05/17/12	RA-228	R	**1.423437**		2.90000E-01	1.57907	1.57907	0.5007 L	78%		1.943256		
				(0.558232)		(1.1000E-01)	(0.614212)	(0.614212)	(0.173205)			0.839108		
	05/17/12	RA-228	A	**2.160592**		4.96667E-01	2.396822	2.396822	0.5007 L	78%		1.014653		
				(0.348137)		(7.3560E-02)	(0.379525)	(0.379525)	(0.10)			0.438133		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TF	WATER	*STLE	Ra228WoBS	**MR83H1AL**	**pCi/L**	**R**	04/26/12 10:20	05/17/12 14:41	05/02/12 11:35	RATA45727	1	g	
384121,GW-26 DUP					,J2D270484-3		WATER			29.5	05/17/12 08:40	RATA45727 Alq	88%	500.20 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:50	RA-228	62	123	GPC3A	1	N	N	4.6117E-01	1.0000E+00	N	75%	N		1.5300E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		6%			(0.000E+00)	0.001999		
1	05/17/12 13:46	RA-228	56	123	GPC3A	1	N	N	4.6117E-01	1.0000E+00	N	75%	N		1.6979E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		6%			(0.000E+00)	0.001999		
2	05/17/12 14:41	RA-228	41	123	GPC3A	1	N	N	4.6117E-01	1.0000E+00	N	75%	N		1.8843E+00	4.5045E+02	1.0020E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		6%			(0.000E+00)	0.001999		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:4

RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

TestAmerica

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 2121091

Alpha Beta, Ra-228 by GPC , Calculated Results

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**3.308809**		8.30000E-01	3.666915	3.666915	0.5002 L	75%		1.894693		
				(0.721978)		(1.6176E-01)	(0.778826)	(0.778826)	(0.173205)			0.839811		
	05/17/12	RA-228	R	**3.141029**		7.10000E-01	3.480977	3.480977	0.5002 L	75%		2.102611		
				(0.748424)		(1.5416E-01)	(0.810956)	(0.810956)	(0.173205)			0.931969		
	05/17/12	RA-228	R	**2.012878**		4.10000E-01	2.230728	2.230728	0.5002 L	75%		2.333345		
				(0.683545)		(1.3329E-01)	(0.749267)	(0.749267)	(0.173205)			1.03424		
	05/17/12	RA-228	A	**2.820905**		6.50000E-01	3.126207	3.126207	0.5002 L	75%		1.218334		
				(0.414812)		(8.6731E-02)	(0.450385)	(0.450385)	(0.10)			0.540019		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TF	WATER	*STLE	Ra228WoBS	**MR9MJ1AA**	**pCi/L**	**B**	04/25/12 11:45	05/17/12 14:41	05/02/12 11:35	RATA45728	1	g	
0,INTRA-LAB BLANK					,J2D300000-91 v4.8.34		WATER			29.6	05/17/12 08:40	RATA45728 Alq	82%	1001.50 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:50	RA-228	24	141	GPC3B	1	N	N	4.7433E-01	1.0000E+00	N	71%	N		1.5300E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		
1	05/17/12 13:46	RA-228	17	141	GPC3B	1	N	N	4.7433E-01	1.0000E+00	N	71%	N		1.6979E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		
2	05/17/12 14:41	RA-228	29	141	GPC3B	1	N	N	4.7433E-01	1.0000E+00	N	71%	N		1.8843E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.044E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**0.020542**	**U4**	1.00000E-02	0.045567	0.045567	1.0015 L	71%		1.037449		
				(0.217083)		(1.0567E-01)	(0.481529)	(0.481529)	(0.173205)			0.46333		
	05/17/12	RA-228	R	**-0.296353**	**U4**	-1.30000E-01	-0.657371	-0.657371	1.0015 L	71%		1.151295		
				(0.210484)		(9.1469E-02)	(0.465739)	(0.465739)	(0.173205)			0.514175		
	05/17/12	RA-228	R	**0.278278**	**U4**	1.10000E-01	0.617277	0.617277	1.0015 L	71%		1.277635		
				(0.291533)		(1.1475E-01)	(0.645944)	(0.645944)	(0.173205)			0.570599		
	05/17/12	RA-228	A	**0.000822**	**U4**	-3.33333E-03	0.001824	0.001824	1.0015 L	71%		0.667105		
				(0.140008)		(6.0277E-02)	(0.310202)	(0.310202)	(0.10)			0.297933		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TF	WATER	*STLE	Ra228WoBS	**MR9MJ1AC**	**pCi/L**	**S**	04/25/12 11:45	05/17/12 14:41	05/02/12 11:35	RASB1125	1	g	
0,INTRA-LAB CHECK					,J2D300000-91 v4.8.34		WATER			29.6	05/17/12 08:40	RASB1125 Alq	91%	1001.30 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	05/17/12 12:50	RA-228	311	111	GPC3C	1	N	N	4.7125E-01	1.0000E+00	N	78%	N		1.5300E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.504E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		
1	05/17/12 13:46	RA-228	291	111	GPC3C	1	N	N	4.7125E-01	1.0000E+00	N	78%	N		1.6979E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.504E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		

() - (1s Uncertainities), Q - Qualifier, U Result Is Less Than Lc = 1.645 * TPU

RecCnt:6

RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

TestAmerica

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

Batch Nbr: 2121091

Alpha Beta, Ra-228 by GPC , Calculated Results

5/17/2012 10:53:14 PM

2	05/17/12 14:41	RA-228	255	111	GPC3C	1	N	N	4.7125E-01	1.0000E+00	N	78%	N		1.8843E+00	4.5045E+02	1.0023E+00	
			50	300			Y		(1.504E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	05/17/12	RA-228	R	**10.926792**		5.85000E+00	24.233019	24.233019	1.0013 L	78%	110%	0.848383		
				(1.273773)		(3.5445E-01)	(2.551879)	(2.551879)	(0.173205)			0.373795		
	05/17/12	RA-228	R	**11.296744**		5.45000E+00	25.053484	25.053484	1.0013 L	78%	114%	0.941481		
				(1.330844)		(3.4298E-01)	(2.672472)	(2.672472)	(0.173205)			0.414814		
	05/17/12	RA-228	R	**10.880226**		4.73000E+00	24.129746	24.129746	1.0013 L	78%	110%	1.044796		
				(1.31162)		(3.2130E-01)	(2.646854)	(2.646854)	(0.173205)			0.460334		
	05/17/12	RA-228	A	**11.034587**		5.34333E+00	24.472083	24.472083	1.0013 L	78%	111%	0.545531		
				(0.753804)		(1.9621E-01)	(1.51511)	(1.51511)	(0.10)			0.240359		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU

RecCnt:6

RADCALC v4.8.34

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

TestAmerica

Quality Assurance Report. Generated 7-JUN-2012 14:30:44.37

QA Filename : RDND07$DKA100:[QUAD3.QA]CHK.QAF;1

-- Multi-Test Full Report --

Description : quad 3a 1" beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 40.624569 Upper Bound : 44.900841

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 42.762688 Std Deviation : 0.673971

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
2-APR-2012 04:43	CHK		43.4000				
3-APR-2012 05:23	CHK		43.5000				
4-APR-2012 04:06	CHK		43.0000				
5-APR-2012 04:58	CHK		43.6000				
6-APR-2012 04:23	CHK		44.1000				
9-APR-2012 04:28	CHK		43.1000				
10-APR-2012 05:19	CHK		42.5000				
11-APR-2012 05:29	CHK		43.3000				
12-APR-2012 05:13	CHK		43.7000				
13-APR-2012 04:55	CHK		43.9000				
16-APR-2012 04:50	CHK		42.2000				
17-APR-2012 04:42	CHK		42.9000				
18-APR-2012 04:54	CHK		43.7000				
19-APR-2012 05:08	CHK		43.7000				
20-APR-2012 03:50	CHK		43.0000				
23-APR-2012 04:11	CHK		44.1000				
24-APR-2012 05:03	CHK		44.3000		In		
25-APR-2012 04:50	CHK		43.9000				
26-APR-2012 05:32	CHK		43.9000				
27-APR-2012 05:14	CHK		43.9000				
28-APR-2012 02:13	CHK		43.2000				
30-APR-2012 04:45	CHK		43.8000				

1-MAY-2012 04:26	CHK		43.9000	| |	|
2-MAY-2012 03:54	CHK		43.2000	| |	|
3-MAY-2012 05:01	CHK		44.0000	| |	|
4-MAY-2012 04:34	CHK		43.5000	| |	|
7-MAY-2012 04:31	CHK		42.6000	| |	|
8-MAY-2012 05:08	CHK		43.4000	| |	|
9-MAY-2012 04:44	CHK		42.4000	| |	|
10-MAY-2012 04:36	CHK		42.8000	| |	|
11-MAY-2012 04:33	CHK		42.1000	| |	|
14-MAY-2012 05:03	CHK		42.8000	| |	|
15-MAY-2012 04:02	CHK		43.8000	| |	|
16-MAY-2012 04:07	CHK		43.4000	| |	|
17-MAY-2012 04:42	CHK		43.6000	| |	|
18-MAY-2012 05:54	CHK		43.7000	| |	|
21-MAY-2012 04:43	CHK		43.4000	| |	|
22-MAY-2012 04:57	CHK		43.0000	| |	|

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-MAY-2012 06:24	CHK		43.3000	| | | |
24-MAY-2012 04:45	CHK		42.9000	| | | |
25-MAY-2012 05:53	CHK		43.4000	| | | |
29-MAY-2012 04:53	CHK ✓		43.4000	| | | |
30-MAY-2012 06:26	CHK		42.2000	| | | |
31-MAY-2012 04:58	CHK		43.0000	| | | |
1-JUN-2012 05:35	CHK		42.8000	| | | |
4-JUN-2012 04:25	CHK		43.0000	| | | |
5-JUN-2012 04:18	CHK		43.6000	| | | |
6-JUN-2012 04:54	CHK		42.9000	| | | |

-- Multi-Test Full Report --

Description : quad 3b 1' beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----

Lower Bound : 42.270061 Upper Bound : 46.719540

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00

Mean : 44.494778 Std Deviation : 0.526917

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
2-APR-2012 04:43	CHK		45.2000				
3-APR-2012 05:23	CHK		45.0000				
4-APR-2012 04:06	CHK		45.3000				
5-APR-2012 04:58	CHK		45.1000				
6-APR-2012 04:23	CHK		45.4000				
9-APR-2012 04:28	CHK		45.3000				
10-APR-2012 05:19	CHK		45.8000		In		
11-APR-2012 05:29	CHK		45.3000				
12-APR-2012 05:13	CHK		45.1000				
13-APR-2012 04:55	CHK		45.3000				
16-APR-2012 04:50	CHK		44.1000				
17-APR-2012 04:42	CHK		45.3000				
18-APR-2012 04:54	CHK		45.2000				
19-APR-2012 05:08	CHK		45.0000				
20-APR-2012 03:50	CHK		45.2000				
23-APR-2012 04:11	CHK		45.8000		In		
24-APR-2012 05:03	CHK		45.5000				
25-APR-2012 04:50	CHK		45.0000				
26-APR-2012 05:32	CHK		44.6000				
27-APR-2012 05:14	CHK		45.1000				
28-APR-2012 02:13	CHK		44.2000				
30-APR-2012 04:45	CHK		44.9000				
1-MAY-2012 04:26	CHK		45.0000				
2-MAY-2012 03:54	CHK		44.3000				
3-MAY-2012 05:01	CHK		44.4000				
4-MAY-2012 04:34	CHK		44.5000				
7-MAY-2012 04:31	CHK		43.7000				

8-MAY-2012 05:08	CHK		44.3000			

†Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
9-MAY-2012 04:44	CHK		44.0000				
10-MAY-2012 04:36	CHK		43.9000				
11-MAY-2012 04:33	CHK		44.5000				
14-MAY-2012 05:03	CHK		45.2000				
15-MAY-2012 04:02	CHK		44.4000				
16-MAY-2012 04:07	CHK		44.9000				
17-MAY-2012 04:42	CHK		44.7000				
18-MAY-2012 05:54	CHK		45.4000				
21-MAY-2012 04:43	CHK		45.1000				
22-MAY-2012 04:57	CHK		44.8000				
23-MAY-2012 06:24	CHK		45.1000				
24-MAY-2012 04:45	CHK		44.6000				
25-MAY-2012 05:53	CHK		44.3000				
29-MAY-2012 04:53	CHK		44.4000				
30-MAY-2012 06:26	CHK		44.1000				
31-MAY-2012 04:58	CHK		43.3000	In			
1-JUN-2012 05:35	CHK		44.1000				
4-JUN-2012 04:25	CHK		44.2000				
5-JUN-2012 04:18	CHK		45.1000				
6-JUN-2012 04:54	CHK		43.7000				

-- Multi-Test Full Report --

Description : quad 3c 1' beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 42.345211 Upper Bound : 46.802601

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 44.573879 Std Deviation : 0.557644

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej

2-APR-2012 04:43	CHK		43.8000			
3-APR-2012 05:23	CHK		44.5000			
4-APR-2012 04:06	CHK		43.5000			
5-APR-2012 04:58	CHK		44.4000			
6-APR-2012 04:23	CHK		44.3000			
9-APR-2012 04:28	CHK		43.7000			
10-APR-2012 05:19	CHK		44.5000			
11-APR-2012 05:29	CHK		44.3000			
12-APR-2012 05:13	CHK		44.9000			
13-APR-2012 04:55	CHK		45.8000	In		
16-APR-2012 04:50	CHK		44.2000			
17-APR-2012 04:42	CHK		44.5000			
18-APR-2012 04:54	CHK		44.3000			
19-APR-2012 05:08	CHK		45.1000			
20-APR-2012 03:50	CHK		44.7000			
23-APR-2012 04:11	CHK		45.1000			
24-APR-2012 05:03	CHK		44.8000			
25-APR-2012 04:50	CHK		44.3000			

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
26-APR-2012 05:32	CHK		45.1000				
27-APR-2012 05:14	CHK		44.5000				
28-APR-2012 02:13	CHK		44.0000				
30-APR-2012 04:45	CHK		44.8000				
1-MAY-2012 04:26	CHK		44.1000				
2-MAY-2012 03:54	CHK		44.4000				
3-MAY-2012 05:01	CHK		45.5000				
4-MAY-2012 04:34	CHK		44.7000				
7-MAY-2012 04:31	CHK		44.7000				
8-MAY-2012 05:08	CHK		44.7000				
9-MAY-2012 04:44	CHK		45.4000				
10-MAY-2012 04:36	CHK		44.8000				

11-MAY-2012 04:33	CHK		45.1000	| |	|
14-MAY-2012 05:03	CHK		44.6000	| |	|
15-MAY-2012 04:02	CHK		44.8000	| |	|
16-MAY-2012 04:07	CHK		45.2000	| |	|
17-MAY-2012 04:42	CHK		44.7000	| |	|
18-MAY-2012 05:54	CHK		44.9000	| |	|
21-MAY-2012 04:43	CHK		45.0000	| |	|
22-MAY-2012 04:57	CHK		45.2000	| |	|
23-MAY-2012 06:24	CHK		44.6000	| |	|
24-MAY-2012 04:45	CHK		43.6000	| |	|
25-MAY-2012 05:53	CHK		44.9000	| |	|
29-MAY-2012 04:53	CHK		45.0000	| |	|
30-MAY-2012 06:26	CHK		44.4000	| |	|
31-MAY-2012 04:58	CHK		45.0000	| |	|
1-JUN-2012 05:35	CHK		45.4000	| |	|
4-JUN-2012 04:25	CHK		45.3000	| |	|
5-JUN-2012 04:18	CHK		45.0000	| |	|
6-JUN-2012 04:54	CHK		45.0000	| |	|

-- Multi-Test Full Report --

Description : quad 3d 1" beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 41.807129 Upper Bound : 46.207878

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 44.007462 Std Deviation : 0.426672

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-APR-2012 04:43	CHK		43.5000	| | | |
3-APR-2012 05:23	CHK		44.2000	| | | |
4-APR-2012 04:06	CHK		44.5000	| | | |
5-APR-2012 04:58	CHK		43.8000	| | | |
6-APR-2012 04:23	CHK		44.5000	| | | |

18-MAY-2012 05:54	CHK		44.8000	| |	|
21-MAY-2012 04:43	CHK		45.0000	|In|	|
22-MAY-2012 04:57	CHK		44.7000	| |	|
23-MAY-2012 06:24	CHK		44.2000	| |	|
24-MAY-2012 04:45	CHK		44.0000	| |	|
25-MAY-2012 05:53	CHK		44.6000	| |	|
29-MAY-2012 04:53	CHK	DOT Used	44.7000	| |	|
30-MAY-2012 06:26	CHK		44.6000	| |	|
31-MAY-2012 04:58	CHK		43.8000	| |	|
1-JUN-2012 05:35	CHK		44.4000	| |	|
4-JUN-2012 04:25	CHK		44.5000	| |	|
5-JUN-2012 04:18	CHK		44.2000	| |	|
6-JUN-2012 04:54	CHK		44.4000	| |	|

Quality Assurance Report. Generated 7-JUN-2012 14:30:44.90

QA Filename : RDND07$DKA100:[QUAD3.QA]BKG_1.QAF;3

-- Multi-Test Full Report --

Description : quad 3a 1" beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.379306 Std Deviation : 0.065995

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-APR-2012 04:38	BKG		0.3300	| | | |
4-APR-2012 01:30	BKG		0.4400	| | | |
5-APR-2012 03:07	BKG		0.3200	| | | |
6-APR-2012 03:30	BKG		0.2900	| | | |
7-APR-2012 01:45	BKG		0.3000	| | | |
10-APR-2012 03:01	BKG		0.3700	| | | |
11-APR-2012 04:03	BKG		0.4100	| | | |
12-APR-2012 03:38	BKG		0.3600	| | | |
13-APR-2012 03:23	BKG		0.3800	| | | |
14-APR-2012 00:06	BKG		0.4800	| | | |

14-APR-2012 16:21	BKG		0.3600			
17-APR-2012 03:10	BKG		0.4100			
18-APR-2012 03:30	BKG		0.3000			
19-APR-2012 04:08	BKG		0.4300			
20-APR-2012 03:21	BKG		0.3800			
21-APR-2012 05:32	BKG		0.3700			
24-APR-2012 04:07	BKG		0.3700			
25-APR-2012 03:52	BKG		0.4900			
26-APR-2012 03:48	BKG		0.3500			
27-APR-2012 03:39	BKG		0.3200			
28-APR-2012 00:49	BKG		0.4000			
28-APR-2012 10:59	BKG		0.6600		Ac	
28-APR-2012 16:11	BKG		0.3600			
29-APR-2012 02:15	BKG		0.4100			
29-APR-2012 09:30	BKG		0.3700			
1-MAY-2012 03:27	BKG		0.3700			
2-MAY-2012 01:25	BKG		0.3800			
2-MAY-2012 02:29	BKG		0.3800			
3-MAY-2012 03:36	BKG		0.4100			
4-MAY-2012 03:55	BKG		0.3700			
5-MAY-2012 01:22	BKG		0.3300			
5-MAY-2012 18:00	BKG		0.4000			
8-MAY-2012 03:16	BKG		0.3800			
9-MAY-2012 03:13	BKG		0.3500			
10-MAY-2012 03:11	BKG		0.3400			
11-MAY-2012 03:42	BKG		0.4400			
12-MAY-2012 04:31	BKG		0.3700			
12-MAY-2012 15:43	BKG		0.3600			
15-MAY-2012 03:32	BKG		0.5000			
16-MAY-2012 03:00	BKG		0.3200			
17-MAY-2012 04:09	BKG		0.4100			

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS	Rej
18-MAY-2012 05:26	BKG		0.3400					
19-MAY-2012 04:56	BKG		0.4000					
19-MAY-2012 16:49	BKG		0.2700					
22-MAY-2012 03:31	BKG		0.3100					
23-MAY-2012 03:31	BKG		0.3400					
24-MAY-2012 03:48	BKG		0.4000					
25-MAY-2012 03:27	BKG		0.3400					
26-MAY-2012 03:51	BKG		0.3100					
30-MAY-2012 05:21	BKG		0.3300					
31-MAY-2012 03:38	BKG		0.3600					
1-JUN-2012 04:04	BKG		0.4200					
2-JUN-2012 04:06	BKG		0.3200					
2-JUN-2012 04:06	BKG		0.3200					
3-JUN-2012 11:30	BKG		0.2700					
5-JUN-2012 03:29	BKG		0.3600					
6-JUN-2012 04:14	BKG		0.3200					

-- Multi-Test Full Report --

Description : quad 3b 1" beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.410462 Std Deviation : 0.045133

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS	Rej
3-APR-2012 04:38	BKG		0.3200		In			
4-APR-2012 01:30	BKG		0.3800					
5-APR-2012 03:07	BKG		0.3600					
6-APR-2012 03:30	BKG		0.4600					
7-APR-2012 01:45	BKG		0.4300					
10-APR-2012 03:01	BKG		0.4800					
11-APR-2012 04:03	BKG		0.4400					
12-APR-2012 03:38	BKG		0.4100					

13-APR-2012 03:23	BKG		0.4000			
14-APR-2012 00:06	BKG		0.5400	In		
14-APR-2012 16:21	BKG		0.3400			
17-APR-2012 03:10	BKG		0.4900			
18-APR-2012 03:30	BKG		0.4200			
19-APR-2012 04:08	BKG		0.4500			
20-APR-2012 03:21	BKG		0.4100			
21-APR-2012 05:32	BKG		0.4300			
24-APR-2012 04:07	BKG		0.5300	In		
25-APR-2012 03:52	BKG		0.4600			
26-APR-2012 03:48	BKG		0.4500			
27-APR-2012 03:39	BKG		0.5100	In		
28-APR-2012 00:49	BKG		0.4400			
28-APR-2012 10:59	BKG		0.6600	Ac		
28-APR-2012 16:11	BKG		0.3400			
29-APR-2012 02:15	BKG		0.3800			
29-APR-2012 09:30	BKG		0.3400			

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
1-MAY-2012 03:27	BKG		0.5100	In			
2-MAY-2012 01:25	BKG		0.4400				
2-MAY-2012 02:29	BKG		0.4300				
3-MAY-2012 03:36	BKG		0.3800				
4-MAY-2012 03:55	BKG		0.3800				
5-MAY-2012 01:22	BKG		0.4300				
5-MAY-2012 18:00	BKG		0.4600				
8-MAY-2012 03:16	BKG		0.4100				
9-MAY-2012 03:13	BKG		0.5200	In			
10-MAY-2012 03:11	BKG		0.4200				
11-MAY-2012 03:42	BKG		0.5100	In			
12-MAY-2012 04:31	BKG		0.4600				
12-MAY-2012 15:43	BKG		0.4400				

15-MAY-2012 03:32	BKG	0.3700			
16-MAY-2012 03:00	BKG	0.5000			
17-MAY-2012 04:09	BKG	0.4700			
18-MAY-2012 05:26	BKG	0.4400			
19-MAY-2012 04:56	BKG	0.5100	In		
19-MAY-2012 16:49	BKG	0.4900			
22-MAY-2012 03:31	BKG	0.5100	In		
23-MAY-2012 03:31	BKG	0.4200			
24-MAY-2012 03:48	BKG	0.4800			
25-MAY-2012 03:27	BKG	0.4900			
26-MAY-2012 03:51	BKG	0.4500			
30-MAY-2012 05:21	BKG	0.3900			
31-MAY-2012 03:38	BKG	0.4000			
1-JUN-2012 04:04	BKG	0.3600			
2-JUN-2012 04:06	BKG	0.3400			
2-JUN-2012 04:06	BKG	0.3400			
3-JUN-2012 11:30	BKG	0.3200	In		
5-JUN-2012 03:29	BKG	0.4700			
6-JUN-2012 04:14	BKG	0.4500			

-- Multi-Test Full Report

Description : quad 3c 1' beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.375549 Std Deviation : 0.045256

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
3-APR-2012 04:38	BKG		0.3400				
4-APR-2012 01:30	BKG		0.3900				
5-APR-2012 03:07	BKG		0.3900				
6-APR-2012 03:30	BKG		0.3200				
7-APR-2012 01:45	BKG		0.4200				
10-APR-2012 03:01	BKG		0.4000				

11-APR-2012 04:03	BKG		0.3700			
12-APR-2012 03:38	BKG		0.3900			
13-APR-2012 03:23	BKG		0.3600			

♀Quality Assurance Multi-Test Full Report (continued) Page : 4

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
14-APR-2012 00:06	BKG		0.4200				
14-APR-2012 16:21	BKG		0.3600				
17-APR-2012 03:10	BKG		0.3000				
18-APR-2012 03:30	BKG		0.2900				
19-APR-2012 04:08	BKG		0.4400				
20-APR-2012 03:21	BKG		0.3900				
21-APR-2012 05:32	BKG		0.3400				
24-APR-2012 04:07	BKG		0.3700				
25-APR-2012 03:52	BKG		0.3300				
26-APR-2012 03:48	BKG		0.3700				
27-APR-2012 03:39	BKG		0.3700				
28-APR-2012 00:49	BKG		0.4300				
28-APR-2012 10:59	BKG		0.5800		Ac		
28-APR-2012 16:11	BKG		0.4200				
29-APR-2012 02:15	BKG		0.3800				
29-APR-2012 09:30	BKG		0.4000				
1-MAY-2012 03:27	BKG		0.3600				
2-MAY-2012 01:25	BKG		0.3500				
2-MAY-2012 02:29	BKG		0.3400				
3-MAY-2012 03:36	BKG		0.4100				
4-MAY-2012 03:55	BKG		0.3800				
5-MAY-2012 01:22	BKG		0.3600				
5-MAY-2012 18:00	BKG		0.3600				
8-MAY-2012 03:16	BKG		0.3900				
9-MAY-2012 03:13	BKG		0.4500				
10-MAY-2012 03:11	BKG		0.4100				
11-MAY-2012 03:42	BKG		0.4500				

12-MAY-2012 04:31	BKG		0.4600	| |	|
12-MAY-2012 15:43	BKG		0.3600	| |	|
15-MAY-2012 03:32	BKG		0.4600	| |	|
16-MAY-2012 03:00	BKG		0.3400	| |	|
17-MAY-2012 04:09	BKG		0.3700	| |	|
18-MAY-2012 05:26	BKG		0.3400	| |	|
19-MAY-2012 04:56	BKG		0.3800	| |	|
19-MAY-2012 16:49	BKG		0.3900	| |	|
22-MAY-2012 03:31	BKG		0.3800	| |	|
23-MAY-2012 03:31	BKG		0.3700	| |	|
24-MAY-2012 03:48	BKG		0.4000	| |	|
25-MAY-2012 03:27	BKG		0.3900	| |	|
26-MAY-2012 03:51	BKG	/	0.3800	| |	|
30-MAY-2012 05:21	BKG	/	0.3500	| |	|
31-MAY-2012 03:38	BKG		0.3400	| |	|
1-JUN-2012 04:04	BKG		0.3900	| |	|
2-JUN-2012 04:06	BKG		0.3500	| |	|
2-JUN-2012 04:06	BKG		0.3500	| |	|
3-JUN-2012 11:30	BKG		0.3500	| |	|
5-JUN-2012 03:29	BKG		0.3300	| |	|
6-JUN-2012 04:14	BKG		0.3200	| |	|

-- Multi-Test Full Report --

Description : quad 3d 1" beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.367919 Std Deviation : 0.062257

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-APR-2012 04:38	BKG		0.4100	| | | |

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **JULY 6, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION-**
VOC / SVOC SIM / GRO / DRO / PERCHLORATE / METALS
MARTIN STATE AIRPORT GROUNDWATER SAMPLING – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-10949-1

SAMPLES: 9/Aqueous/VOC

MSA-DMW2A-050312	MSA-DMW4D-050312	MSA-DMW4I-050312
MSA-DMW4S-050312	MSA-DMW6D-050312	MSA-DMW6I-050312
MSA-DMW6S-050312	MSA-DMW7S-050312	TB-050312

8/Aqueous/SVOC SIM/Perchlorate/Metals

MSA-DMW2A-050312	MSA-DMW4D-050312	MSA-DMW4I-050312
MSA-DMW4S-050312	MSA-DMW6D-050312	MSA-DMW6I-050312
MSA-DMW6S-050312	MSA-DMW7S-050312	

3/Aqueous/GRO/DRO

MSA-DMW4S-050312	MSA-DMW6S-050312	MSA-DMW7S-050312

Overview

The sample set for Martin State Airport Groundwater Sampling, SDG 240-10949-1 consists of eight (8) aqueous environmental samples and a trip blank. All samples were analyzed for volatile organic compounds (VOCs). Eight (8) aqueous environmental samples were analyzed for 1,4-dioxane in the semivolatile organic compound (SVOC) SIM fraction, perchlorate, total and dissolved metals. Three (3) aqueous environmental samples; MSA-DMW4S-050312, MSA-DMW6S-050312 and MSA-DMW7S-050312 were analyzed for gasoline range organics (GRO) and diesel range organics (DRO). GRO is listed on the form 1s and EDD as total petroleum hydrocarbons (TPH) (C6-C10) and DRO as TPH (C10-C32). There are no field duplicate pairs included in this SDG.

The samples were collected on May 3, 2012 and analyzed by Test America Laboratories, Inc. Volatile organic compound analyses were conducted in accordance to SW-846 Method 8260B. The analyses for 1,4-dioxane followed SW-846 Method 8270C in Selective Ion Monitoring SIM mode. GRO and DRO analyses followed SW-846 Method 8015B. The analyses for RDX followed SW-846 Method 8330 and perchlorate 6850 reporting protocol. Metals analyses were conducted in accordance with SW-846 6020A and mercury Method 7470A.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, matrix spike/matrix spike duplicate results, serial dilution, compound identification, chromatographic resolution, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- In the volatile initial calibration of instrument A3UX16 on May 9, 2012 and the continuing calibration on May 10, 2012 @ 10:53, May 11, 2012 @ 10:56 and May 16, 2012 @ 9:54, tert-butyl alcohol and vinyl acetate had a relative response factor (RRF) less than the 0.05 quality control limit. The nondetected vinyl acetate and tert-butyl alcohol results were qualified as rejected (UR) in the affected samples.

- Several samples contained Tentatively Identified Compounds (TICs) containing silanol or siloxanes. These compounds were qualified as rejected (R) because they are indictative of column bleed.

Minor Problems

- The surrogate recoveries of nitrobenzene-d5, 2-fluorobiphenyl, 2,4,6-tribromophenol and terphenyl-d14 were less than the lower quality control limit in sample MSA-DMW6S-050312. The sample was re-extracted outside of hold time with surrogate recoveries within quality control limits. The original nondetected 1,4-dioxane result in sample MSA-DMW6S-050312was used for validation and reporting purposes. The nondetected 1,4-dioxane result was qualified as biased low (UL) due to surrogate recoveries outside quality control limits.

- TICs were qualified as presumptively present (NJ) in several samples.

- GRO was detected in the laboratory method blank 240-43312/6.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
GRO	28.9	144.5

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data. Positive GRO results less than the action level were qualified as (B).

- DRO was detected in the laboratory method blank 240-43296/10.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
DRO	337	1685

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data. Positive DRO results less than the action level were qualified as (B).

- The CRQL percent recoveries of lead, nickel and thallium were greater than 110% in CRI sample 240-43857/7 analyzed on May 11, 2012. The positive lead and nickel results less than 2X the reporting limit were qualified as biased high (K) in the total and dissolved metals fraction. If the sample was qualified due to uncertainty near the detection limit the positive results for lead and nickel were qualified as estimated (J) in the total and dissolved metals fraction due to conflicting directional bias. No action was taken on the thallium results.

- The CRQL percent recovery of lead was greater than the 110% upper quality control limit in CRI sample 240-44022/7 analyzed on May 14, 2012. The positive lead results less than 2X the reporting limit were qualified as estimated (J) in the total and dissolved metals fraction due to conflicting

directional bias.

- Contamination was detected in the laboratory method blank, continuing calibration blanks and initial calibration blanks affecting both the total and dissolved metal results.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
Molybdenum(1)	0.540	2.7
Thallium (2)	0.372	1.86
Tungsten (1)	0.711	3.56
Barium (3)	0.940	4.7
Copper (3)	0.642	3.21
Zinc (3)	3.41	17.05
Barium (4)	0.556	2.78

(1) Maximum concentration detected in initial calibration blank 240-43857/6 analyzed on May 11, 2012 @ 6:23.
(2) Maximum concentration detected in the continuing calibration blank (CCB) 240-43857/40 analyzed on May 11, 2012 @ 9:48.
(3) Maximum concentration detected in the laboratory method blank 240-43497/1-A.
(4) Maximum concentration detected in the laboratory method blank 240-43699/1-A.

An action level of 5X the maximum concentration of contaminant was used to evaluate samples due to blank contamination. Positive results less than the action level were qualified (B) as a result of blank contamination. Sample aliquot and dilution factors were taken into account in validation of data.

- The internal standard recoveries for holium (molecular weight 165) were greater than the 125% quality control limit in samples MSA-DMW4I-050312, MSA-DMW4D-050312, MSA-DMW4S-050312 and MSA-DMW2A-050312. The target metals affected by these noncompliances are antimony (MW 123), barium (MW 137), lead (MW 207), thallium (MW 204) and tungsten (MW 184). The positive and nondetected antimony, barium, lead, thallium and tungsten total and dissolved metal results in samples MSA-DMW4I-050312, MSA-DMW4D-050312, MSA-DMW4S-050312 and MSA-DMW2A-050312 were qualified as estimated (J) and (UJ), respectively.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

Contamination was detected in several VOC laboratory method blanks.

Compound	Maximum Concentration (ug/L)
1,2,3-trichlorobenzene[(1)]	0.372
1,2,3-trichlorobenzene[(2)]	0.322
1,2,4-trichlorobenzene[(1)]	0.247
1,2,4-trichlorobenzene[(2)]	0.192
Hexachlorobutadiene[(1)]	0.462
Hexachlorobutadiene[(2)]	0.479

(1) Maximum concentration detected in laboratory method blank 240-43549/5 analyzed on May 10, 2012 @ 12:02.
(2) Maximum concentration detected in laboratory method blank 240-43737/5 analyzed on May 11, 2012 @ 12:04.

No action was taken on the nondetected 1,2,3-trichlorobenzene, 1,2,4-trichlorobenzene and hexachlorobutadiene results in the affected samples.

The continuing calibration percent difference (%D) for tert-amyl methyl ether was greater than 20% and less than 50% on May 16, 2012 @10:28. No action was taken on the nondetected tert-amyl methyl ether results.

The matrix spike duplicate (MSD) percent recoveries (%Rs) of 1,2-dibromoethane and trichloroethene were greater than the upper quality control limit in sample MSA-DMW2A-050312. No action was taken because the MS %Rs and relative percent differences (RPDs) of 1,2-dibromoethane and trichloroethene were within quality control limits.

The MS/MSD %Rs of 2-chloroethyl vinyl ether and 2-butanone were 0% in sample 240-10837-D-5. No action was taken because this sample is not included in this SDG.

The MS/MSD %Rs of 2-chloroethyl vinyl ether were 0% in sample 240-11065-E-2. No action was taken because this sample is not included in this SDG.

The surrogate recovery of terphenyl-d14 was less than the lower quality control limit and greater than 10% in sample MSA-DMW4I-050312. The sample was re-extracted outside of hold time. The original sample result was used for validation and reporting purposes. No action was taken on the positive 1,4-dioxane result in sample MSA-DMW4I-050312.

The RPD for mercury was outside quality control limits in the MS/MSD of sample 240-11088-P-1-C. No action was taken because this sample is not included in this SDG.

1,2,4-Trichlorobenzene in sample MSA-DMW2A-050312 was reported at a concentration of 440 ug/L. However, the sample was diluted 417X. The data validator reviewed the spectra and confirmed the positive 1,2,4-trichlorobenzene result in sample MSA-DMW2A-050312 against standard spectra. No action was taken. A copy of the spectra is included in Appendix C as a reference.

Several VOC samples were diluted:

Sample	Dilution Factor
MSA-DMW2A-050312	417X
MSA-DMW7S-050312	417X
MSA-DMW4D-050312	143X
MSA-DMW4I-050312	125X
MSA-DMW4S-050312	40X

Nondetected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Tert-butyl alcohol and vinyl acetate had RRFs less than quality control limits in the initial and continuing calibrations. Surrogate recoveries were outside quality control limits in the SVOC fraction in sample MSA-DMW6S-050312. GRO, DRO and metals were detected in the laboratory blanks. The CRQL %Rs of several metals exceeded 110% resulting in the qualification of positive results. The internal standard recoveries for holium were greater than the 125% quality control limit in samples MSA-DMW4I-050312, MSA-DMW4D-050312, MSA-DMW4S-050312 and MSA-DMW2A-050312.

Other Factors Affecting Data Quality: TICs were detected in several samples.

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (9/94) and Region III EPA Functional Guidelines for Inorganic Data Validation (April 1993). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-9			240-10949-7			240-10949-6			240-10949-8		
FRACTION: OV	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		96	U		33	U		29	U		9.2	U	
1,1,1-TRICHLOROETHANE		92	U		31	U		59	J	P	8.8	U	
1,1,2,2-TETRACHLOROETHANE		75	U		26	U		23	U		7.2	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		120	U		40	U		35	U		11	U	
1,1-DICHLOROETHANE		63	U		21	U		51	J	P	6	U	
1,1-DICHLOROETHENE		79	U		27	U		150			24	J	P
1,1-DICHLOROPROPENE		54	U		19	U		16	U		5.2	U	
1,2,3-TRICHLOROBENZENE		71	U		24	U		21	U		6.8	U	
1,2,3-TRICHLOROPROPANE		180	U		61	U		54	U		17	U	
1,2,3-TRIMETHYLBENZENE		2.5	U		0.84	U		0.74	U		0.24	U	
1,2,4-TRICHLOROBENZENE		440			21	U		19	U		6	U	
1,2,4-TRIMETHYLBENZENE		50	U		17	U		15	U		4.8	U	
1,2-DIBROMO-3-CHLOROPROPANE		280	U		96	U		84	U		27	U	
1,2-DIBROMOETHANE		100	U		34	U		30	U		9.6	U	
1,2-DICHLOROBENZENE		54	U		19	U		16	U		5.2	U	
1,2-DICHLOROETHANE		92	U		31	U		28	U		20	J	P
1,2-DICHLOROPROPANE		75	U		26	U		23	U		7.2	U	
1,3-DICHLOROBENZENE		58	U		20	U		18	U		5.6	U	
1,3-DICHLOROPROPANE		67	U		23	U		20	U		6.4	U	
1,4-DICHLOROBENZENE		54	U		19	U		16	U		5.2	U	
2,2-DICHLOROPROPANE		54	U		19	U		16	U		5.2	U	
2-BUTANONE		240	U		81	U		71	U		23	U	
2-CHLOROETHYL VINYL ETHER		410	U		140	U		120	U		40	U	
2-CHLOROTOLUENE		46	U		16	U		14	U		4.4	U	
2-HEXANONE		170	U		59	U		51	U		16	U	
4-CHLOROTOLUENE		75	U		26	U		23	U		7.2	U	
4-ISOPROPYLTOLUENE		50	U		17	U		15	U		4.8	U	
4-METHYL-2-PENTANONE		130	U		46	U		40	U		13	U	
ACETONE		460	U		160	U		140	U		44	U	
BENZENE		54	U		19	U		16	U		5.2	U	
BROMOBENZENE		54	U		19	U		16	U		5.2	U	
BROMOCHLOROMETHANE		120	U		41	U		36	U		12	U	
BROMODICHLOROMETHANE		63	U		21	U		19	U		6	U	
BROMOFORM		270	U		91	U		80	U		26	U	
BROMOMETHANE		170	U		59	U		51	U		16	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-3			240-10949-2			240-10949-1			240-10949-4		
FRACTION: OV	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U		0.23	U		96	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U		0.22	U		130	J	P
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U		0.18	U		75	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U		0.28	U		120	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U		0.15	U		63	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		140	J	P
1,1-DICHLOROPROPENE		0.13	U		0.13	U		0.13	U		54	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U		0.17	U		71	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U		0.43	U		180	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U		0.0059	U		2.5	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U		0.15	U		63	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U		0.12	U		50	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U		0.67	U		280	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U		0.24	U		100	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		54	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U		0.22	U		92	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U		0.18	U		75	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U		0.14	U		58	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U		0.16	U		67	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U		0.13	U		54	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U		0.13	U		54	U	
2-BUTANONE		0.57	U		0.57	U		0.57	U		240	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U		0.99	U		410	U	
2-CHLOROTOLUENE		0.11	U		0.11	U		0.11	U		46	U	
2-HEXANONE		0.41	U		0.41	U		0.41	U		170	U	
4-CHLOROTOLUENE		0.18	U		0.18	U		0.18	U		75	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U		0.12	U		50	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U		0.32	U		130	U	
ACETONE		1.1	U		1.1	U		1.1	U		460	U	
BENZENE		0.13	U		0.13	U		0.13	U		54	U	
BROMOBENZENE		0.13	U		0.13	U		0.13	U		54	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U		0.29	U		120	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U		0.15	U		63	U	
BROMOFORM		0.64	U		0.64	U		0.64	U		270	U	
BROMOMETHANE		0.41	U		0.41	U		0.41	U		170	U	

PROJ_NO: 04021	NSAMPLE	TB-050312
SDG: 240-10949-1	LAB_ID	240-10949-5
FRACTION: OV	SAMP_DATE	5/3/2012
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	0.23	U	
1,1,1-TRICHLOROETHANE	0.22	U	
1,1,2,2-TETRACHLOROETHANE	0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	0.28	U	
1,1-DICHLOROETHANE	0.15	U	
1,1-DICHLOROETHENE	0.19	U	
1,1-DICHLOROPROPENE	0.13	U	
1,2,3-TRICHLOROBENZENE	0.17	U	
1,2,3-TRICHLOROPROPANE	0.43	U	
1,2,3-TRIMETHYLBENZENE	0.0059	U	
1,2,4-TRICHLOROBENZENE	0.15	U	
1,2,4-TRIMETHYLBENZENE	0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	0.67	U	
1,2-DIBROMOETHANE	0.24	U	
1,2-DICHLOROBENZENE	0.13	U	
1,2-DICHLOROETHANE	0.22	U	
1,2-DICHLOROPROPANE	0.18	U	
1,3-DICHLOROBENZENE	0.14	U	
1,3-DICHLOROPROPANE	0.16	U	
1,4-DICHLOROBENZENE	0.13	U	
2,2-DICHLOROPROPANE	0.13	U	
2-BUTANONE	0.57	U	
2-CHLOROETHYL VINYL ETHER	0.99	U	
2-CHLOROTOLUENE	0.11	U	
2-HEXANONE	0.41	U	
4-CHLOROTOLUENE	0.18	U	
4-ISOPROPYLTOLUENE	0.12	U	
4-METHYL-2-PENTANONE	0.32	U	
ACETONE	1.1	U	
BENZENE	0.13	U	
BROMOBENZENE	0.13	U	
BROMOCHLOROMETHANE	0.29	U	
BROMODICHLOROMETHANE	0.15	U	
BROMOFORM	0.64	U	
BROMOMETHANE	0.41	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-9			240-10949-7			240-10949-6			240-10949-8		
FRACTION: OV	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		54	U		19	U		16	U		5.2	U	
CARBON TETRACHLORIDE		54	U		19	U		16	U		5.2	U	
CHLOROBENZENE		63	U		21	U		19	U		6	U	
CHLORODIBROMOMETHANE		75	U		26	U		23	U		7.2	U	
CHLOROETHANE		120	U		41	U		36	U		12	U	
CHLOROFORM		67	U		23	U		20	U		6.4	U	
CHLOROMETHANE		130	U		43	U		38	U		12	U	
CIS-1,2-DICHLOROETHENE		3400			530			1800			120		
CIS-1,3-DICHLOROPROPENE		58	U		20	U		18	U		5.6	U	
DIBROMOMETHANE		120	U		40	U		35	U		11	U	
DICHLORODIFLUOROMETHANE		130	U		44	U		39	U		12	U	
DIISOPROPYL ETHER		630	U		210	U		190	U		60	U	
ETHYL TERT-BUTYL ETHER		46	U		16	U		14	U		4.4	U	
ETHYLBENZENE		71	U		24	U		21	U		6.8	U	
HEXACHLOROBUTADIENE		130	U		43	U		38	U		12	U	
ISOPROPYLBENZENE		54	U		19	U		16	U		5.2	U	
M+P-XYLENES		100	U		34	U		30	U		9.6	U	
METHYL TERT-BUTYL ETHER		71	U		24	U		21	U		6.8	U	
METHYLCYCLOHEXANE													
METHYLENE CHLORIDE		140	U		47	U		41	U		13	U	
NAPHTHALENE		100	U		34	U		30	U		9.6	U	
N-BUTYLBENZENE		50	U		17	U		15	U		4.8	U	
N-PROPYLBENZENE		58	U		20	U		18	U		5.6	U	
O-XYLENE		58	U		20	U		18	U		5.6	U	
SEC-BUTYLBENZENE		54	U		19	U		16	U		5.2	U	
SILANOL, TRIMETHYL-													
STYRENE		46	U		16	U		14	U		4.4	U	
TERT-AMYL METHYL ETHER		28	U		9.6	U		8.4	U		2.7	U	
TERT-BUTYLBENZENE		54	U		19	U		16	U		5.2	U	
TERTIARY-BUTYL ALCOHOL		1600	UR	C	560	UR	C	490	UR	C	160	UR	C
TETRACHLOROETHENE		120	U		41	U		36	U		12	U	
TOLUENE		54	U		19	U		16	U		5.2	U	
TOTAL XYLENES		120	U		40	U		35	U		11	U	
TRANS-1,2-DICHLOROETHENE		79	U		27	U		27	J	P	7.6	U	
TRANS-1,3-DICHLOROPROPENE		79	U		27	U		24	U		7.6	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-3			240-10949-2			240-10949-1			240-10949-4		
FRACTION: OV	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U		0.13	U		54	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U		0.13	U		54	U	
CHLOROBENZENE		0.15	U		0.15	U		0.29	J	P	63	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U		0.18	U		75	U	
CHLOROETHANE		0.29	U		0.29	U		0.29	U		120	U	
CHLOROFORM		0.16	U		0.16	U		0.16	U		67	U	
CHLOROMETHANE		0.3	U		0.3	U		0.3	U		130	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U		1.4			15000		
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U		0.14	U		58	U	
DIBROMOMETHANE		0.28	U		0.28	U		0.28	U		120	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U		0.31	U		130	U	
DIISOPROPYL ETHER		1.5	U		1.5	U		1.5	U		630	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U		0.11	U		46	U	
ETHYLBENZENE		0.17	U		0.17	U		0.17	U		71	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U		0.3	U		130	U	
ISOPROPYLBENZENE		0.13	U		0.13	U		0.13	U		54	U	
M+P-XYLENES		0.24	U		0.24	U		0.24	U		100	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U		0.17	U		71	U	
METHYLCYCLOHEXANE											82	NJ	Z1
METHYLENE CHLORIDE		0.33	U		0.33	U		0.33	U		140	U	
NAPHTHALENE		0.24	U		0.24	U		0.24	U		100	U	
N-BUTYLBENZENE		0.12	U		0.12	U		0.12	U		50	U	
N-PROPYLBENZENE		0.14	U		0.14	U		0.14	U		58	U	
O-XYLENE		0.14	U		0.14	U		0.14	U		58	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		54	U	
SILANOL, TRIMETHYL-		2.3	R	Z2	3.1	R	Z2	1.6	R	Z2			
STYRENE		0.11	U		0.11	U		0.11	U		46	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U		0.067	U		28	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U		0.13	U		54	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C	3.9	UR	C	1600	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U		0.29	U		120	U	
TOLUENE		0.13	U		0.13	U		0.13	U		63	J	P
TOTAL XYLENES		0.28	U		0.28	U		0.28	U		120	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U		0.19	U		120	J	P
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U		0.19	U		79	U	

PROJ_NO: 04021	NSAMPLE	TB-050312
SDG: 240-10949-1	LAB_ID	240-10949-5
FRACTION: OV	SAMP_DATE	5/3/2012
MEDIA: WATER	QC_TYPE	NM
	UNITS	UG/L
	PCT_SOLIDS	0.0
	DUP_OF	

PARAMETER	RESULT	VQL	QLCD
CARBON DISULFIDE	0.13	U	
CARBON TETRACHLORIDE	0.13	U	
CHLOROBENZENE	0.15	U	
CHLORODIBROMOMETHANE	0.18	U	
CHLOROETHANE	0.29	U	
CHLOROFORM	0.16	U	
CHLOROMETHANE	0.3	U	
CIS-1,2-DICHLOROETHENE	0.17	U	
CIS-1,3-DICHLOROPROPENE	0.14	U	
DIBROMOMETHANE	0.28	U	
DICHLORODIFLUOROMETHANE	0.31	U	
DIISOPROPYL ETHER	1.5	U	
ETHYL TERT-BUTYL ETHER	0.11	U	
ETHYLBENZENE	0.17	U	
HEXACHLOROBUTADIENE	0.3	U	
ISOPROPYLBENZENE	0.13	U	
M+P-XYLENES	0.24	U	
METHYL TERT-BUTYL ETHER	0.17	U	
METHYLCYCLOHEXANE			
METHYLENE CHLORIDE	0.33	U	
NAPHTHALENE	0.24	U	
N-BUTYLBENZENE	0.12	U	
N-PROPYLBENZENE	0.14	U	
O-XYLENE	0.14	U	
SEC-BUTYLBENZENE	0.13	U	
SILANOL, TRIMETHYL-			
STYRENE	0.11	U	
TERT-AMYL METHYL ETHER	0.067	U	
TERT-BUTYLBENZENE	0.13	U	
TERTIARY-BUTYL ALCOHOL	3.9	UR	C
TETRACHLOROETHENE	0.29	U	
TOLUENE	0.13	U	
TOTAL XYLENES	0.28	U	
TRANS-1,2-DICHLOROETHENE	0.19	U	
TRANS-1,3-DICHLOROPROPENE	0.19	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-9			240-10949-7			240-10949-6			240-10949-8		
FRACTION: OV	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		11000			4700			4100			1600		
TRICHLOROFLUOROMETHANE		88	U		30	U		26	U		8.4	U	
VINYL ACETATE		79	UR	C	27	UR	C	24	UR	C	7.6	UR	C
VINYL CHLORIDE		810			31	U		1500			27	J	P

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-3			240-10949-2			240-10949-1			240-10949-4		
FRACTION: OV	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		0.17	U		0.17	U		0.57	J	P	4700		
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U		0.21	U		88	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C	0.19	UR	C	79	UR	C
VINYL CHLORIDE		0.22	U		0.22	U		0.22	U		2200		

PROJ_NO: 04021	NSAMPLE	TB-050312		
SDG: 240-10949-1	LAB_ID	240-10949-5		
FRACTION: OV	SAMP_DATE	5/3/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
TRICHLOROETHENE		0.17	U	
TRICHLOROFLUOROMETHANE		0.21	U	
VINYL ACETATE		0.19	UR	C
VINYL CHLORIDE		0.22	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-9			240-10949-7			240-10949-6			240-10949-8		
FRACTION: OS	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		300			29			29			21		

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-3			240-10949-2			240-10949-1			240-10949-4		
FRACTION: OS	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.47	U		0.48	U		0.48	UL	R	89		

PROJ_NO: 04021	NSAMPLE	MSA-DMW4S-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-8			240-10949-1			240-10949-4		
FRACTION: PET	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		690			42	B	A	7500		
TPH (C10-C32)		240	U		430	B	A	770	B	A

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-9			240-10949-7			240-10949-6			240-10949-8		
FRACTION: M	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.65	UJ	N	1.3	UJ	N	0.65	UJ	N	0.65	UJ	N
ARSENIC		9.9			22			17			6.5		
BARIUM		33	J	N	19	B	A	23	J	NP	11	B	A
BERYLLIUM		2.4			4.4			6.1			2.1		
CADMIUM		800			22			14			43		
CHROMIUM		150			3.8			21			2.5		
COBALT		570			150			62			87		
COPPER		140			65			150			9		
LEAD		12	J	N	1.9	J	CNP	5.2	J	N	3.7	J	NP
MERCURY		0.6			1.6			0.12	U		0.12	U	
MOLYBDENUM		3.3	J	P	0.093	U		1	J	P	0.093	U	
NICKEL		160			110			41			46		
SELENIUM		11			31			14			6.5		
SILVER		0.22	J	P	0.08	U		0.26	J	P	0.08	U	
THALLIUM		0.7	UJ	N	1.4	UJ	N	0.7	UJ	N	0.7	UJ	N
TUNGSTEN		1.9	UJ	N	3.7	UJ	N	1.9	UJ	N	1.9	UJ	N
VANADIUM		73			1.5	J	P	30			1.8	J	P
ZINC		620			350			200			180		

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-3			240-10949-2			240-10949-1			240-10949-4		
FRACTION: M	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	J	P	0.18	J	P	0.18	J	P	0.13	U	
ARSENIC		2.4	J	P	3.4	J	P	6.8			5.2		
BARIUM		54			13			37			9.5		
BERYLLIUM		0.57	J	P	6.5			0.2	U		0.94	J	P
CADMIUM		0.75	J	P	7.3			0.13	U		0.85	J	P
CHROMIUM		5.8			110			1.6	J	P	0.71	U	
COBALT		27			86			4.1			22		
COPPER		20			53			1.5	B	A	10		
LEAD		3.5			2.5			0.89	J	CP	1	K	C
MERCURY		1.7			0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.53	B	A	2.4	B	A	0.24	B	A	0.1	B	A
NICKEL		41			99			2.4	K	C	26		
SELENIUM		2.3	J	P	3.7	J	P	0.67	J	P	5.3		
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.21	B	A	0.19	B	A	0.14	U		0.14	U	
TUNGSTEN		1	B	A	0.37	U		0.37	U		0.37	U	
VANADIUM		5.8	B	A	0.44	U		1.9	B	A	0.44	U	
ZINC		120			440			6.4	B	A	29		

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-9			240-10949-7			240-10949-6			240-10949-8		
FRACTION: MF	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.65	UJ	N	1.3	UJ	N	0.65	UJ	N	0.65	UJ	N
ARSENIC		7.5			23			15			6		
BARIUM		12	B	A	17	B	A	9.8	B	A	9.1	B	A
BERYLLIUM		2.1			4.6			6.8			1.7		
CADMIUM		740			23			11			10		
CHROMIUM		4.3			1.7	J	P	5.6			0.71	U	
COBALT		550			160			67			72		
COPPER		41			68			59			3		
LEAD		5.3	J	N	1.8	UJ	N	2.3	J	NP	1.3	J	CNP
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.093	U		0.093	U		0.093	U		0.093	U	
NICKEL		160			120			44			39		
SELENIUM		10			32			16			5.4		
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.7	UJ	N	1.4	UJ	N	0.7	UJ	N	0.7	UJ	N
TUNGSTEN		1.9	UJ	N	3.7	UJ	N	1.9	UJ	N	1.9	UJ	N
VANADIUM		3.9	J	P	0.44	U		16	J	P	0.44	U	
ZINC		560			360			190			120		

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-3			240-10949-2			240-10949-1			240-10949-4		
FRACTION: MF	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.17	J	P	0.13	U	
ARSENIC		1.1	J	P	3.8	J		7			4.5	J	P
BARIUM		52			13			38			9.8		
BERYLLIUM		0.58	J	P	7.1			0.2	U		0.93	J	P
CADMIUM		0.75	J	P	6.9			0.13	U		0.89	J	P
CHROMIUM		0.71	U		38			0.71	U		0.88	J	P
COBALT		29			91			4.2			22		
COPPER		15			24			0.4	B	A	8.2		
LEAD		1.9	K	C	2	K	C	0.18	U		0.22	J	CP
MERCURY		0.41			0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.17	B	A	0.28	B	A	0.23	B	A	0.18	B	A
NICKEL		38			110			2.1	K	C	23		
SELENIUM		2.2	J	P	4.2	J	P	0.66	J	P	5.4		
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.15	B	A	0.19	B	A	0.14	U		0.14	U	
TUNGSTEN		0.37	U		0.37	U		0.37	U		0.37	U	
VANADIUM		0.44	U		0.44	U		0.44	U		0.44	U	
ZINC		94			430			2.3	U		30		

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-9			240-10949-7			240-10949-6			240-10949-8		
FRACTION: MISC	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.12	J	P	4.6			1.3			0.082	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: 240-10949-1	LAB_ID	240-10949-3			240-10949-2			240-10949-1			240-10949-4		
FRACTION: MISC	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.13	J	P	0.082	U		0.082	U		0.082	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW2A-050312 | Lab Sample ID: 240-10949-9

Matrix: Water | Lab File ID: UXM5935.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/16/2012 12:29

Soil Aliquot Vol: | Dilution Factor: 416.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44226 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	420	U	420	96
71-55-6	1,1,1-Trichloroethane	420	U	420	92
79-34-5	1,1,2,2-Tetrachloroethane	420	U	420	75
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	420	U	420	120
75-34-3	1,1-Dichloroethane	420	U	420	63
75-35-4	1,1-Dichloroethene	420	U	420	79
563-58-6	1,1-Dichloropropene	420	U	420	54
87-61-6	1,2,3-Trichlorobenzene	420	U	420	71
96-18-4	1,2,3-Trichloropropane	420	U	420	180
526-73-8	1,2,3-Trimethylbenzene	2100	U	2100	2.5
120-82-1	1,2,4-Trichlorobenzene	440		420	63
95-63-6	1,2,4-Trimethylbenzene	420	U	420	50
96-12-8	1,2-Dibromo-3-Chloropropane	830	U	830	280
95-50-1	1,2-Dichlorobenzene	420	U	420	54
107-06-2	1,2-Dichloroethane	420	U	420	92
78-87-5	1,2-Dichloropropane	420	U	420	75
541-73-1	1,3-Dichlorobenzene	420	U	420	58
142-28-9	1,3-Dichloropropane	420	U	420	67
106-46-7	1,4-Dichlorobenzene	420	U	420	54
594-20-7	2,2-Dichloropropane	420	U	420	54
110-75-8	2-Chloroethyl vinyl ether	4200	U	4200	410
95-49-8	2-Chlorotoluene	420	U	420	46
591-78-6	2-Hexanone	4200	U	4200	170
108-86-1	Bromobenzene	420	U	420	54
74-97-5	Bromochloromethane	420	U	420	120
106-43-4	4-Chlorotoluene	420	U	420	75
99-87-6	p-Isopropyltoluene	420	U	420	50
67-64-1	Acetone	4200	U	4200	460
71-43-2	Benzene	420	U	420	54
75-25-2	Bromoform	420	U	420	270
74-83-9	Bromomethane	420	U	420	170
75-15-0	Carbon disulfide	420	U	420	54
56-23-5	Carbon tetrachloride	420	U	420	54
108-90-7	Chlorobenzene	420	U	420	63
75-00-3	Chloroethane	420	U	420	120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW2A-050312 | Lab Sample ID: 240-10949-9

Matrix: Water | Lab File ID: UXM5935.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/16/2012 12:29

Soil Aliquot Vol: | Dilution Factor: 416.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44226 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	420	U	420	67
74-87-3	Chloromethane	420	U	420	130
156-59-2	cis-1,2-Dichloroethene	3400		420	71
10061-01-5	cis-1,3-Dichloropropene	420	U	420	58
87-68-3	Hexachlorobutadiene	420	U	420	130
74-95-3	Dibromomethane	420	U	420	120
75-27-4	Bromodichloromethane	420	U	420	63
75-71-8	Dichlorodifluoromethane	420	U	420	130
100-41-4	Ethylbenzene	420	U	420	71
106-93-4	1,2-Dibromoethane	420	U	420	100
108-20-3	Diisopropyl ether	4200	U	4200	630
91-20-3	Naphthalene	420	U	420	100
179601-23-1	m-Xylene & p-Xylene	830	U	830	100
104-51-8	n-Butylbenzene	420	U	420	50
98-82-8	Isopropylbenzene	420	U	420	54
103-65-1	n-Propylbenzene	420	U	420	58
78-93-3	2-Butanone	4200	U	4200	240
108-10-1	4-Methyl-2-pentanone	4200	U	4200	130
135-98-8	sec-Butylbenzene	420	U	420	54
1634-04-4	Methyl tert-butyl ether	2100	U	2100	71
994-05-8	Tert-amyl-methyl ether (TAME)	2100	U	2100	28
75-09-2	Methylene Chloride	420	U	420	140
95-47-6	o-Xylene	420	U	420	58
100-42-5	Styrene	420	U	420	46
637-92-3	Ethyl-t-butyl ether (ETBE)	2100	U	2100	46
98-06-6	tert-Butylbenzene	420	U	420	54
127-18-4	Tetrachloroethene	420	U	420	120
108-88-3	Toluene	420	U	420	54
156-60-5	trans-1,2-Dichloroethene	420	U	420	79
10061-02-6	trans-1,3-Dichloropropene	420	U	420	79
79-01-6	Trichloroethene	11000		420	71
75-69-4	Trichlorofluoromethane	420	U	420	88
108-05-4	Vinyl acetate	830	U	830	79
75-01-4	Vinyl chloride	810		420	92
75-65-0	tert-Butyl alcohol	21000	U	21000	1600
1330-20-7	Xylenes, Total	830	U	830	120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW2A-050312 | Lab Sample ID: 240-10949-9

Matrix: Water | Lab File ID: UXM5935.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/16/2012 12:29

Soil Aliquot Vol: | Dilution Factor: 416.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44226 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	420	U	420	75

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	95		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW2A-050312 Lab Sample ID: 240-10949-9

Matrix: Water Lab File ID: UXM5935.D

Analysis Method: 8260C Date Collected: 05/03/2012 13:40

Sample wt/vol: 5(mL) Date Analyzed: 05/16/2012 12:29

Soil Aliquot Vol: Dilution Factor: 416.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44226 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4D-050312 Lab Sample ID: 240-10949-7

Matrix: Water Lab File ID: UXM5754.D

Analysis Method: 8260C Date Collected: 05/03/2012 10:46

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:48

Soil Aliquot Vol: Dilution Factor: 142.86

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	140	U	140	33
71-55-6	1,1,1-Trichloroethane	140	U	140	31
79-34-5	1,1,2,2-Tetrachloroethane	140	U	140	26
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	140	U	140	40
75-34-3	1,1-Dichloroethane	140	U	140	21
75-35-4	1,1-Dichloroethene	140	U	140	27
563-58-6	1,1-Dichloropropene	140	U	140	19
87-61-6	1,2,3-Trichlorobenzene	140	U	140	24
96-18-4	1,2,3-Trichloropropane	140	U	140	61
526-73-8	1,2,3-Trimethylbenzene	710	U	710	0.84
120-82-1	1,2,4-Trichlorobenzene	140	U	140	21
95-63-6	1,2,4-Trimethylbenzene	140	U	140	17
96-12-8	1,2-Dibromo-3-Chloropropane	290	U	290	96
95-50-1	1,2-Dichlorobenzene	140	U	140	19
107-06-2	1,2-Dichloroethane	140	U	140	31
78-87-5	1,2-Dichloropropane	140	U	140	26
541-73-1	1,3-Dichlorobenzene	140	U	140	20
142-28-9	1,3-Dichloropropane	140	U	140	23
106-46-7	1,4-Dichlorobenzene	140	U	140	19
594-20-7	2,2-Dichloropropane	140	U	140	19
110-75-8	2-Chloroethyl vinyl ether	1400	U	1400	140
95-49-8	2-Chlorotoluene	140	U	140	16
591-78-6	2-Hexanone	1400	U	1400	59
108-86-1	Bromobenzene	140	U	140	19
74-97-5	Bromochloromethane	140	U	140	41
106-43-4	4-Chlorotoluene	140	U	140	26
99-87-6	p-Isopropyltoluene	140	U	140	17
67-64-1	Acetone	1400	U	1400	160
71-43-2	Benzene	140	U	140	19
75-25-2	Bromoform	140	U	140	91
74-83-9	Bromomethane	140	U	140	59
75-15-0	Carbon disulfide	140	U	140	19
56-23-5	Carbon tetrachloride	140	U	140	19
108-90-7	Chlorobenzene	140	U	140	21
75-00-3	Chloroethane	140	U	140	41

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4D-050312 | Lab Sample ID: 240-10949-7

Matrix: Water | Lab File ID: UXM5754.D

Analysis Method: 8260C | Date Collected: 05/03/2012 10:46

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 14:48

Soil Aliquot Vol: | Dilution Factor: 142.86

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	140	U	140	23
74-87-3	Chloromethane	140	U	140	43
156-59-2	cis-1,2-Dichloroethene	530		140	24
10061-01-5	cis-1,3-Dichloropropene	140	U	140	20
87-68-3	Hexachlorobutadiene	140	U	140	43
74-95-3	Dibromomethane	140	U	140	40
75-27-4	Bromodichloromethane	140	U	140	21
75-71-8	Dichlorodifluoromethane	140	U	140	44
100-41-4	Ethylbenzene	140	U	140	24
106-93-4	1,2-Dibromoethane	140	U	140	34
108-20-3	Diisopropyl ether	1400	U	1400	210
91-20-3	Naphthalene	140	U	140	34
179601-23-1	m-Xylene & p-Xylene	290	U	290	34
104-51-8	n-Butylbenzene	140	U	140	17
98-82-8	Isopropylbenzene	140	U	140	19
103-65-1	n-Propylbenzene	140	U	140	20
78-93-3	2-Butanone	1400	U	1400	81
108-10-1	4-Methyl-2-pentanone	1400	U	1400	46
135-98-8	sec-Butylbenzene	140	U	140	19
1634-04-4	Methyl tert-butyl ether	710	U	710	24
994-05-8	Tert-amyl-methyl ether (TAME)	710	U	710	9.6
75-09-2	Methylene Chloride	140	U	140	47
95-47-6	o-Xylene	140	U	140	20
100-42-5	Styrene	140	U	140	16
637-92-3	Ethyl-t-butyl ether (ETBE)	710	U	710	16
98-06-6	tert-Butylbenzene	140	U	140	19
127-18-4	Tetrachloroethene	140	U	140	41
108-88-3	Toluene	140	U	140	19
156-60-5	trans-1,2-Dichloroethene	140	U	140	27
10061-02-6	trans-1,3-Dichloropropene	140	U	140	27
79-01-6	Trichloroethene	4700		140	24
75-69-4	Trichlorofluoromethane	140	U	140	30
108-05-4	Vinyl acetate	290	U	290	27
75-01-4	Vinyl chloride	140	U	140	31
75-65-0	tert-Butyl alcohol	7100	U	7100	560
1330-20-7	Xylenes, Total	290	U	290	40

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4D-050312 Lab Sample ID: 240-10949-7

Matrix: Water Lab File ID: UXM5754.D

Analysis Method: 8260C Date Collected: 05/03/2012 10:46

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:48

Soil Aliquot Vol: Dilution Factor: 142.86

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	140	U	140	26

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	96		63-129
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
2037-26-5	Toluene-d8 (Surr)	95		74-115
1868-53-7	Dibromofluoromethane (Surr)	90		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4D-050312 Lab Sample ID: 240-10949-7

Matrix: Water Lab File ID: UXM5754.D

Analysis Method: 8260C Date Collected: 05/03/2012 10:46

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:48

Soil Aliquot Vol: Dilution Factor: 142.86

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4I-050312 | Lab Sample ID: 240-10949-6

Matrix: Water | Lab File ID: UXM5753.D

Analysis Method: 8260C | Date Collected: 05/03/2012 09:34

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 14:25

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	130	U	130	29
71-55-6	1,1,1-Trichloroethane	59	J	130	28
79-34-5	1,1,2,2-Tetrachloroethane	130	U	130	23
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	130	U	130	35
75-34-3	1,1-Dichloroethane	51	J	130	19
75-35-4	1,1-Dichloroethene	150		130	24
563-58-6	1,1-Dichloropropene	130	U	130	16
87-61-6	1,2,3-Trichlorobenzene	130	U	130	21
96-18-4	1,2,3-Trichloropropane	130	U	130	54
526-73-8	1,2,3-Trimethylbenzene	630	U	630	0.74
120-82-1	1,2,4-Trichlorobenzene	130	U	130	19
95-63-6	1,2,4-Trimethylbenzene	130	U	130	15
96-12-8	1,2-Dibromo-3-Chloropropane	250	U	250	84
95-50-1	1,2-Dichlorobenzene	130	U	130	16
107-06-2	1,2-Dichloroethane	130	U	130	28
78-87-5	1,2-Dichloropropane	130	U	130	23
541-73-1	1,3-Dichlorobenzene	130	U	130	18
142-28-9	1,3-Dichloropropane	130	U	130	20
106-46-7	1,4-Dichlorobenzene	130	U	130	16
594-20-7	2,2-Dichloropropane	130	U	130	16
110-75-8	2-Chloroethyl vinyl ether	1300	U	1300	120
95-49-8	2-Chlorotoluene	130	U	130	14
591-78-6	2-Hexanone	1300	U	1300	51
108-86-1	Bromobenzene	130	U	130	16
74-97-5	Bromochloromethane	130	U	130	36
106-43-4	4-Chlorotoluene	130	U	130	23
99-87-6	p-Isopropyltoluene	130	U	130	15
67-64-1	Acetone	1300	U	1300	140
71-43-2	Benzene	130	U	130	16
75-25-2	Bromoform	130	U	130	80
74-83-9	Bromomethane	130	U	130	51
75-15-0	Carbon disulfide	130	U	130	16
56-23-5	Carbon tetrachloride	130	U	130	16
108-90-7	Chlorobenzene	130	U	130	19
75-00-3	Chloroethane	130	U	130	36

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4I-050312 Lab Sample ID: 240-10949-6

Matrix: Water Lab File ID: UXM5753.D

Analysis Method: 8260C Date Collected: 05/03/2012 09:34

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:25

Soil Aliquot Vol: Dilution Factor: 125

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	130	U	130	20
74-87-3	Chloromethane	130	U	130	38
156-59-2	cis-1,2-Dichloroethene	1800		130	21
10061-01-5	cis-1,3-Dichloropropene	130	U	130	18
87-68-3	Hexachlorobutadiene	130	U	130	38
74-95-3	Dibromomethane	130	U	130	35
75-27-4	Bromodichloromethane	130	U	130	19
75-71-8	Dichlorodifluoromethane	130	U	130	39
100-41-4	Ethylbenzene	130	U	130	21
106-93-4	1,2-Dibromoethane	130	U	130	30
108-20-3	Diisopropyl ether	1300	U	1300	190
91-20-3	Naphthalene	130	U	130	30
179601-23-1	m-Xylene & p-Xylene	250	U	250	30
104-51-8	n-Butylbenzene	130	U	130	15
98-82-8	Isopropylbenzene	130	U	130	16
103-65-1	n-Propylbenzene	130	U	130	18
78-93-3	2-Butanone	1300	U	1300	71
108-10-1	4-Methyl-2-pentanone	1300	U	1300	40
135-98-8	sec-Butylbenzene	130	U	130	16
1634-04-4	Methyl tert-butyl ether	630	U	630	21
994-05-8	Tert-amyl-methyl ether (TAME)	630	U	630	8.4
75-09-2	Methylene Chloride	130	U	130	41
95-47-6	o-Xylene	130	U	130	18
100-42-5	Styrene	130	U	130	14
637-92-3	Ethyl-t-butyl ether (ETBE)	630	U	630	14
98-06-6	tert-Butylbenzene	130	U	130	16
127-18-4	Tetrachloroethene	130	U	130	36
108-88-3	Toluene	130	U	130	16
156-60-5	trans-1,2-Dichloroethene	27	J	130	24
10061-02-6	trans-1,3-Dichloropropene	130	U	130	24
79-01-6	Trichloroethene	4100		130	21
75-69-4	Trichlorofluoromethane	130	U	130	26
108-05-4	Vinyl acetate	250	U	250	24
75-01-4	Vinyl chloride	1500		130	28
75-65-0	tert-Butyl alcohol	6300	U	6300	490
1330-20-7	Xylenes, Total	250	U	250	35

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4I-050312 | Lab Sample ID: 240-10949-6

Matrix: Water | Lab File ID: UXM5753.D

Analysis Method: 8260C | Date Collected: 05/03/2012 09:34

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 14:25

Soil Aliquot Vol: | Dilution Factor: 125

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	130	U	130	23

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	94		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
2037-26-5	Toluene-d8 (Surr)	90		74-115
1868-53-7	Dibromofluoromethane (Surr)	90		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4I-050312 Lab Sample ID: 240-10949-6

Matrix: Water Lab File ID: UXM5753.D

Analysis Method: 8260C Date Collected: 05/03/2012 09:34

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:25

Soil Aliquot Vol: Dilution Factor: 125

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4S-050312 | Lab Sample ID: 240-10949-8

Matrix: Water | Lab File ID: UXM5755.D

Analysis Method: 8260C | Date Collected: 05/03/2012 12:02

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 15:11

Soil Aliquot Vol: | Dilution Factor: 40

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	40	U	40	9.2
71-55-6	1,1,1-Trichloroethane	40	U	40	8.8
79-34-5	1,1,2,2-Tetrachloroethane	40	U	40	7.2
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	40	U	40	11
75-34-3	1,1-Dichloroethane	40	U	40	6.0
75-35-4	1,1-Dichloroethene	24	J	40	7.6
563-58-6	1,1-Dichloropropene	40	U	40	5.2
87-61-6	1,2,3-Trichlorobenzene	40	U	40	6.8
96-18-4	1,2,3-Trichloropropane	40	U	40	17
526-73-8	1,2,3-Trimethylbenzene	200	U	200	0.24
120-82-1	1,2,4-Trichlorobenzene	40	U	40	6.0
95-63-6	1,2,4-Trimethylbenzene	40	U	40	4.8
96-12-8	1,2-Dibromo-3-Chloropropane	80	U	80	27
95-50-1	1,2-Dichlorobenzene	40	U	40	5.2
107-06-2	1,2-Dichloroethane	20	J	40	8.8
78-87-5	1,2-Dichloropropane	40	U	40	7.2
541-73-1	1,3-Dichlorobenzene	40	U	40	5.6
142-28-9	1,3-Dichloropropane	40	U	40	6.4
106-46-7	1,4-Dichlorobenzene	40	U	40	5.2
594-20-7	2,2-Dichloropropane	40	U	40	5.2
110-75-8	2-Chloroethyl vinyl ether	400	U	400	40
95-49-8	2-Chlorotoluene	40	U	40	4.4
591-78-6	2-Hexanone	400	U	400	16
108-86-1	Bromobenzene	40	U	40	5.2
74-97-5	Bromochloromethane	40	U	40	12
106-43-4	4-Chlorotoluene	40	U	40	7.2
99-87-6	p-Isopropyltoluene	40	U	40	4.8
67-64-1	Acetone	400	U	400	44
71-43-2	Benzene	40	U	40	5.2
75-25-2	Bromoform	40	U	40	26
74-83-9	Bromomethane	40	U	40	16
75-15-0	Carbon disulfide	40	U	40	5.2
56-23-5	Carbon tetrachloride	40	U	40	5.2
108-90-7	Chlorobenzene	40	U	40	6.0
75-00-3	Chloroethane	40	U	40	12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4S-050312 | Lab Sample ID: 240-10949-8

Matrix: Water | Lab File ID: UXM5755.D

Analysis Method: 8260C | Date Collected: 05/03/2012 12:02

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 15:11

Soil Aliquot Vol: | Dilution Factor: 40

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	40	U	40	6.4
74-87-3	Chloromethane	40	U	40	12
156-59-2	cis-1,2-Dichloroethene	120		40	6.8
10061-01-5	cis-1,3-Dichloropropene	40	U	40	5.6
87-68-3	Hexachlorobutadiene	40	U	40	12
74-95-3	Dibromomethane	40	U	40	11
75-27-4	Bromodichloromethane	40	U	40	6.0
75-71-8	Dichlorodifluoromethane	40	U	40	12
100-41-4	Ethylbenzene	40	U	40	6.8
106-93-4	1,2-Dibromoethane	40	U	40	9.6
108-20-3	Diisopropyl ether	400	U	400	60
91-20-3	Naphthalene	40	U	40	9.6
179601-23-1	m-Xylene & p-Xylene	80	U	80	9.6
104-51-8	n-Butylbenzene	40	U	40	4.8
98-82-8	Isopropylbenzene	40	U	40	5.2
103-65-1	n-Propylbenzene	40	U	40	5.6
78-93-3	2-Butanone	400	U	400	23
108-10-1	4-Methyl-2-pentanone	400	U	400	13
135-98-8	sec-Butylbenzene	40	U	40	5.2
1634-04-4	Methyl tert-butyl ether	200	U	200	6.8
994-05-8	Tert-amyl-methyl ether (TAME)	200	U	200	2.7
75-09-2	Methylene Chloride	40	U	40	13
95-47-6	o-Xylene	40	U	40	5.6
100-42-5	Styrene	40	U	40	4.4
637-92-3	Ethyl-t-butyl ether (ETBE)	200	U	200	4.4
98-06-6	tert-Butylbenzene	40	U	40	5.2
127-18-4	Tetrachloroethene	40	U	40	12
108-88-3	Toluene	40	U	40	5.2
156-60-5	trans-1,2-Dichloroethene	40	U	40	7.6
10061-02-6	trans-1,3-Dichloropropene	40	U	40	7.6
79-01-6	Trichloroethene	1600		40	6.8
75-69-4	Trichlorofluoromethane	40	U	40	8.4
108-05-4	Vinyl acetate	80	U	80	7.6
75-01-4	Vinyl chloride	27	J	40	8.8
75-65-0	tert-Butyl alcohol	2000	U	2000	160
1330-20-7	Xylenes, Total	80	U	80	11

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4S-050312 | Lab Sample ID: 240-10949-8

Matrix: Water | Lab File ID: UXM5755.D

Analysis Method: 8260C | Date Collected: 05/03/2012 12:02

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 15:11

Soil Aliquot Vol: | Dilution Factor: 40

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	40	U	40	7.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
2037-26-5	Toluene-d8 (Surr)	99		74-115
1868-53-7	Dibromofluoromethane (Surr)	90		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4S-050312 Lab Sample ID: 240-10949-8

Matrix: Water Lab File ID: UXM5755.D

Analysis Method: 8260C Date Collected: 05/03/2012 12:02

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 15:11

Soil Aliquot Vol: Dilution Factor: 40

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6D-050312 | Lab Sample ID: 240-10949-3

Matrix: Water | Lab File ID: UXM5714.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 19:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6D-050312 | Lab Sample ID: 240-10949-3

Matrix: Water | Lab File ID: UXM5714.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 19:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6D-050312 | Lab Sample ID: 240-10949-3

Matrix: Water | Lab File ID: UXM5714.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 19:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		63-129
460-00-4	4-Bromofluorobenzene (Surr)	98		66-117
2037-26-5	Toluene-d8 (Surr)	98		74-115
1868-53-7	Dibromofluoromethane (Surr)	99		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6D-050312 | Lab Sample ID: 240-10949-3

Matrix: Water | Lab File ID: UXM5714.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 19:13

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 2.3

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	2.3	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6I-050312 | Lab Sample ID: 240-10949-2

Matrix: Water | Lab File ID: UXM5713.D

Analysis Method: 8260C | Date Collected: 05/03/2012 11:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 18:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6I-050312 | Lab Sample ID: 240-10949-2

Matrix: Water | Lab File ID: UXM5713.D

Analysis Method: 8260C | Date Collected: 05/03/2012 11:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 18:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6I-050312 | Lab Sample ID: 240-10949-2

Matrix: Water | Lab File ID: UXM5713.D

Analysis Method: 8260C | Date Collected: 05/03/2012 11:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 18:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
2037-26-5	Toluene-d8 (Surr)	93		74-115
1868-53-7	Dibromofluoromethane (Surr)	84		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6I-050312 | Lab Sample ID: 240-10949-2

Matrix: Water | Lab File ID: UXM5713.D

Analysis Method: 8260C | Date Collected: 05/03/2012 11:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 18:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 3.1

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	3.1	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 | Lab Sample ID: 240-10949-1

Matrix: Water | Lab File ID: UXM5712.D

Analysis Method: 8260C | Date Collected: 05/03/2012 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 18:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	0.29	J	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 | Lab Sample ID: 240-10949-1

Matrix: Water | Lab File ID: UXM5712.D

Analysis Method: 8260C | Date Collected: 05/03/2012 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 18:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.4		1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	0.57	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 Lab Sample ID: 240-10949-1

Matrix: Water Lab File ID: UXM5712.D

Analysis Method: 8260C Date Collected: 05/03/2012 09:40

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 18:28

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
460-00-4	4-Bromofluorobenzene (Surr)	92		66-117
2037-26-5	Toluene-d8 (Surr)	97		74-115
1868-53-7	Dibromofluoromethane (Surr)	90		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 | Lab Sample ID: 240-10949-1

Matrix: Water | Lab File ID: UXM5712.D

Analysis Method: 8260C | Date Collected: 05/03/2012 09:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 18:28

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 1.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.60	1.6	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 | Lab Sample ID: 240-10949-4

Matrix: Water | Lab File ID: UXM5751.D

Analysis Method: 8260C | Date Collected: 05/03/2012 14:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 13:40

Soil Aliquot Vol: | Dilution Factor: 416.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	420	U	420	96
71-55-6	1,1,1-Trichloroethane	130	J	420	92
79-34-5	1,1,2,2-Tetrachloroethane	420	U	420	75
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	420	U	420	120
75-34-3	1,1-Dichloroethane	420	U	420	63
75-35-4	1,1-Dichloroethene	140	J	420	79
563-58-6	1,1-Dichloropropene	420	U	420	54
87-61-6	1,2,3-Trichlorobenzene	420	U	420	71
96-18-4	1,2,3-Trichloropropane	420	U	420	180
526-73-8	1,2,3-Trimethylbenzene	2100	U	2100	2.5
120-82-1	1,2,4-Trichlorobenzene	420	U	420	63
95-63-6	1,2,4-Trimethylbenzene	420	U	420	50
96-12-8	1,2-Dibromo-3-Chloropropane	830	U	830	280
95-50-1	1,2-Dichlorobenzene	420	U	420	54
107-06-2	1,2-Dichloroethane	420	U	420	92
78-87-5	1,2-Dichloropropane	420	U	420	75
541-73-1	1,3-Dichlorobenzene	420	U	420	58
142-28-9	1,3-Dichloropropane	420	U	420	67
106-46-7	1,4-Dichlorobenzene	420	U	420	54
594-20-7	2,2-Dichloropropane	420	U	420	54
110-75-8	2-Chloroethyl vinyl ether	4200	U	4200	410
95-49-8	2-Chlorotoluene	420	U	420	46
591-78-6	2-Hexanone	4200	U	4200	170
108-86-1	Bromobenzene	420	U	420	54
74-97-5	Bromochloromethane	420	U	420	120
106-43-4	4-Chlorotoluene	420	U	420	75
99-87-6	p-Isopropyltoluene	420	U	420	50
67-64-1	Acetone	4200	U	4200	460
71-43-2	Benzene	420	U	420	54
75-25-2	Bromoform	420	U	420	270
74-83-9	Bromomethane	420	U	420	170
75-15-0	Carbon disulfide	420	U	420	54
56-23-5	Carbon tetrachloride	420	U	420	54
108-90-7	Chlorobenzene	420	U	420	63
75-00-3	Chloroethane	420	U	420	120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 Lab Sample ID: 240-10949-4

Matrix: Water Lab File ID: UXM5751.D

Analysis Method: 8260C Date Collected: 05/03/2012 14:15

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 13:40

Soil Aliquot Vol: Dilution Factor: 416.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	420	U	420	67
74-87-3	Chloromethane	420	U	420	130
156-59-2	cis-1,2-Dichloroethene	15000		420	71
10061-01-5	cis-1,3-Dichloropropene	420	U	420	58
87-68-3	Hexachlorobutadiene	420	U	420	130
74-95-3	Dibromomethane	420	U	420	120
75-27-4	Bromodichloromethane	420	U	420	63
75-71-8	Dichlorodifluoromethane	420	U	420	130
100-41-4	Ethylbenzene	420	U	420	71
106-93-4	1,2-Dibromoethane	420	U	420	100
108-20-3	Diisopropyl ether	4200	U	4200	630
91-20-3	Naphthalene	420	U	420	100
179601-23-1	m-Xylene & p-Xylene	830	U	830	100
104-51-8	n-Butylbenzene	420	U	420	50
98-82-8	Isopropylbenzene	420	U	420	54
103-65-1	n-Propylbenzene	420	U	420	58
78-93-3	2-Butanone	4200	U	4200	240
108-10-1	4-Methyl-2-pentanone	4200	U	4200	130
135-98-8	sec-Butylbenzene	420	U	420	54
1634-04-4	Methyl tert-butyl ether	2100	U	2100	71
994-05-8	Tert-amyl-methyl ether (TAME)	2100	U	2100	28
75-09-2	Methylene Chloride	420	U	420	140
95-47-6	o-Xylene	420	U	420	58
100-42-5	Styrene	420	U	420	46
637-92-3	Ethyl-t-butyl ether (ETBE)	2100	U	2100	46
98-06-6	tert-Butylbenzene	420	U	420	54
127-18-4	Tetrachloroethene	420	U	420	120
108-88-3	Toluene	63	J	420	54
156-60-5	trans-1,2-Dichloroethene	120	J	420	79
10061-02-6	trans-1,3-Dichloropropene	420	U	420	79
79-01-6	Trichloroethene	4700		420	71
75-69-4	Trichlorofluoromethane	420	U	420	88
108-05-4	Vinyl acetate	830	U	830	79
75-01-4	Vinyl chloride	2200		420	92
75-65-0	tert-Butyl alcohol	21000	U	21000	1600
1330-20-7	Xylenes, Total	830	U	830	120

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 Lab Sample ID: 240-10949-4

Matrix: Water Lab File ID: UXM5751.D

Analysis Method: 8260C Date Collected: 05/03/2012 14:15

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 13:40

Soil Aliquot Vol: Dilution Factor: 416.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	420	U	420	75

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		63-129
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
2037-26-5	Toluene-d8 (Surr)	102		74-115
1868-53-7	Dibromofluoromethane (Surr)	95		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 Lab Sample ID: 240-10949-4

Matrix: Water Lab File ID: UXM5751.D

Analysis Method: 8260C Date Collected: 05/03/2012 14:15

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 13:40

Soil Aliquot Vol: Dilution Factor: 416.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 1 TIC Result Total: 82

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	82	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: TB-050312 Lab Sample ID: 240-10949-5

Matrix: Water Lab File ID: UXM5752.D

Analysis Method: 8260C Date Collected: 05/03/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: TB-050312 | Lab Sample ID: 240-10949-5

Matrix: Water | Lab File ID: UXM5752.D

Analysis Method: 8260C | Date Collected: 05/03/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 14:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: TB-050312 Lab Sample ID: 240-10949-5

Matrix: Water Lab File ID: UXM5752.D

Analysis Method: 8260C Date Collected: 05/03/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	92		63-129
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
2037-26-5	Toluene-d8 (Surr)	89		74-115
1868-53-7	Dibromofluoromethane (Surr)	86		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: TB-050312 Lab Sample ID: 240-10949-5

Matrix: Water Lab File ID: UXM5752.D

Analysis Method: 8260C Date Collected: 05/03/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 14:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW2A-050312 | Lab Sample ID: 240-10949-9

Matrix: Water | Lab File ID: 0513021.D

Analysis Method: 8270C | Date Collected: 05/03/2012 13:40

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1030(mL) | Date Analyzed: 05/13/2012 12:43

Con. Extract Vol.: 2(mL) | Dilution Factor: 10

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43845 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	300		9.7	4.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		28-110
367-12-4	2-Fluorophenol (Surr)	50		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	69		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	55		10-110
1718-51-0	Terphenyl-d14 (Surr)	59		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4D-050312 | Lab Sample ID: 240-10949-7

Matrix: Water | Lab File ID: 0511036.D

Analysis Method: 8270C | Date Collected: 05/03/2012 10:46

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1020(mL) | Date Analyzed: 05/11/2012 17:54

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43638 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	29		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	56		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	51		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	53		27-111
4165-62-2	Phenol-d5 (Surr)	55		10-110
1718-51-0	Terphenyl-d14 (Surr)	58		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4I-050312 | Lab Sample ID: 240-10949-6

Matrix: Water | Lab File ID: 0513020.D

Analysis Method: 8270C | Date Collected: 05/03/2012 09:34

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1010(mL) | Date Analyzed: 05/13/2012 12:25

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43845 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	29		0.99	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	29		28-110
367-12-4	2-Fluorophenol (Surr)	30		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	30		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	28		27-111
4165-62-2	Phenol-d5 (Surr)	31		10-110
1718-51-0	Terphenyl-d14 (Surr)	33	X	37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4I-050312 RE | Lab Sample ID: 240-10949-6 RE

Matrix: Water | Lab File ID: 0516040.D

Analysis Method: 8270C | Date Collected: 05/03/2012 09:34

Extract. Method: 3520C | Date Extracted: 05/14/2012 07:44

Sample wt/vol: 1050(mL) | Date Analyzed: 05/16/2012 19:49

Con. Extract Vol.: 2(mL) | Dilution Factor: 2

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44186 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	*1,4-Dioxane*	*69*	*H*	*1.9*	*0.93*

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	31		28-110
367-12-4	2-Fluorophenol (Surr)	56		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	43		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	42		27-111
4165-62-2	Phenol-d5 (Surr)	36		10-110
1718-51-0	Terphenyl-d14 (Surr)	44		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4S-050312 | Lab Sample ID: 240-10949-8

Matrix: Water | Lab File ID: 0511037.D

Analysis Method: 8270C | Date Collected: 05/03/2012 12:02

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1020(mL) | Date Analyzed: 05/11/2012 18:12

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43638 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	21		0.98	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	42		28-110
367-12-4	2-Fluorophenol (Surr)	44		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	45		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	42		27-111
4165-62-2	Phenol-d5 (Surr)	44		10-110
1718-51-0	Terphenyl-d14 (Surr)	54		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6D-050312 | Lab Sample ID: 240-10949-3

Matrix: Water | Lab File ID: 0511033.D

Analysis Method: 8270C | Date Collected: 05/03/2012 13:00

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1050(mL) | Date Analyzed: 05/11/2012 17:01

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43638 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	43		28-110
367-12-4	2-Fluorophenol (Surr)	48		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	40		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	45		27-111
4165-62-2	Phenol-d5 (Surr)	46		10-110
1718-51-0	Terphenyl-d14 (Surr)	52		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6I-050312 | Lab Sample ID: 240-10949-2

Matrix: Water | Lab File ID: 0511032.D

Analysis Method: 8270C | Date Collected: 05/03/2012 11:25

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1030(mL) | Date Analyzed: 05/11/2012 16:43

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43638 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.97	U	0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	53		28-110
367-12-4	2-Fluorophenol (Surr)	57		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	53		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	55		27-111
4165-62-2	Phenol-d5 (Surr)	55		10-110
1718-51-0	Terphenyl-d14 (Surr)	64		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 Lab Sample ID: 240-10949-1

Matrix: Water Lab File ID: 0511022.D

Analysis Method: 8270C Date Collected: 05/03/2012 09:40

Extract. Method: 3520C Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1030(mL) Date Analyzed: 05/11/2012 13:45

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 43638 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.97	U	0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	12	X	28-110
367-12-4	2-Fluorophenol (Surr)	13		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	14	X	22-120
4165-60-0	Nitrobenzene-d5 (Surr)	11	X	27-111
4165-62-2	Phenol-d5 (Surr)	13		10-110
1718-51-0	Terphenyl-d14 (Surr)	13	X	37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 RE | Lab Sample ID: 240-10949-1 RE

Matrix: Water | Lab File ID: 0516008.D

Analysis Method: 8270C | Date Collected: 05/03/2012 09:40

Extract. Method: 3520C | Date Extracted: 05/14/2012 07:44

Sample wt/vol: 1050(mL) | Date Analyzed: 05/16/2012 10:22

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44186 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	*1,4-Dioxane*	*0.95*	*U H*	*0.95*	*0.47*

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	52		28-110
367-12-4	2-Fluorophenol (Surr)	42		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	59		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	49		27-111
4165-62-2	Phenol-d5 (Surr)	35		10-110
1718-51-0	Terphenyl-d14 (Surr)	63		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 | Lab Sample ID: 240-10949-4

Matrix: Water | Lab File ID: 0511034.D

Analysis Method: 8270C | Date Collected: 05/03/2012 14:15

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1040(mL) | Date Analyzed: 05/11/2012 17:18

Con. Extract Vol.: 2(mL) | Dilution Factor: 4

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43638 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	89		3.8	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	50		28-110
367-12-4	2-Fluorophenol (Surr)	55		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	55		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	57		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4S-050312 Lab Sample ID: 240-10949-8

Matrix: Water Lab File ID: YF050913.D

Analysis Method: 8015B Date Collected: 05/03/2012 12:02

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2012 17:27

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	690	B	200	50

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	62		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 Lab Sample ID: 240-10949-1

Matrix: Water Lab File ID: YF050909.D

Analysis Method: 8015B Date Collected: 05/03/2012 09:40

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2012 14:51

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	42	J B	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	60		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 Lab Sample ID: 240-10949-4

Matrix: Water Lab File ID: YF050912.D

Analysis Method: 8015B Date Collected: 05/03/2012 14:15

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2012 16:48

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	7500	B	1000	250

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	57		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW4S-050312 | Lab Sample ID: 240-10949-8

Matrix: Water | Lab File ID: P6F05121.D

Analysis Method: 8015B | Date Collected: 05/03/2012 12:02

Extraction Method: 3520C | Date Extracted: 05/09/2012 08:43

Sample wt/vol: 980(mL) | Date Analyzed: 05/11/2012 12:40

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43655 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	510	U	510	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	39		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 | Lab Sample ID: 240-10949-1

Matrix: Water | Lab File ID: P6F05119.D

Analysis Method: 8015B | Date Collected: 05/03/2012 09:40

Extraction Method: 3520C | Date Extracted: 05/09/2012 08:43

Sample wt/vol: 1040(mL) | Date Analyzed: 05/11/2012 11:39

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43655 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	430	J B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	19		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 | Lab Sample ID: 240-10949-4

Matrix: Water | Lab File ID: P6F05120.D

Analysis Method: 8015B | Date Collected: 05/03/2012 14:15

Extraction Method: 3520C | Date Extracted: 05/09/2012 08:43

Sample wt/vol: 1050(mL) | Date Analyzed: 05/11/2012 12:09

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43655 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	770	B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	47		10-110

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG No.:

Project: MSA Groundwater Sampling

Client Sample ID	Lab Sample ID
MSA-DMW6S-050312	240-10949-1
MSA-DMW6I-050312	240-10949-2
MSA-DMW6D-050312	240-10949-3
MSA-DMW7S-050312	240-10949-4
MSA-DMW4I-050312	240-10949-6
MSA-DMW4D-050312	240-10949-7
MSA-DMW4S-050312	240-10949-8
MSA-DMW2A-050312	240-10949-9

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW6S-050312 Lab Sample ID: 240-10949-1

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 09:40

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW6S-050312 Lab Sample ID: 240-10949-1

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 09:40

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.18	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	6.8	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	37	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	1.6	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	4.1	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.5	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.89	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.24	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	2.4	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.67	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	1.9	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	6.4	20	2.3	ug/L	J	B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW6S-050312 Lab Sample ID: 240-10949-1

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 09:40

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.17	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	7.0	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	38	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	4.2	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.40	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.23	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	2.1	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.66	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	20	20	2.3	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW6I-050312 Lab Sample ID: 240-10949-2

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 11:25

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW6I-050312 Lab Sample ID: 240-10949-2

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 11:25

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.18	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	3.4	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	13	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	6.5	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	7.3	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	110	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	86	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	53	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.5	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	2.4	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	99	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	3.7	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.19	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	440	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW6I-050312 Lab Sample ID: 240-10949-2

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 11:25

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	3.8	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	13	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	7.1	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	6.9	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	38	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	91	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	24	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.0	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.28	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	110	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	4.2	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.19	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	430	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW6D-050312 Lab Sample ID: 240-10949-3

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 13:00

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	1.7	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW6D-050312 Lab Sample ID: 240-10949-3

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 13:00

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.13	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	2.4	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	54	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.57	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.75	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	5.8	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	27	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	20	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	3.5	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.53	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	41	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.3	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.21	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	1.0	10	0.37	ug/L	J		1	6020
7440-62-2	Vanadium	5.8	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	120	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW6D-050312 Lab Sample ID: 240-10949-3

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 13:00

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.1	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	52	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.58	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.75	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	29	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	15	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.9	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.17	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	38	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.2	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.15	2.0	0.14	ug/L	J		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	94	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.41	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW7S-050312 Lab Sample ID: 240-10949-4

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 14:15

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW7S-050312 Lab Sample ID: 240-10949-4

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 14:15

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	5.2	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	9.5	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.94	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.85	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	22	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	10	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.10	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	26	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.3	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	29	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW7S-050312 Lab Sample ID: 240-10949-4

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 14:15

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	4.5	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	9.8	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.93	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.89	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	0.88	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	22	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	8.2	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.22	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.18	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	23	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.4	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	30	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW41-050312 Lab Sample ID: 240-10949-6

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 09:34

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW4I-050312 Lab Sample ID: 240-10949-6

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 09:34

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	17	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	23	25	0.95	ug/L	J	B	5	6020
7440-41-7	Beryllium	6.1	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	14	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	21	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	62	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	150	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	5.2	5.0	0.90	ug/L			5	6020
7439-98-7	Molybdenum	1.0	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	41	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	14	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	0.26	1.0	0.080	ug/L	J		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7440-62-2	Vanadium	30	20	0.44	ug/L			1	6020
7440-66-6	Zinc	200	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW4I-050312 Lab Sample ID: 240-10949-6

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 09:34

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	15	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	9.8	25	0.95	ug/L	J	B	5	6020
7440-41-7	Beryllium	6.8	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	11	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	5.6	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	67	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	59	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.3	5.0	0.90	ug/L	J		5	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	44	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	16	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-62-2	Vanadium	16	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	190	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW4D-050312 Lab Sample ID: 240-10949-7

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 10:46

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	1.6	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW4D-050312 Lab Sample ID: 240-10949-7

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 10:46

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	20	20	1.3	ug/L	U		10	6020
7440-38-2	Arsenic	22	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	19	50	1.9	ug/L	J	B	10	6020
7440-41-7	Beryllium	4.4	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	22	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	3.8	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	150	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	65	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.9	10	1.8	ug/L	J		10	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	110	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	31	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	20	20	1.4	ug/L	U		10	6020
7440-33-7	Tungsten	100	100	3.7	ug/L	U		10	6020
7440-62-2	Vanadium	1.5	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	350	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW4D-050312 Lab Sample ID: 240-10949-7

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 10:46

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	20	20	1.3	ug/L	U		10	6020
7440-38-2	Arsenic	23	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	17	50	1.9	ug/L	J	B	10	6020
7440-41-7	Beryllium	4.6	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	23	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	1.7	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	160	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	68	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	10	10	1.8	ug/L	U		10	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	120	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	32	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	20	20	1.4	ug/L	U		10	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	360	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	100	100	3.7	ug/L	U		10	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW4S-050312 Lab Sample ID: 240-10949-8

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 12:02

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW4S-050312 Lab Sample ID: 240-10949-8

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 12:02

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	6.5	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	11	25	0.95	ug/L	J	B	5	6020
7440-41-7	Beryllium	2.1	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	43	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	2.5	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	87	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	9.0	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	3.7	5.0	0.90	ug/L	J		5	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	46	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	6.5	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7440-62-2	Vanadium	1.8	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	180	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW4S-050312 Lab Sample ID: 240-10949-8

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 12:02

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	6.0	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	9.1	25	0.95	ug/L	J	B	5	6020
7440-41-7	Beryllium	1.7	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	10	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	72	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	3.0	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.3	5.0	0.90	ug/L	J		5	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	39	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.4	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	120	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW2A-050312 Lab Sample ID: 240-10949-9

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 13:40

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.60	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW2A-050312 Lab Sample ID: 240-10949-9

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 13:40

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	9.9	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	33	25	0.95	ug/L		B	5	6020
7440-41-7	Beryllium	2.4	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	800	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	150	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	570	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	140	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	12	5.0	0.90	ug/L			5	6020
7439-98-7	Molybdenum	3.3	10	0.093	ug/L	J		1	6020
7440-02-0	Nickel	160	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	11	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	0.22	1.0	0.080	ug/L	J		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7440-62-2	Vanadium	73	20	0.44	ug/L			1	6020
7440-66-6	Zinc	620	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW2A-050312 Lab Sample ID: 240-10949-9

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG ID.:

Matrix: Water Date Sampled: 05/03/2012 13:40

Reporting Basis: WET Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	7.5	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	12	25	0.95	ug/L	J	B	5	6020
7440-41-7	Beryllium	2.1	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	740	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	4.3	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	550	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	41	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	5.3	5.0	0.90	ug/L			5	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	160	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	10	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-62-2	Vanadium	3.9	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	560	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

TestAmerica Canton

Client Sample ID: MSA-DMW2A-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E050430-008	Work Order #...: MTEG71AA		Matrix.....: WATER	
Date Sampled...: 05/03/12	Date Received..: 05/05/12			
Prep Date.....: 05/10/12	Analysis Date..: 05/19/12			
Prep Batch #...: 2131072				
Dilution Factor: 1	Method.....: SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.12 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result Result is less than RL.

TestAmerica Canton

Client Sample ID: MSA-DMW4D-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E050430-006	Work Order #...:	MTEG51AA	Matrix.....:	WATER
Date Sampled...:	05/03/12	Date Received..:	05/05/12		
Prep Date.....:	05/10/12	Analysis Date..:	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	4.6	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW4I-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E050430-005	Work Order #...:	MTEG41AA	Matrix.....:	WATER
Date Sampled...:	05/03/12	Date Received..:	05/05/12		
Prep Date.....:	05/10/12	Analysis Date..:	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	1.3	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW4S-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E050430-007	**Work Order #...:** MTEG61AA		**Matrix.....:** WATER	
Date Sampled...: 05/03/12	**Date Received..:** 05/05/12			
Prep Date.....: 05/10/12	**Analysis Date..:** 05/19/12			
Prep Batch #...: 2131072				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW6D-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E050430-003	Work Order #...:	MTEG21AA	Matrix.....:	WATER
Date Sampled...:	05/03/12	Date Received..:	05/05/12		
Prep Date.....:	05/10/12	Analysis Date..:	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.13 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

TestAmerica Canton

Client Sample ID: MSA-DMW6I-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E050430-002	**Work Order #...:**	MTEG11AA	**Matrix.....:**	WATER
Date Sampled...:	05/03/12	**Date Received..:**	05/05/12		
Prep Date.....:	05/10/12	**Analysis Date..:**	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW6S-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E050430-001	**Work Order #...:**	MTEG01AA	**Matrix.....:**	WATER
Date Sampled...:	05/03/12	**Date Received..:**	05/05/12		
Prep Date.....:	05/10/12	**Analysis Date..:**	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW7S-050312

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E050430-004	**Work Order #...:**	MTEG31AA	**Matrix.....:**	WATER
Date Sampled...:	05/03/12	**Date Received..:**	05/05/12		
Prep Date.....:	05/10/12	**Analysis Date..:**	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-10949-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate analysis was performed at the TestAmerica West Sacramento Laboratory.
The Total Alpha Radium and Radium 228 analysis was performed at the TestAmerica Richland Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT
The samples were received on 05/04/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 1.7, 2.6, 2.9 and 3.1 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)
Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW6I-050312 (240-10949-2), MSA-DMW6D-050312 (240-10949-3), MSA-DMW7S-050312 (240-10949-4), TB-050312 (240-10949-5), MSA-DMW4I-050312 (240-10949-6), MSA-DMW4D-050312 (240-10949-7), MSA-DMW4S-050312 (240-10949-8) and MSA-DMW2A-050312 (240-10949-9) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/10/2012, 05/11/2012 and 05/16/2012.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43549/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

1,2,3-Trichlorobenzene, 1,2,4-Trichlorobenzene and Hexachlorobutadiene were detected in method blank MB 240-43737/5 at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

2-Butanone and 2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-10837-5 in batch 240-43549.

1,2-Dibromoethane and Trichloroethene failed the recovery criteria high for the MSD of sample MSA-DMW2A-050312 (240-10949-9) in batch 240-44226.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample 240-11065-2 in batch 240-43737.

Refer to the QC report for details.

Samples MSA-DMW7S-050312 (240-10949-4)[416.67X], MSA-DMW4I-050312 (240-10949-6)[125X], MSA-DMW4D-050312

(240-10949-7)[142.86X], MSA-DMW4S-050312 (240-10949-8)[40X] and MSA-DMW2A-050312 (240-10949-9)[416.67X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW6I-050312 (240-10949-2), MSA-DMW6D-050312 (240-10949-3), MSA-DMW7S-050312 (240-10949-4), MSA-DMW4I-050312 (240-10949-6), MSA-DMW4D-050312 (240-10949-7), MSA-DMW4S-050312 (240-10949-8) and MSA-DMW2A-050312 (240-10949-9) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/09/2012 and 05/14/2012 and analyzed on 05/11/2012, 05/13/2012 and 05/16/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Surrogate recoveries for the following samples were outside control limits: MSA-DMW4I-050312 (240-10949-6) and MSA-DMW6S-050312 (240-10949-1). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results. Both sets of data are reported.

Samples MSA-DMW7S-050312 (240-10949-4)[4X], MSA-DMW4I-050312 (240-10949-6)[2X] and MSA-DMW2A-050312 (240-10949-9) [10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 43293, 8270.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW7S-050312 (240-10949-4) and MSA-DMW4S-050312 (240-10949-8) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/09/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-43312/6 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Samples MSA-DMW7S-050312 (240-10949-4)[10X] and MSA-DMW4S-050312 (240-10949-8)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the GRO analyses. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW7S-050312 (240-10949-4) and MSA-DMW4S-050312 (240-10949-8) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/09/2012 and analyzed on 05/11/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Total Petroleum Hydrocarbons (C10-C32) was detected in method blank MB 240-43296/10-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 43296, 8015.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW6I-050312 (240-10949-2), MSA-DMW6D-050312 (240-10949-3), MSA-DMW7S-050312 (240-10949-4), MSA-DMW4I-050312 (240-10949-6), MSA-DMW4D-050312 (240-10949-7), MSA-DMW4S-050312 (240-10949-8) and MSA-DMW2A-050312 (240-10949-9) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/10/2012 and 05/11/2012 and analyzed on 05/11/2012 and 05/14/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)

Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW6I-050312 (240-10949-2), MSA-DMW6D-050312 (240-10949-3), MSA-DMW7S-050312 (240-10949-4), MSA-DMW4I-050312 (240-10949-6), MSA-DMW4D-050312 (240-10949-7), MSA-DMW4S-050312 (240-10949-8) and MSA-DMW2A-050312 (240-10949-9) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/10/2012 and 05/11/2012 and analyzed on 05/11/2012 and 05/14/2012.

Several analytes were detected in method blank MB 240-43497/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Barium, Copper and Zinc were detected in method blank MB 240-43699/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Samples MSA-DMW4I-050312 (240-10949-6)[5X], MSA-DMW4D-050312 (240-10949-7)[10X], MSA-DMW4S-050312 (240-10949-8)[5X] and MSA-DMW2A-050312 (240-10949-9)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW6I-050312 (240-10949-2), MSA-DMW6D-050312 (240-10949-3), MSA-DMW7S-050312 (240-10949-4), MSA-DMW4I-050312 (240-10949-6), MSA-DMW4D-050312 (240-10949-7), MSA-DMW4S-050312 (240-10949-8) and MSA-DMW2A-050312 (240-10949-9) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/11/2012 and analyzed on 05/15/2012.

Mercury exceeded the rpd limit for the MSD of sample 240-11088-1 in batch 240-44211.

Refer to the QC report for details.

No other difficulties were encountered during the mercury analyses. All other quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-DMW6S-050312 (240-10949-1), MSA-DMW6I-050312 (240-10949-2), MSA-DMW6D-050312 (240-10949-3), MSA-DMW7S-050312 (240-10949-4), MSA-DMW4I-050312 (240-10949-6), MSA-DMW4D-050312 (240-10949-7), MSA-DMW4S-050312 (240-10949-8) and MSA-DMW2A-050312 (240-10949-9) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/11/2012 and analyzed on 05/15/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10949-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-10949-1	MSA-DMW6S-050312	Water	05/03/2012 0940	05/04/2012 0915
240-10949-2	MSA-DMW6I-050312	Water	05/03/2012 1125	05/04/2012 0915
240-10949-3	MSA-DMW6D-050312	Water	05/03/2012 1300	05/04/2012 0915
240-10949-4	MSA-DMW7S-050312	Water	05/03/2012 1415	05/04/2012 0915
240-10949-5TB	TB-050312	Water	05/03/2012 0000	05/04/2012 0915
240-10949-6	MSA-DMW4I-050312	Water	05/03/2012 0934	05/04/2012 0915
240-10949-7	MSA-DMW4D-050312	Water	05/03/2012 1046	05/04/2012 0915
240-10949-8	MSA-DMW4S-050312	Water	05/03/2012 1202	05/04/2012 0915
240-10949-9	MSA-DMW2A-050312	Water	05/03/2012 1340	05/04/2012 0915

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10949-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Total Radium	TAL RCH	TAL-RCH EPA	
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL RCH = TestAmerica Richland

TAL WSC = TestAmerica West Sacramento

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-RCH = TestAmerica Laboratories, Richland, Facility Standard Operating Procedure.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact					
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact:	COC No: 006083
Address: 20251 Century Blvd Ste 200	Telephone: (301) 528-5552	Telephone: (703) 342-8384	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apanavage@tetratech.com	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: (301) 528-5552		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client: ☐ Lab sampling: ☐
Project Name: MSA GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04021-03	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/ NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite/ Grab	VOCs	Total Metals	Dissolved Metals	Perchlorate	1,4-Dioxane	TPH- DRO + GRO	Radium 224, 226, 228				Sample Specific Notes / Special Instructions:
MSA-DMW6S-050312	5/3/12	0940		X					5	5			5				X	X	X	X	X	X	X				
MSA-DMW6I-050312		1125		X					5	3			3				X	X	X	X	X		X				
MSA-DMW6D-050312		1300		X					5	3			3				X	X	X	X	X		X				
MSA-DMW7S-050312		1415		X					2	5			5				X	X	X	X	X	X					
TB-050312		—																									
MSA-DMW4I-050312		0934		X					2	3			2				X	X	X	X	X						
MSA-DMW4D-050312		1046		X					2	3			2				X	X	X	X	X						
MSA-DMW4S-050312		1209		X					2	5			5				X	X	X	X	X	X					
MSA-DMW2A-050312		1340		X					2	3			2				X	X	X	X	X						

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:
	Tetra Tech	5/3/12 - 1645		TAL	5-4-12 915

Page 1824 of 1827

06/08/2012

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TestAmerica North Canton Sample Receipt Form/Narrative Login # : 16949

Client Tetra Tech Site Name _____ By: _____ (Signature)

Cooler Received on 5-4-12 Opened on 5-4-12

FedEx (1st) Grd Exp UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box (Other) _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 4G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 5G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C

☒ Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? Yes No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
6S	<2 <2 <2 <2 <2	5-4-12	NS
6I	<2 <2 <2 <2 <2		
6D	<2 <2 <2 <2 <2		
7S	<2 <2		
4I	<2 <2		
4D	<2 <2		
4S	<2 <2		
2A	<2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client	4.9	2.9	64	ice
client	3.7	1.7		
client	4.6	2.6		
client	5.1	3.1		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-10949-1

Login Number: 10949
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

G2E050430

Client Information (Sub Contract Lab)	Sampler:	Lab PM: O'Meara, Patrick J	Carrier Tracking No(s):	COC No. 240-5686.1
Client Contact: Shipping/Receiving	Phone	E-Mail: patrick omeara@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 240-10949-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 5/22/2012			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel)	PO #:			
Email:	WO #			
Project Name: MSA Groundwater Sampling	Project #: 24005772			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=Comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ 6850 Perchlorate-West Sacramento	Total Number of containers	Special Instructions/Note:
			Preservation Code:						
MSA-DMW6S-050312 (240-10949-1)	5/3/12	09:40 Eastern		Water			X	1	
MSA-DMW6I-050312 (240-10949-2)	5/3/12	11:25 Eastern		Water			X	1	
MSA-DMW6D-050312 (240-10949-3)	5/3/12	13:00 Eastern		Water			X	1	
MSA-DMW7S-050312 (240-10949-4)	5/3/12	14:15 Eastern		Water			X	1	
MSA-DMW4I-050312 (240-10949-6)	5/3/12	09:34 Eastern		Water			X	1	
MSA-DMW4D-050312 (240-10949-7)	5/3/12	10:46 Eastern		Water			X	1	
MSA-DMW4S-050312 (240-10949-8)	5/3/12	12:02 Eastern		Water			X	1	
MSA-DMW2A-050312 (240-10949-9)	5/3/12	13:40 Eastern		Water			X	1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time:	Company	Received by: [signature]	Date/Time: 5-5-12 1045	Company: TALLIS
Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company
Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.3

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TAL CANTON PM KD

LOT# (QUANTIMS ID) G2E050430 QUOTE# 88995 LOCATION W13C

Checked (✓)

DATE RECEIVED 5/5/12 TIME RECEIVED 10:15 ☑

DELIVERED BY ☑ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☐ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☑ N/A ☐ ☑

CUSTODY SEAL #(S) NA

COC #(S) 240-5686.1 ☐ ☑

TEMPERATURE BLANK Observed: 1.5 Corrected: 0.8

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 2.4,2.1,2.0 Average 2.1 Corrected Average 1.3

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☑ #5 ☐ ☐ OTHER ☐ ☑

CH Initials 5/5/12 Date

==========

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY..... CH ☑

LOGGED IN BY..... CH ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☑ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☐ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)*1 ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

CH Initials 5/5/12 Date

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

HOLDTIME

SDG 240-10949-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HG	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HG	UG/L	MSA-DMW6I-050312	240-10949-2	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HG	UG/L	MSA-DMW6D-050312	240-10949-3	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HG	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HG	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HG	UG/L	MSA-DMW4D-050312	240-10949-7	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HG	UG/L	MSA-DMW2A-050312	240-10949-9	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
M	UG/L	MSA-DMW2A-050312	240-10949-9	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11
M	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
M	UG/L	MSA-DMW6I-050312	240-10949-2	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
M	UG/L	MSA-DMW6D-050312	240-10949-3	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
M	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11
M	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11
M	UG/L	MSA-DMW4D-050312	240-10949-7	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
M	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
HGF	UG/L	MSA-DMW6D-050312	240-10949-3	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HGF	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HGF	UG/L	MSA-DMW6I-050312	240-10949-2	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HGF	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HGF	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HGF	UG/L	MSA-DMW4D-050312	240-10949-7	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HGF	UG/L	MSA-DMW2A-050312	240-10949-9	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
HGF	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/11/2012	5/15/2012	8	4	12
MF	UG/L	MSA-DMW6I-050312	240-10949-2	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
MF	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11
MF	UG/L	MSA-DMW2A-050312	240-10949-9	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11
MF	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11
MF	UG/L	MSA-DMW6D-050312	240-10949-3	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
MF	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
MF	UG/L	MSA-DMW4D-050312	240-10949-7	NM	5/3/2012	5/11/2012	5/14/2012	8	3	11
MF	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/10/2012	5/11/2012	7	1	8
PCL	UG/L	MSA-DMW2A-050312	240-10949-9	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
PCL	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16
PCL	UG/L	MSA-DMW4D-050312	240-10949-7	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16
PCL	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16
PCL	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16
PCL	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16
PCL	UG/L	MSA-DMW6D-050312	240-10949-3	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16
PCL	UG/L	MSA-DMW6I-050312	240-10949-2	NM	5/3/2012	5/10/2012	5/19/2012	7	9	16
OS	UG/L	MSA-DMW6I-050312	240-10949-2	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
OS	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
OS	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
OS	UG/L	MSA-DMW6D-050312	240-10949-3	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
OS	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
OS	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/14/2012	5/16/2012	11	2	13
OS	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/9/2012	5/13/2012	6	4	10
OS	UG/L	MSA-DMW4D-050312	240-10949-7	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
OS	UG/L	MSA-DMW2A-050312	240-10949-9	NM	5/3/2012	5/9/2012	5/13/2012	6	4	10
OS	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/14/2012	5/16/2012	11	2	13
OV	UG/L	TB-050312	240-10949-5	TB	5/3/2012	5/11/2012	5/11/2012	8	0	8

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/11/2012	5/11/2012	8	0	8
OV	UG/L	TB-050312	240-10949-5	NM	5/3/2012	5/11/2012	5/11/2012	8	0	8
OV	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/11/2012	5/11/2012	8	0	8
OV	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/10/2012	5/10/2012	7	0	7
OV	UG/L	MSA-DMW6D-050312	240-10949-3	NM	5/3/2012	5/10/2012	5/10/2012	7	0	7
OV	UG/L	MSA-DMW4I-050312	240-10949-6	NM	5/3/2012	5/11/2012	5/11/2012	8	0	8
OV	UG/L	MSA-DMW4D-050312	240-10949-7	NM	5/3/2012	5/11/2012	5/11/2012	8	0	8
OV	UG/L	MSA-DMW2A-050312	240-10949-9	NM	5/3/2012	5/16/2012	5/16/2012	13	0	13
OV	UG/L	MSA-DMW6I-050312	240-10949-2	NM	5/3/2012	5/10/2012	5/10/2012	7	0	7
DRO	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
DRO	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
DRO	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/9/2012	5/11/2012	6	2	8
GRO	UG/L	MSA-DMW7S-050312	240-10949-4	NM	5/3/2012	5/9/2012	5/9/2012	6	0	6
GRO	UG/L	MSA-DMW6S-050312	240-10949-1	NM	5/3/2012	5/9/2012	5/9/2012	6	0	6
GRO	UG/L	MSA-DMW4S-050312	240-10949-8	NM	5/3/2012	5/9/2012	5/9/2012	6	0	6

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: BFB2951.D BFB Injection Date: 05/09/2012

Instrument ID: A3UX16 BFB Injection Time: 16:26

Analysis Batch No.: 43409

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.5	
75	30.0 - 60.0 % of mass 95	47.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	79.3	
175	5.0 - 9.0 % of mass 174	5.7	(7.2)1
176	95.0 - 101.0 % of mass 174	78.8	(99.5)1
177	5.0 - 9.0 % of mass 176	4.7	(5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-43409/2	UXM5660.D	05/09/2012	16:50
	STD8260 240-43409/3	UXM5661.D	05/09/2012	17:12
	STD8260 240-43409/4	UXM5662.D	05/09/2012	17:35
	STD8260 240-43409/5	UXM5663.D	05/09/2012	17:58
	STD8260 240-43409/6	UXM5664.D	05/09/2012	18:20
	STD8260 240-43409/7	UXM5665.D	05/09/2012	18:43
	ICV 240-43409/8	UXM5666.D	05/09/2012	19:06

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-43409/7	UXM5665.D
Level 2	STD8260 240-43409/6	UXM5664.D
Level 3	STD8260 240-43409/5	UXM5663.D
Level 4	STD8260 240-43409/4	UXM5662.D
Level 5	STD8260 240-43409/3	UXM5661.D
Level 6	STD8260 240-43409/2	UXM5660.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3032 0.3143	0.2539	0.2973	0.2657	0.3062	Ave		0.2901			0.1000	8.4		15.0			
Chloromethane	0.6852 0.6205	0.6371	0.6849	0.6156	0.6587	Ave		0.6503			0.1000	4.7		15.0			
Vinyl chloride	0.4547 0.4560	0.4270	0.4657	0.4279	0.4758	Ave		0.4512			0.1000	4.4		15.0			
Bromomethane	0.2084 0.1529	0.1821	0.1851	0.1563	0.1804	Ave		0.1775			0.0500	12.0		15.0			
Chloroethane	0.2573 0.2377	0.2580	0.2693	0.2344	0.2581	Ave		0.2524				5.4		15.0			
Trichlorofluoromethane	0.3101 0.3295	0.3079	0.3225	0.2997	0.3473	Ave		0.3195			0.1000	5.4		15.0			
Acrolein	0.0620 0.0594	0.0566	0.0598	0.0605	0.0630	Ave		0.0602				3.7		15.0			
1,1-Dichloroethene	0.2593 0.2847	0.2457	0.2768	0.2781	0.2948	Ave		0.2733			0.1000	6.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1558 0.2077	0.1678	0.1758	0.1970	0.2009	Ave		0.1842			0.0500	11.0		15.0			
Acetone	0.1950 0.0973	0.1448	0.1189	0.1063	0.1066	Lin1	0.1992	0.0970			0.0500				0.9990		0.9950
Iodomethane	0.4877 0.4873	0.4523	0.4923	0.4807	0.4978	Ave		0.4830				3.3		15.0			
Carbon disulfide	0.8203 0.9849	0.8078	0.8789	0.8856	0.9660	Ave		0.8906			0.1000	8.2		15.0			
Acetonitrile	0.0521 0.0408	0.0448	0.0457	0.0427	0.0442	Ave		0.0451				8.6		15.0			
Methyl acetate	0.2743 0.2474	0.2522	0.2631	0.2590	0.2628	Ave		0.2598			0.1000	3.6		15.0			
Methylene Chloride	0.5939 0.3427	0.4564	0.4050	0.3631	0.3666	Lin1	0.2534	0.3421			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.2834 0.4163	0.2994	0.3340	0.3600	0.3897	Ave		0.3471			0.1000	15.0		15.0			
1,2-Dichloropropane	0.3163 0.3393	0.3026	0.3214	0.3206	0.3464	Ave		0.3244			0.1000	4.9		15.0			
Dibromomethane	0.1317 0.1397	0.1303	0.1368	0.1366	0.1460	Ave		0.1369				4.1		15.0			
1,4-Dioxane	0.0019 0.0018	0.0020	0.0021	0.0020	0.0021	Ave		0.0020				7.2		15.0			
Bromodichloromethane	0.2564 0.3265	0.2419	0.2713	0.2771	0.3245	Ave		0.2830			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1506 0.1609	0.1383	0.1637	0.1582	0.1703	Ave		0.1570				7.1		15.0			
cis-1,3-Dichloropropene	0.2551 0.3710	0.2499	0.2985	0.3081	0.3650	Lin1	-0.188	0.3666			0.1500				0.9960		0.9950
4-Methyl-2-pentanone	0.2837 0.2990	0.2651	0.2929	0.2909	0.3111	Ave		0.2905			0.0500	5.3		15.0			
Toluene	1.6482 1.7043	1.5200	1.5382	1.5720	1.7039	Ave		1.6145			0.4000	5.1		15.0			
trans-1,3-Dichloropropene	0.2583 0.4170	0.2712	0.3095	0.3332	0.4003	Qua	-0.269	0.3783	0.0012		0.1000				0.9990		0.9900
Ethyl methacrylate	0.3360 0.4227	0.3466	0.3745	0.3996	0.4375	Ave		0.3861				11.0		15.0			
1,1,2-Trichloroethane	0.2835 0.2793	0.2694	0.2686	0.2750	0.2894	Ave		0.2775			0.1000	2.9		15.0			
1,3-Dichloropropane	0.5297 0.5095	0.5041	0.4977	0.5018	0.5376	Ave		0.5134				3.2		15.0			
Tetrachloroethene	0.2829 0.3018	0.2688	0.2694	0.2845	0.3065	Ave		0.2856			0.2000	5.5		15.0			
2-Hexanone	0.2570 0.2616	0.2458	0.2583	0.2602	0.2737	Ave		0.2594			0.0500	3.5		15.0			
Dibromochloromethane	0.1998 0.2905	0.1878	0.2173	0.2406	0.2828	Lin1	-0.158	0.2858							0.9950		0.9950
1,2-Dibromoethane	0.2771 0.2885	0.2414	0.2810	0.2689	0.2989	Ave		0.2760				7.2		15.0			
Chlorobenzene	1.0779 1.0958	1.0292	1.0419	1.0268	1.0997	Ave		1.0619			0.3000	3.1		15.0			
1,1,1,2-Tetrachloroethane	0.2890 0.3687	0.2701	0.3001	0.3244	0.3603	Ave		0.3188				12.0		15.0			
Ethylbenzene	0.5370 0.5872	0.5263	0.5398	0.5618	0.5955	Ave		0.5579				5.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6927 0.7473	0.6545	0.6868	0.6838	0.7439	Ave		0.7015				5.2		15.0			
o-Xylene	0.6585 0.7303	0.6697	0.6826	0.7022	0.7337	Ave		0.6962				4.5		15.0			
Styrene	1.0101 1.2393	1.0332	1.0826	1.1410	1.2330	Ave		1.1232			0.3000	8.8		15.0			
Bromoform	0.0997 0.1652	0.1002	0.1141	0.1314	0.1520	Qua	-0.092	0.1394	0.0007		0.1000				1.0000		0.9900
Isopropylbenzene	1.5686 1.8453	1.5081	1.5792	1.6843	1.7759	Ave		1.6603			0.1000	7.9		15.0			
1,1,2,2-Tetrachloroethane	0.6421 0.6392	0.5897	0.6508	0.6293	0.6884	Ave		0.6399			0.3000	5.0		15.0			
Bromobenzene	0.7124 0.8007	0.7229	0.7655	0.7154	0.8316	Ave		0.7581				6.6		15.0			
1,2,3-Trichloropropane	0.2331 0.2050	0.1899	0.2018	0.2064	0.2197	Ave		0.2093				7.2		15.0			
trans-1,4-Dichloro-2-butene	0.0972 0.1779	0.1139	0.1228	0.1331	0.1671	Qua	-0.117	0.1526	0.0007						0.9990		0.9900
n-Propylbenzene	0.7268 0.8204	0.6778	0.7587	0.7438	0.8378	Ave		0.7609				7.8		15.0			
2-Chlorotoluene	0.6703 0.7397	0.6758	0.6924	0.6931	0.7657	Ave		0.7061				5.4		15.0			
1,3,5-Trimethylbenzene	2.0828 2.5958	2.0405	2.3124	2.3306	2.5681	Ave		2.3217				10.0		15.0			
4-Chlorotoluene	0.7205 0.7747	0.6930	0.7396	0.7189	0.7965	Ave		0.7405				5.2		15.0			
tert-Butylbenzene	1.9330 2.3935	1.9972	1.9127	2.1455	2.3504	Ave		2.1221				9.9		15.0			
1,2,4-Trimethylbenzene	2.2784 2.6594	2.2133	2.3747	2.3863	2.6735	Ave		2.4310				8.0		15.0			
sec-Butylbenzene	2.3140 2.8409	2.3222	2.4938	2.5429	2.7579	Ave		2.5453				8.6		15.0			
1,3-Dichlorobenzene	1.3846 1.4804	1.3348	1.4061	1.3608	1.4933	Ave		1.4100			0.6000	4.6		15.0			
p-Isopropyltoluene	1.8496 2.5189	1.9566	2.1436	2.2002	2.4336	Ave		2.1837				12.0		15.0			
1,4-Dichlorobenzene	1.5343 1.5331	1.3976	1.4633	1.4252	1.5585	Ave		1.4853			0.5000	4.5		15.0			
n-Butylbenzene	1.5207 2.0613	1.5638	1.6967	1.7858	1.9861	Ave		1.7691				12.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3844 1.4205	1.3540	1.3870	1.3472	1.4582	Ave		1.3919			0.4000	3.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0794 0.0870	0.0683	0.0814	0.0746	0.0883	Ave		0.0798			0.0500	9.5		15.0			
1,3,5-Trichlorobenzene	0.7539 0.8344	0.7656	0.7991	0.8104	0.8665	Ave		0.8050				5.2		15.0			
1,2,4-Trichlorobenzene	0.6479 0.6976	0.6519	0.6850	0.7123	0.7408	Ave		0.6892			0.2000	5.2		15.0			
Hexachlorobutadiene	0.2984 0.2880	0.3131	0.3156	0.3236	0.3074	Ave		0.3077				4.2		15.0			
Naphthalene	1.3167 1.5171	1.2964	1.5138	1.5269	1.6839	Ave		1.4758				9.9		15.0			
1,2,3-Trichlorobenzene	0.6093 0.5088	0.5775	0.5956	0.5994	0.6006	Ave		0.5819				6.4		15.0			
Dibromofluoromethane (Surr)	0.2449 0.2557	0.2414	0.2613	0.2511	0.2697	Ave		0.2540				4.1		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3352 0.3180	0.3022	0.3162	0.3092	0.3364	Ave		0.3195				4.3		15.0			
Toluene-d8 (Surr)	1.3399 1.4228	1.2843	1.2848	1.3063	1.4382	Ave		1.3460				5.1		15.0			
4-Bromofluorobenzene (Surr)	0.5239 0.5294	0.5089	0.5007	0.5033	0.5393	Ave		0.5176				3.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3514		11.0	10.0	10.4	20.0
Diisopropyl ether	Ave	0.2775	0.2746		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0089		517	500	3.5	20.0
Cyclohexanone	Lin1		0.0196		41.7	200	-79.2*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.571		8.62	10.0	-13.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2045	0.1000	7.05	10.0	-29.5*	20.0
Chloromethane	Ave	0.6503	0.5741	0.1000	8.83	10.0	-11.7	20.0
Vinyl chloride	Ave	0.4512	0.4382	0.1000	9.71	10.0	-2.9	20.0
Bromomethane	Ave	0.1775	0.1621	0.0500	9.13	10.0	-8.7	20.0
Chloroethane	Ave	0.2524	0.2375	0.0500	9.41	10.0	-5.9	20.0
Trichlorofluoromethane	Ave	0.3195	0.3224	0.1000	10.1	10.0	0.9	20.0
Acrolein	Ave	0.0602	0.0316		15.7	30.0	-47.6*	20.0
1,1-Dichloroethene	Ave	0.2733	0.2968	0.1000	10.9	10.0	8.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2129	0.0500	11.6	10.0	15.6	20.0
Acetone	Lin1		0.1000	0.0500	18.6	20.0	-7.0	20.0
Iodomethane	Ave	0.4830	0.4930		10.2	10.0	2.1	20.0
Carbon disulfide	Ave	0.8906	0.9121	0.1000	10.2	10.0	2.4	20.0
Acetonitrile	Ave	0.0451	0.0442		29.4	30.0	-2.0	20.0
Methyl acetate	Ave	0.2598	0.2961	0.1000	11.4	10.0	14.0	20.0
Methylene Chloride	Lin1		0.3698	0.1000	10.1	10.0	1.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0177		198	200	-1.0	20.0
Acrylonitrile	Ave	0.1429	0.1377		28.9	30.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.7047	0.1000	9.91	10.0	-0.9	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3422	0.1000	10.3	10.0	3.4	20.0
Hexane	Ave	0.0431	0.0478		11.1	10.0	10.8	20.0
1,1-Dichloroethane	Ave	0.6504	0.6789	0.1000	10.4	10.0	4.4	20.0
Vinyl acetate	Ave	0.0379	0.0349		9.19	10.0	-8.1	20.0
2-Butanone	Ave	0.1434	0.1319	0.0500	18.4	20.0	-8.1	20.0
2,2-Dichloropropane	Ave	0.2584	0.2680		10.4	10.0	3.7	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3544	0.1000	10.2	10.0	1.5	20.0
Bromochloromethane	Ave	0.1454	0.1487		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5335	0.2000	10.2	10.0	2.0	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4102	0.1000	10.4	10.0	4.2	20.0
Cyclohexane	Ave	0.6493	0.6633	0.1000	10.2	10.0	2.2	20.0
1,1-Dichloropropene	Ave	0.3618	0.3695		10.2	10.0	2.1	20.0
Carbon tetrachloride	Lin1		0.3100	0.1000	9.41	10.0	-5.9	20.0
1,2-Dichloroethane	Ave	0.4273	0.4347	0.1000	10.2	10.0	1.7	20.0
Benzene	Ave	1.162	1.177	0.5000	10.1	10.0	1.2	20.0
Trichloroethene	Ave	0.2745	0.2806	0.2000	10.2	10.0	2.2	20.0
1,2-Dichloropropane	Ave	0.3244	0.3251	0.1000	10.0	10.0	0.2	20.0
Methylcyclohexane	Ave	0.3471	0.3473	0.1000	10.0	10.0	0.0	20.0
Dibromomethane	Ave	0.1369	0.1442		10.5	10.0	5.4	20.0
Bromodichloromethane	Ave	0.2830	0.2938	0.1000	10.4	10.0	3.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1570	0.1413		9.00	10.0	-10.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.3014	0.1500	8.73	10.0	-12.7	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2896	0.0500	19.9	20.0	-0.3	20.0
Toluene	Ave	1.614	1.572	0.4000	9.74	10.0	-2.6	20.0
trans-1,3-Dichloropropene	Qua		0.3327	0.1000	9.24	10.0	-7.6	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2762	0.1000	9.95	10.0	-0.5	20.0
1,3-Dichloropropane	Ave	0.5134	0.4975		9.69	10.0	-3.1	20.0
Tetrachloroethene	Ave	0.2856	0.2813	0.2000	9.85	10.0	-1.5	20.0
2-Hexanone	Ave	0.2594	0.2452	0.0500	18.9	20.0	-5.5	20.0
Dibromochloromethane	Lin1		0.2350		8.77	10.0	-12.3	20.0
1,2-Dibromoethane	Ave	0.2760	0.2737		9.92	10.0	-0.8	20.0
Chlorobenzene	Ave	1.062	1.051	0.3000	9.90	10.0	-1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3286		10.3	10.0	3.1	20.0
Ethylbenzene	Ave	0.5579	0.5654		10.1	10.0	1.3	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.6978		19.9	20.0	-0.5	20.0
o-Xylene	Ave	0.6962	0.7046		10.1	10.0	1.2	20.0
Styrene	Ave	1.123	1.167	0.3000	10.4	10.0	3.9	20.0
Bromoform	Qua		0.1291	0.1000	9.47	10.0	-5.3	20.0
Isopropylbenzene	Ave	1.660	1.692	0.1000	10.2	10.0	1.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6196	0.3000	9.68	10.0	-3.2	20.0
Bromobenzene	Ave	0.7581	0.7479		9.87	10.0	-1.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.1984		9.48	10.0	-5.2	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1324		16.8	20.0	-16.0	20.0
n-Propylbenzene	Ave	0.7609	0.7738		10.2	10.0	1.7	20.0
2-Chlorotoluene	Ave	0.7061	0.7155		10.1	10.0	1.3	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.338		10.1	10.0	0.7	20.0
4-Chlorotoluene	Ave	0.7405	0.7420		10.0	10.0	0.2	20.0
tert-Butylbenzene	Ave	2.122	2.147		10.1	10.0	1.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.470		10.2	10.0	1.6	20.0
sec-Butylbenzene	Ave	2.545	2.467		9.69	10.0	-3.1	20.0
1,3-Dichlorobenzene	Ave	1.410	1.419	0.6000	10.1	10.0	0.6	20.0
p-Isopropyltoluene	Ave	2.184	2.305		10.6	10.0	5.5	20.0
1,4-Dichlorobenzene	Ave	1.485	1.439	0.5000	9.69	10.0	-3.1	20.0
n-Butylbenzene	Ave	1.769	1.800		10.2	10.0	1.7	20.0
1,2-Dichlorobenzene	Ave	1.392	1.345	0.4000	9.66	10.0	-3.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0779	0.0500	9.76	10.0	-2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6576	0.2000	9.54	10.0	-4.6	20.0
Hexachlorobutadiene	Ave	0.3077	0.2672		8.69	10.0	-13.1	20.0
Naphthalene	Ave	1.476	1.471		9.97	10.0	-0.3	20.0
1,2,3-Trichlorobenzene	Ave	0.5819	0.5595		9.61	10.0	-3.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2365		9.50	10.2	-6.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2929		9.36	10.2	-8.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.346	1.233		9.35	10.2	-8.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4948		9.76	10.2	-4.4	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: BFB2952.D BFB Injection Date: 05/10/2012

Instrument ID: A3UX16 BFB Injection Time: 10:23

Analysis Batch No.: 43549

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	26.4	
75	30.0 - 60.0 % of mass 95	47.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	78.6	
175	5.0 - 9.0 % of mass 174	4.8	(6.1)1
176	95.0 - 101.0 % of mass 174	77.5	(98.6)1
177	5.0 - 9.0 % of mass 176	5.0	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-43549/2	UXM5692.D	05/10/2012	10:53
	CCV 240-43549/3	UXM5693.D	05/10/2012	11:16
	LCS 240-43549/4	UXM5694.D	05/10/2012	11:39
	MB 240-43549/5	UXM5695.D	05/10/2012	12:02
MSA-DMW6S-050312	240-10949-1	UXM5712.D	05/10/2012	18:28
MSA-DMW6I-050312	240-10949-2	UXM5713.D	05/10/2012	18:51
MSA-DMW6D-050312	240-10949-3	UXM5714.D	05/10/2012	19:13
	240-10837-D-5 MS	UXM5716.D	05/10/2012	19:58
	240-10837-E-5 MSD	UXM5717.D	05/10/2012	20:21

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2790	0.1000	9.62	10.0	-3.8	20.0
Chloromethane	Ave	0.6503	0.6113	0.1000	9.40	10.0	-6.0	20.0
Vinyl chloride	Ave	0.4512	0.4262	0.1000	9.45	10.0	-5.5	20.0
Bromomethane	Ave	0.1775	0.1770	0.0500	9.97	10.0	-0.3	20.0
Chloroethane	Ave	0.2524	0.2504	0.0500	9.92	10.0	-0.8	20.0
Trichlorofluoromethane	Ave	0.3195	0.3217	0.1000	10.1	10.0	0.7	20.0
Acrolein	Ave	0.0602	0.0539		89.5	100	-10.5	20.0
1,1-Dichloroethene	Ave	0.2733	0.2791	0.1000	10.2	10.0	2.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2017	0.0500	11.0	10.0	9.5	20.0
Acetone	Lin1		0.0988	0.0500	18.3	20.0	-8.5	20.0
Iodomethane	Ave	0.4830	0.4722		9.78	10.0	-2.2	20.0
Carbon disulfide	Ave	0.8906	0.9826	0.1000	11.0	10.0	10.3	20.0
Acetonitrile	Ave	0.0451	0.0445		98.8	100	-1.2	20.0
Methyl acetate	Ave	0.2598	0.2519	0.1000	19.4	20.0	-3.0	20.0
Methylene Chloride	Lin1		0.3834	0.1000	10.5	10.0	5.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0166		186	200	-7.1	20.0
Acrylonitrile	Ave	0.1429	0.1377		19.3	20.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.6763	0.1000	9.52	10.0	-4.8	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3410	0.1000	10.3	10.0	3.1	20.0
Hexane	Ave	0.0431	0.0483		11.2	10.0	12.1	20.0
1,1-Dichloroethane	Ave	0.6504	0.6517	0.1000	10.0	10.0	0.2	20.0
Vinyl acetate	Ave	0.0379	0.0403		10.6	10.0	6.2	20.0
2-Butanone	Ave	0.1434	0.1404	0.0500	19.6	20.0	-2.1	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3372	0.1000	9.66	10.0	-3.4	20.0
2,2-Dichloropropane	Ave	0.2584	0.2768		10.7	10.0	7.1	20.0
Bromochloromethane	Ave	0.1454	0.1447		9.95	10.0	-0.5	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5315	0.2000	10.2	10.0	1.7	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4191	0.1000	10.6	10.0	6.4	20.0
Cyclohexane	Ave	0.6493	0.6985	0.1000	10.8	10.0	7.6	20.0
1,1-Dichloropropene	Ave	0.3618	0.3859		10.7	10.0	6.6	20.0
Carbon tetrachloride	Lin1		0.3255	0.1000	9.86	10.0	-1.4	20.0
1,2-Dichloroethane	Ave	0.4273	0.4578	0.1000	10.7	10.0	7.1	20.0
Benzene	Ave	1.162	1.187	0.5000	10.2	10.0	2.2	20.0
Trichloroethene	Ave	0.2745	0.2912	0.2000	10.6	10.0	6.1	20.0
Methylcyclohexane	Ave	0.3471	0.3832	0.1000	11.0	10.0	10.4	20.0
1,2-Dichloropropane	Ave	0.3244	0.3319	0.1000	10.2	10.0	2.3	20.0
Dibromomethane	Ave	0.1369	0.1455		10.6	10.0	6.3	20.0
1,4-Dioxane	Ave	0.0020	0.0018		457	500	-8.7	20.0
Bromodichloromethane	Ave	0.2830	0.3185	0.1000	11.3	10.0	12.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1570	0.1558		19.9	20.0	-0.7	20.0
cis-1,3-Dichloropropene	Lin1		0.3284	0.1500	9.47	10.0	-5.3	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2951	0.0500	20.3	20.0	1.6	20.0
Toluene	Ave	1.614	1.737	0.4000	10.8	10.0	7.6	20.0
trans-1,3-Dichloropropene	Qua		0.3546	0.1000	9.79	10.0	-2.1	20.0
Ethyl methacrylate	Ave	0.3861	0.4404		11.4	10.0	14.1	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2924	0.1000	10.5	10.0	5.3	20.0
1,3-Dichloropropane	Ave	0.5134	0.5380		10.5	10.0	4.8	20.0
Tetrachloroethene	Ave	0.2856	0.3170	0.2000	11.1	10.0	11.0	20.0
2-Hexanone	Ave	0.2594	0.2762	0.0500	21.3	20.0	6.5	20.0
Dibromochloromethane	Lin1		0.2723		10.1	10.0	1.0	20.0
1,2-Dibromoethane	Ave	0.2760	0.2994		10.9	10.0	8.5	20.0
Chlorobenzene	Ave	1.062	1.117	0.3000	10.5	10.0	5.2	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3682		11.5	10.0	15.5	20.0
Ethylbenzene	Ave	0.5579	0.6165		11.0	10.0	10.5	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7510		21.4	20.0	7.1	20.0
o-Xylene	Ave	0.6962	0.7534		10.8	10.0	8.2	20.0
Styrene	Ave	1.123	1.258	0.3000	11.2	10.0	12.0	20.0
Bromoform	Qua		0.1388	0.1000	10.1	10.0	1.0	20.0
Isopropylbenzene	Ave	1.660	1.794	0.1000	10.8	10.0	8.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6643	0.3000	10.4	10.0	3.8	20.0
Bromobenzene	Ave	0.7581	0.7834		10.3	10.0	3.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2152		10.3	10.0	2.8	20.0
trans-1,4-Dichloro-2-butene	Qua		0.0543		4.24	10.0	-57.6*	20.0
n-Propylbenzene	Ave	0.7609	0.8162		10.7	10.0	7.3	20.0
2-Chlorotoluene	Ave	0.7061	0.7430		10.5	10.0	5.2	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.504		10.8	10.0	7.9	20.0
4-Chlorotoluene	Ave	0.7405	0.8068		10.9	10.0	8.9	20.0
tert-Butylbenzene	Ave	2.122	2.300		10.8	10.0	8.4	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.614		10.8	10.0	7.5	20.0
sec-Butylbenzene	Ave	2.545	2.730		10.7	10.0	7.3	20.0
1,3-Dichlorobenzene	Ave	1.410	1.472	0.6000	10.4	10.0	4.4	20.0
p-Isopropyltoluene	Ave	2.184	2.381		10.9	10.0	9.0	20.0
1,4-Dichlorobenzene	Ave	1.485	1.576	0.5000	10.6	10.0	6.1	20.0
n-Butylbenzene	Ave	1.769	1.900		10.7	10.0	7.4	20.0
1,2-Dichlorobenzene	Ave	1.392	1.409	0.4000	10.1	10.0	1.2	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0780	0.0500	9.77	10.0	-2.3	20.0
1,3,5-Trichlorobenzene	Ave	0.8050	0.8184		10.2	10.0	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6691	0.2000	9.71	10.0	-2.9	20.0
Hexachlorobutadiene	Ave	0.3077	0.3034		9.86	10.0	-1.4	20.0
Naphthalene	Ave	1.476	1.368		9.27	10.0	-7.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-43549/2 Calibration Date: 05/10/2012 10:53

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5692.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5819	0.5411		9.30	10.0	-7.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2445		9.83	10.2	-3.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3043		9.72	10.2	-4.8	20.0
Toluene-d8 (Surr)	Ave	1.346	1.370		10.4	10.2	1.8	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5247		10.3	10.2	1.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43549/3 Calibration Date: 05/10/2012 11:16

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5693.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4896		9.25	10.0	-7.5	20.0
Ethyl ether	Ave	0.3182	0.3276		10.3	10.0	2.9	20.0
3-Chloro-1-propene	Ave	0.1408	0.1484		10.5	10.0	5.4	20.0
Diisopropyl ether	Ave	0.2775	0.2850		51.4	50.0	2.7	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.6754		13.1	10.0	31.0*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	1.041		11.7	10.0	16.9	20.0
Propionitrile	Ave	0.0386	0.0464		24.0	20.0	20.1*	20.0
Ethyl acetate	Ave	0.2719	0.2669		19.6	20.0	-1.8	20.0
Methacrylonitrile	Ave	0.1921	0.1929		10.0	10.0	0.4	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		210	200	5.0	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6111		8.54	10.0	-14.6	20.0
n-Heptane	Ave	0.0406	0.0423		10.4	10.0	4.1	20.0
n-Butanol	Lin1		0.0066		197	200	-1.7	20.0
2-Nitropropane	Qua		0.0411		19.9	20.0	-0.5	20.0
Cyclohexanone	Lin1		0.0552		56.6	100	-43.4*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.606		8.74	10.0	-12.6	20.0
2-Methylnaphthalene	Qua		0.3582		8.10	20.0	-59.5*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43549/3 Calibration Date: 05/10/2012 11:16

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5693.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2276		9.15	10.2	-10.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2873		9.18	10.2	-10.1	20.0
Toluene-d8 (Surr)	Ave	1.346	1.243		9.43	10.2	-7.7	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4929		9.72	10.2	-4.8	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: UXM5695.D Lab Sample ID: MB 240-43549/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/10/2012 12:02

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-43549/4	UXM5694.D	05/10/2012 11:39
MSA-DMW6S-050312	240-10949-1	UXM5712.D	05/10/2012 18:28
MSA-DMW6I-050312	240-10949-2	UXM5713.D	05/10/2012 18:51
MSA-DMW6D-050312	240-10949-3	UXM5714.D	05/10/2012 19:13
	240-10837-D-5 MS	UXM5716.D	05/10/2012 19:58
	240-10837-E-5 MSD	UXM5717.D	05/10/2012 20:21

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43549/5

Matrix: Water | Lab File ID: UXM5695.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43549 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.372	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	0.247	J	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	0.462	J	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	98		63-129
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
2037-26-5	Toluene-d8 (Surr)	97		74-115
1868-53-7	Dibromofluoromethane (Surr)	91		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43549/5

Matrix: Water Lab File ID: UXM5695.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/10/2012 12:02

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43549 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: BFB2956.D BFB Injection Date: 05/11/2012

Instrument ID: A3UX16 BFB Injection Time: 10:30

Analysis Batch No.: 43737

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.5	
75	30.0 - 60.0 % of mass 95	47.6	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	77.1	
175	5.0 - 9.0 % of mass 174	5.4	(6.9)1
176	95.0 - 101.0 % of mass 174	77.4	(100.4)1
177	5.0 - 9.0 % of mass 176	4.9	(6.4)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-43737/2	UXM5744.D	05/11/2012	10:56
	CCV 240-43737/3	UXM5745.D	05/11/2012	11:19
	LCS 240-43737/4	UXM5746.D	05/11/2012	11:42
	MB 240-43737/5	UXM5747.D	05/11/2012	12:04
MSA-DMW7S-050312	240-10949-4	UXM5751.D	05/11/2012	13:40
TB-050312	240-10949-5	UXM5752.D	05/11/2012	14:02
MSA-DMW4I-050312	240-10949-6	UXM5753.D	05/11/2012	14:25
MSA-DMW4D-050312	240-10949-7	UXM5754.D	05/11/2012	14:48
MSA-DMW4S-050312	240-10949-8	UXM5755.D	05/11/2012	15:11
	240-11065-E-2 MS	UXM5768.D	05/11/2012	20:05
	240-11065-F-2 MSD	UXM5769.D	05/11/2012	20:28

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-43737/2 Calibration Date: 05/11/2012 10:56

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5744.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2475	0.1000	8.53	10.0	-14.7	20.0
Chloromethane	Ave	0.6503	0.6698	0.1000	10.3	10.0	3.0	20.0
Vinyl chloride	Ave	0.4512	0.4758	0.1000	10.5	10.0	5.5	20.0
Bromomethane	Ave	0.1775	0.1684	0.0500	9.49	10.0	-5.1	20.0
Chloroethane	Ave	0.2524	0.2596	0.0500	10.3	10.0	2.8	20.0
Trichlorofluoromethane	Ave	0.3195	0.3437	0.1000	10.8	10.0	7.6	20.0
Acrolein	Ave	0.0602	0.0546		90.6	100	-9.4	20.0
1,1-Dichloroethene	Ave	0.2733	0.2997	0.1000	11.0	10.0	9.7	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2159	0.0500	11.7	10.0	17.2	20.0
Acetone	Lin1		0.1027	0.0500	19.1	20.0	-4.5	20.0
Iodomethane	Ave	0.4830	0.5104		10.6	10.0	5.7	20.0
Carbon disulfide	Ave	0.8906	0.9937	0.1000	11.2	10.0	11.6	20.0
Acetonitrile	Ave	0.0451	0.0478		106	100	6.1	20.0
Methyl acetate	Ave	0.2598	0.2764	0.1000	21.3	20.0	6.4	20.0
Methylene Chloride	Lin1		0.3931	0.1000	10.7	10.0	7.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0172		193	200	-3.7	20.0
Acrylonitrile	Ave	0.1429	0.1484		20.8	20.0	3.9	20.0
Methyl tert-butyl ether	Ave	0.7108	0.7130	0.1000	10.0	10.0	0.3	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3496	0.1000	10.6	10.0	5.7	20.0
Hexane	Ave	0.0431	0.0500		11.6	10.0	16.0	20.0
1,1-Dichloroethane	Ave	0.6504	0.6928	0.1000	10.7	10.0	6.5	20.0
Vinyl acetate	Ave	0.0379	0.0363		9.57	10.0	-4.3	20.0
2-Butanone	Ave	0.1434	0.1394	0.0500	19.4	20.0	-2.8	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3657	0.1000	10.5	10.0	4.8	20.0
2,2-Dichloropropane	Ave	0.2584	0.2887		11.2	10.0	11.7	20.0
Bromochloromethane	Ave	0.1454	0.1631		11.2	10.0	12.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0906		9.60	10.0	-4.0	20.0
Chloroform	Ave	0.5228	0.5724	0.2000	10.9	10.0	9.5	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4397	0.1000	11.2	10.0	11.7	20.0
Cyclohexane	Ave	0.6493	0.7523	0.1000	11.6	10.0	15.9	20.0
1,1-Dichloropropene	Ave	0.3618	0.3938		10.9	10.0	8.8	20.0
Carbon tetrachloride	Lin1		0.3410	0.1000	10.3	10.0	3.0	20.0
1,2-Dichloroethane	Ave	0.4273	0.4645	0.1000	10.9	10.0	8.7	20.0
Benzene	Ave	1.162	1.233	0.5000	10.6	10.0	6.1	20.0
Trichloroethene	Ave	0.2745	0.2915	0.2000	10.6	10.0	6.2	20.0
Methylcyclohexane	Ave	0.3471	0.4004	0.1000	11.5	10.0	15.3	20.0
1,2-Dichloropropane	Ave	0.3244	0.3476	0.1000	10.7	10.0	7.2	20.0
Dibromomethane	Ave	0.1369	0.1478		10.8	10.0	8.0	20.0
1,4-Dioxane	Ave	0.0020	0.0019		469	500	-6.2	20.0
Bromodichloromethane	Ave	0.2830	0.3130	0.1000	11.1	10.0	10.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-43737/2 Calibration Date: 05/11/2012 10:56

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5744.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1570	0.1728		22.0	20.0	10.1	20.0
cis-1,3-Dichloropropene	Lin1		0.3541	0.1500	10.2	10.0	2.0	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.3121	0.0500	21.5	20.0	7.5	20.0
Toluene	Ave	1.614	1.707	0.4000	10.6	10.0	5.7	20.0
trans-1,3-Dichloropropene	Qua		0.3631	0.1000	10.0	10.0	0.0	20.0
Ethyl methacrylate	Ave	0.3861	0.4283		11.1	10.0	10.9	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.3052	0.1000	11.0	10.0	10.0	20.0
1,3-Dichloropropane	Ave	0.5134	0.5454		10.6	10.0	6.2	20.0
Tetrachloroethene	Ave	0.2856	0.3043	0.2000	10.7	10.0	6.5	20.0
2-Hexanone	Ave	0.2594	0.2713	0.0500	20.9	20.0	4.6	20.0
Dibromochloromethane	Lin1		0.2812		10.4	10.0	4.0	20.0
1,2-Dibromoethane	Ave	0.2760	0.3007		10.9	10.0	9.0	20.0
Chlorobenzene	Ave	1.062	1.132	0.3000	10.7	10.0	6.6	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3442		10.8	10.0	8.0	20.0
Ethylbenzene	Ave	0.5579	0.6054		10.9	10.0	8.5	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7639		21.8	20.0	8.9	20.0
o-Xylene	Ave	0.6962	0.7377		10.6	10.0	6.0	20.0
Styrene	Ave	1.123	1.250	0.3000	11.1	10.0	11.3	20.0
Bromoform	Qua		0.1388	0.1000	10.1	10.0	1.0	20.0
Isopropylbenzene	Ave	1.660	1.752	0.1000	10.6	10.0	5.5	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6685	0.3000	10.4	10.0	4.5	20.0
Bromobenzene	Ave	0.7581	0.8166		10.8	10.0	7.7	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2126		10.2	10.0	1.5	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1002		7.10	10.0	-29.0*	20.0
n-Propylbenzene	Ave	0.7609	0.8437		11.1	10.0	10.9	20.0
2-Chlorotoluene	Ave	0.7061	0.7700		10.9	10.0	9.0	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.568		11.1	10.0	10.6	20.0
4-Chlorotoluene	Ave	0.7405	0.7853		10.6	10.0	6.0	20.0
tert-Butylbenzene	Ave	2.122	2.361		11.1	10.0	11.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.656		10.9	10.0	9.3	20.0
sec-Butylbenzene	Ave	2.545	2.763		10.9	10.0	8.6	20.0
1,3-Dichlorobenzene	Ave	1.410	1.514	0.6000	10.7	10.0	7.3	20.0
p-Isopropyltoluene	Ave	2.184	2.394		11.0	10.0	9.7	20.0
1,4-Dichlorobenzene	Ave	1.485	1.566	0.5000	10.5	10.0	5.4	20.0
n-Butylbenzene	Ave	1.769	1.881		10.6	10.0	6.3	20.0
1,2-Dichlorobenzene	Ave	1.392	1.462	0.4000	10.5	10.0	5.0	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0754	0.0500	9.44	10.0	-5.6	20.0
1,3,5-Trichlorobenzene	Ave	0.8050	0.8428		10.5	10.0	4.7	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6909	0.2000	10.0	10.0	0.2	20.0
Hexachlorobutadiene	Ave	0.3077	0.2929		9.52	10.0	-4.8	20.0
Naphthalene	Ave	1.476	1.381		9.36	10.0	-6.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-43737/2 Calibration Date: 05/11/2012 10:56

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5744.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5819	0.5496		9.45	10.0	-5.5	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2561		10.3	10.2	0.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3103		9.91	10.2	-2.9	20.0
Toluene-d8 (Surr)	Ave	1.346	1.349		10.2	10.2	0.2	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4949		9.76	10.2	-4.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43737/3 Calibration Date: 05/11/2012 11:19

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5745.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4850		9.17	10.0	-8.3	20.0
Ethyl ether	Ave	0.3182	0.3288		10.3	10.0	3.3	20.0
3-Chloro-1-propene	Ave	0.1408	0.1471		10.4	10.0	4.5	20.0
Diisopropyl ether	Ave	0.2775	0.2818		50.8	50.0	1.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.7091		13.8	10.0	37.5*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	1.054		11.8	10.0	18.4	20.0
Propionitrile	Ave	0.0386	0.0479		24.8	20.0	24.0*	20.0
Ethyl acetate	Ave	0.2719	0.2618		19.3	20.0	-3.7	20.0
Methacrylonitrile	Ave	0.1921	0.1945		10.1	10.0	1.2	20.0
Isobutyl alcohol	Ave	0.0086	0.0091		212	200	5.9	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6046		8.45	10.0	-15.5	20.0
n-Heptane	Ave	0.0406	0.0423		10.4	10.0	4.0	20.0
n-Butanol	Lin1		0.0061		185	200	-7.7	20.0
2-Nitropropane	Qua		0.0418		20.2	20.0	1.0	20.0
Cyclohexanone	Lin1		0.0624		63.3	100	-36.7*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.641		8.86	10.0	-11.4	20.0
2-Methylnaphthalene	Qua		0.3586		8.10	20.0	-59.5*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43737/3 Calibration Date: 05/11/2012 11:19

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5745.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2470		9.93	10.2	-2.8	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3010		9.62	10.2	-5.8	20.0
Toluene-d8 (Surr)	Ave	1.346	1.308		9.92	10.2	-2.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5113		10.1	10.2	-1.2	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: UXM5747.D Lab Sample ID: MB 240-43737/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/11/2012 12:04

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-43737/4	UXM5746.D	05/11/2012 11:42
MSA-DMW7S-050312	240-10949-4	UXM5751.D	05/11/2012 13:40
TB-050312	240-10949-5	UXM5752.D	05/11/2012 14:02
MSA-DMW4I-050312	240-10949-6	UXM5753.D	05/11/2012 14:25
MSA-DMW4D-050312	240-10949-7	UXM5754.D	05/11/2012 14:48
MSA-DMW4S-050312	240-10949-8	UXM5755.D	05/11/2012 15:11
	240-11065-E-2 MS	UXM5768.D	05/11/2012 20:05
	240-11065-F-2 MSD	UXM5769.D	05/11/2012 20:28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43737/5

Matrix: Water | Lab File ID: UXM5747.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	0.322	J	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	0.192	J	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43737/5

Matrix: Water | Lab File ID: UXM5747.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	0.479	J	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43737/5

Matrix: Water | Lab File ID: UXM5747.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	91		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
2037-26-5	Toluene-d8 (Surr)	89		74-115
1868-53-7	Dibromofluoromethane (Surr)	87		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43737/5

Matrix: Water Lab File ID: UXM5747.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/11/2012 12:04

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43737 Units: ug/L

Number TICs Found: 1 TIC Result Total: 6.82

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-94-1	Cyclohexanone	9.44	6.82	J

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: BFB2966.D BFB Injection Date: 05/16/2012

Instrument ID: A3UX16 BFB Injection Time: 09:28

Analysis Batch No.: 44226

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.9	
75	30.0 - 60.0 % of mass 95	47.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.4	(0.5)1
174	50.0 - 120.00 % of mass 95	78.9	
175	5.0 - 9.0 % of mass 174	5.8	(7.4)1
176	95.0 - 101.0 % of mass 174	79.6	(101.0)1
177	5.0 - 9.0 % of mass 176	5.0	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-44226/2	UXM5930.D	05/16/2012	09:54
	CCV 240-44226/3	UXM5931.D	05/16/2012	10:28
	LCS 240-44226/4	UXM5932.D	05/16/2012	10:51
	MB 240-44226/6	UXM5934.D	05/16/2012	11:55
MSA-DMW2A-050312	240-10949-9	UXM5935.D	05/16/2012	12:29
MSA-DMW2A-050312 MS	240-10949-9 MS	UXM5936.D	05/16/2012	12:52
MSA-DMW2A-050312 MSD	240-10949-9 MSD	UXM5937.D	05/16/2012	13:15

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-44226/2 Calibration Date: 05/16/2012 09:54

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5930.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2860	0.1000	9.86	10.0	-1.4	20.0
Chloromethane	Ave	0.6503	0.6952	0.1000	10.7	10.0	6.9	20.0
Vinyl chloride	Ave	0.4512	0.4558	0.1000	10.1	10.0	1.0	20.0
Bromomethane	Ave	0.1775	0.1617	0.0500	9.11	10.0	-8.9	20.0
Chloroethane	Ave	0.2524	0.2467	0.0500	9.77	10.0	-2.3	20.0
Trichlorofluoromethane	Ave	0.3195	0.3565	0.1000	11.2	10.0	11.6	20.0
Acrolein	Ave	0.0602	0.0663		110	100	10.1	20.0
1,1-Dichloroethene	Ave	0.2733	0.2791	0.1000	10.2	10.0	2.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2141	0.0500	11.6	10.0	16.2	20.0
Acetone	Lin1		0.1105	0.0500	20.7	20.0	3.5	20.0
Iodomethane	Ave	0.4830	0.4786		9.91	10.0	-0.9	20.0
Carbon disulfide	Ave	0.8906	0.8637	0.1000	9.70	10.0	-3.0	20.0
Acetonitrile	Ave	0.0451	0.0492		109	100	9.1	20.0
Methyl acetate	Ave	0.2598	0.2711	0.1000	20.9	20.0	4.3	20.0
Methylene Chloride	Lin1		0.3750	0.1000	10.2	10.0	2.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0172		193	200	-3.6	20.0
Acrylonitrile	Ave	0.1429	0.1531		21.4	20.0	7.2	20.0
Methyl tert-butyl ether	Ave	0.7108	0.6709	0.1000	9.44	10.0	-5.6	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3285	0.1000	9.93	10.0	-0.7	20.0
Hexane	Ave	0.0431	0.0494		11.5	10.0	14.6	20.0
1,1-Dichloroethane	Ave	0.6504	0.6579	0.1000	10.1	10.0	1.2	20.0
Vinyl acetate	Ave	0.0379	0.0420		11.1	10.0	10.6	20.0
2-Butanone	Ave	0.1434	0.1489	0.0500	20.8	20.0	3.8	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3461	0.1000	9.92	10.0	-0.8	20.0
2,2-Dichloropropane	Ave	0.2584	0.2747		10.6	10.0	6.3	20.0
Bromochloromethane	Ave	0.1454	0.1552		10.7	10.0	6.7	20.0
Tetrahydrofuran	Ave	0.0944	0.0913		9.68	10.0	-3.2	20.0
Chloroform	Ave	0.5228	0.5204	0.2000	9.95	10.0	-0.5	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4111	0.1000	10.4	10.0	4.4	20.0
Cyclohexane	Ave	0.6493	0.7182	0.1000	11.1	10.0	10.6	20.0
1,1-Dichloropropene	Ave	0.3618	0.3800		10.5	10.0	5.0	20.0
Carbon tetrachloride	Lin1		0.3239	0.1000	9.81	10.0	-1.9	20.0
1,2-Dichloroethane	Ave	0.4273	0.4729	0.1000	11.1	10.0	10.7	20.0
Benzene	Ave	1.162	1.211	0.5000	10.4	10.0	4.2	20.0
Trichloroethene	Ave	0.2745	0.2968	0.2000	10.8	10.0	8.2	20.0
Methylcyclohexane	Ave	0.3471	0.3731	0.1000	10.7	10.0	7.5	20.0
1,2-Dichloropropane	Ave	0.3244	0.3494	0.1000	10.8	10.0	7.7	20.0
Dibromomethane	Ave	0.1369	0.1510		11.0	10.0	10.3	20.0
1,4-Dioxane	Ave	0.0020	0.0019		472	500	-5.6	20.0
Bromodichloromethane	Ave	0.2830	0.3075	0.1000	10.9	10.0	8.7	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-44226/2 Calibration Date: 05/16/2012 09:54

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5930.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1570	0.1693		21.6	20.0	7.8	20.0
cis-1,3-Dichloropropene	Lin1		0.3341	0.1500	9.63	10.0	-3.7	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.3073	0.0500	21.2	20.0	5.8	20.0
Toluene	Ave	1.614	1.738	0.4000	10.8	10.0	7.6	20.0
trans-1,3-Dichloropropene	Qua		0.3745	0.1000	10.3	10.0	3.0	20.0
Ethyl methacrylate	Ave	0.3861	0.4266		11.0	10.0	10.5	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.3159	0.1000	11.4	10.0	13.8	20.0
1,3-Dichloropropane	Ave	0.5134	0.5570		10.8	10.0	8.5	20.0
Tetrachloroethene	Ave	0.2856	0.3206	0.2000	11.2	10.0	12.2	20.0
2-Hexanone	Ave	0.2594	0.2828	0.0500	21.8	20.0	9.0	20.0
Dibromochloromethane	Lin1		0.2704		10.0	10.0	0.0	20.0
1,2-Dibromoethane	Ave	0.2760	0.2992		10.8	10.0	8.4	20.0
Chlorobenzene	Ave	1.062	1.120	0.3000	10.5	10.0	5.4	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3578		11.2	10.0	12.3	20.0
Ethylbenzene	Ave	0.5579	0.6075		10.9	10.0	8.9	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7488		21.3	20.0	6.7	20.0
o-Xylene	Ave	0.6962	0.7483		10.7	10.0	7.5	20.0
Styrene	Ave	1.123	1.254	0.3000	11.2	10.0	11.6	20.0
Bromoform	Qua		0.1317	0.1000	9.63	10.0	-3.7	20.0
Isopropylbenzene	Ave	1.660	1.781	0.1000	10.7	10.0	7.3	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6381	0.3000	9.97	10.0	-0.3	20.0
Bromobenzene	Ave	0.7581	0.7705		10.2	10.0	1.6	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2124		10.1	10.0	1.5	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1769		11.7	10.0	17.0	20.0
n-Propylbenzene	Ave	0.7609	0.7917		10.4	10.0	4.1	20.0
2-Chlorotoluene	Ave	0.7061	0.7322		10.4	10.0	3.7	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.428		10.5	10.0	4.6	20.0
4-Chlorotoluene	Ave	0.7405	0.7724		10.4	10.0	4.3	20.0
tert-Butylbenzene	Ave	2.122	2.253		10.6	10.0	6.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.550		10.5	10.0	4.9	20.0
sec-Butylbenzene	Ave	2.545	2.606		10.2	10.0	2.4	20.0
1,3-Dichlorobenzene	Ave	1.410	1.480	0.6000	10.5	10.0	5.0	20.0
p-Isopropyltoluene	Ave	2.184	2.327		10.7	10.0	6.6	20.0
1,4-Dichlorobenzene	Ave	1.485	1.520	0.5000	10.2	10.0	2.4	20.0
n-Butylbenzene	Ave	1.769	1.817		10.3	10.0	2.7	20.0
1,2-Dichlorobenzene	Ave	1.392	1.418	0.4000	10.2	10.0	1.8	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0700	0.0500	8.77	10.0	-12.3	20.0
1,3,5-Trichlorobenzene	Ave	0.8050	0.8434		10.5	10.0	4.8	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6813	0.2000	9.88	10.0	-1.2	20.0
Hexachlorobutadiene	Ave	0.3077	0.2996		9.74	10.0	-2.6	20.0
Naphthalene	Ave	1.476	1.434		9.72	10.0	-2.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVIS 240-44226/2 Calibration Date: 05/16/2012 09:54

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5930.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5819	0.5531		9.50	10.0	-5.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2379		9.56	10.2	-6.3	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3169		10.1	10.2	-0.8	20.0
Toluene-d8 (Surr)	Ave	1.346	1.380		10.5	10.2	2.5	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4946		9.76	10.2	-4.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-44226/3 Calibration Date: 05/16/2012 10:28

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5931.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4575		8.65	10.0	-13.5	20.0
Ethyl ether	Ave	0.3182	0.3236		10.2	10.0	1.7	20.0
3-Chloro-1-propene	Ave	0.1408	0.1339		9.51	10.0	-4.9	20.0
Diisopropyl ether	Ave	0.2775	0.2593		46.7	50.0	-6.6	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.6660		12.9	10.0	29.2*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	0.9781		11.0	10.0	9.9	20.0
Propionitrile	Ave	0.0386	0.0452		23.4	20.0	17.1	20.0
Ethyl acetate	Ave	0.2719	0.2660		19.6	20.0	-2.2	20.0
Methacrylonitrile	Ave	0.1921	0.1858		9.67	10.0	-3.3	20.0
Isobutyl alcohol	Ave	0.0086	0.0090		209	200	4.3	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.5470		7.64	10.0	-23.6*	20.0
n-Heptane	Ave	0.0406	0.0500 ok		12.3	10.0	22.9*	20.0
n-Butanol	Lin1		0.0056		171	200	-14.7	20.0
2-Nitropropane	Qua		0.0377		18.4	20.0	-8.0	20.0
Cyclohexanone	Lin1		0.0442		46.3	100	-53.7*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.608		8.74	10.0	-12.6	20.0
2-Methylnaphthalene	Qua		0.2917		6.94	20.0	-65.3*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-44226/3 Calibration Date: 05/16/2012 10:28

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5931.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2129		8.56	10.2	-16.2	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2889		9.23	10.2	-9.6	20.0
Toluene-d8 (Surr)	Ave	1.346	1.287		9.77	10.2	-4.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4790		9.45	10.2	-7.5	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: UXM5934.D Lab Sample ID: MB 240-44226/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/16/2012 11:55

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-44226/4	UXM5932.D	05/16/2012 10:51
MSA-DMW2A-050312	240-10949-9	UXM5935.D	05/16/2012 12:29
MSA-DMW2A-050312 MS	240-10949-9 MS	UXM5936.D	05/16/2012 12:52
MSA-DMW2A-050312 MSD	240-10949-9 MSD	UXM5937.D	05/16/2012 13:15

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-44226/6

Matrix: Water | Lab File ID: UXM5934.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/16/2012 11:55

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44226 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-44226/6

Matrix: Water Lab File ID: UXM5934.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/16/2012 11:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44226 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
108-20-3	Diisopropyl ether	10	U	10	1.5
91-20-3	Naphthalene	1.0	U	1.0	0.24
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
78-93-3	2-Butanone	10	U	10	0.57
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
95-47-6	o-Xylene	1.0	U	1.0	0.14
100-42-5	Styrene	1.0	U	1.0	0.11
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22
75-65-0	tert-Butyl alcohol	50	U	50	3.9
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-44226/6

Matrix: Water Lab File ID: UXM5934.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/16/2012 11:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44226 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
2037-26-5	Toluene-d8 (Surr)	96		74-115
1868-53-7	Dibromofluoromethane (Surr)	91		75-121

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-44226/6

Matrix: Water Lab File ID: UXM5934.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/16/2012 11:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44226 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW2A-050312 | Lab Sample ID: 240-10949-9

Matrix: Water | Lab File ID: UXM5935.D

Analysis Method: 8260C | Date Collected: 05/03/2012 13:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/16/2012 12:29

Soil Aliquot Vol: | Dilution Factor: 416.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44226 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	420	U	420	96
71-55-6	1,1,1-Trichloroethane	420	U	420	92
79-34-5	1,1,2,2-Tetrachloroethane	420	U	420	75
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	420	U	420	120
75-34-3	1,1-Dichloroethane	420	U	420	63
75-35-4	1,1-Dichloroethene	420	U	420	79
563-58-6	1,1-Dichloropropene	420	U	420	54
87-61-6	1,2,3-Trichlorobenzene	420	U	420	71
96-18-4	1,2,3-Trichloropropane	420	U	420	180
526-73-8	1,2,3-Trimethylbenzene	2100	U	2100	2.5
120-82-1	1,2,4-Trichlorobenzene	440		420	63
95-63-6	1,2,4-Trimethylbenzene	420	U	420	50
96-12-8	1,2-Dibromo-3-Chloropropane	830	U	830	280
95-50-1	1,2-Dichlorobenzene	420	U	420	54
107-06-2	1,2-Dichloroethane	420	U	420	92
78-87-5	1,2-Dichloropropane	420	U	420	75
541-73-1	1,3-Dichlorobenzene	420	U	420	58
142-28-9	1,3-Dichloropropane	420	U	420	67
106-46-7	1,4-Dichlorobenzene	420	U	420	54
594-20-7	2,2-Dichloropropane	420	U	420	54
110-75-8	2-Chloroethyl vinyl ether	4200	U	4200	410
95-49-8	2-Chlorotoluene	420	U	420	46
591-78-6	2-Hexanone	4200	U	4200	170
108-86-1	Bromobenzene	420	U	420	54
74-97-5	Bromochloromethane	420	U	420	120
106-43-4	4-Chlorotoluene	420	U	420	75
99-87-6	p-Isopropyltoluene	420	U	420	50
67-64-1	Acetone	4200	U	4200	460
71-43-2	Benzene	420	U	420	54
75-25-2	Bromoform	420	U	420	270
74-83-9	Bromomethane	420	U	420	170
75-15-0	Carbon disulfide	420	U	420	54
56-23-5	Carbon tetrachloride	420	U	420	54
108-90-7	Chlorobenzene	420	U	420	63
75-00-3	Chloroethane	420	U	420	120

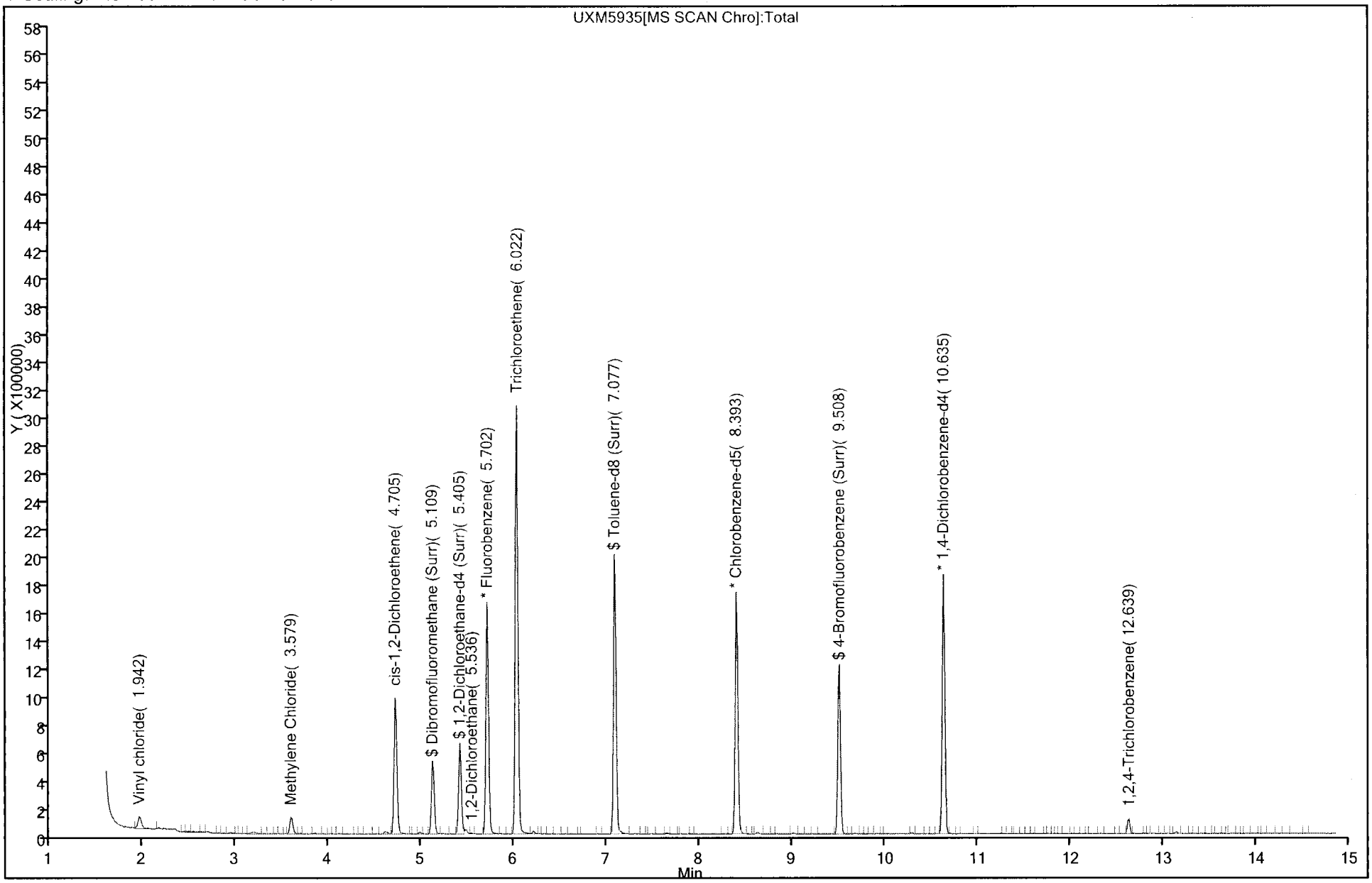
TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120516-10021.b\UXM5935.D		
Lims ID:	240-10949-B-9	Client ID:	MSA-DMW2A-050312
Inject. Date:	16-May-2012 12:29:30	Dil. Factor:	416.6700
Sample Type:	Client		
Sample ID:	240-0010021-007		
Misc. Info.:	M20516A,8260LLUX16,,1644		
Operator:	1904	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	6
Lims Batch ID:	44226	Lims Sample ID:	7
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120516-10021.b\8260_16.m		
Last Update:	17-May-2012 08:05:47	Calib Date:	09-May-2012 18:43:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120509-9809.b\UXM5665.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-18		
First Level Reviewer: quayler		Date:	17-May-2012 07:43:36

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1479096	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.394	-0.001	90	1053667	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	95	579480	10.0	
$ 142 2,5-Dibromotoluene	1		0.000					
$ 5 Dibromofluoromethane (Surr)	113	5.109	5.109	0.0	57	335467	8.93	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	459420	9.72	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1379150	9.72	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	90	494661	9.07	
136 Hexachloroethane TIC	1		0.000					
133 Benzyl chloride	126		0.000					
134 Chlorodifluoromethane TIC	1		0.000					
138 Butyl Methacrylate TIC	1		0.000					
139 C6-C12	1		0.000					
140 C6-C10	1		0.000					
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62	1.942	1.942	0.0	81	129316	1.94	
15 Bromomethane	94		2.286					
16 Chloroethane	64		2.393					
17 Dichlorofluoromethane	67		2.595					
18 Trichlorofluoromethane	101		2.654					
25 Methylal	45		2.856					
19 Ethyl ether	59		2.927					
20 Acrolein	56		3.033					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.164					
22 Acetone	43		3.176					
24 Iodomethane	142		3.282					
26 Carbon disulfide	76		3.353					
27 Acetonitrile	41		3.425					

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
132 n-Butyl acetate	43		7.812					
79 Chlorodibromomethane	129		7.848					
80 Tetrahydrothiophene	60		7.860					
123 Ethylene Dibromide	107		7.966					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
86 Styrene	104		9.010					
85 o-Xylene	106		9.010					
87 Bromoform	173		9.200					
88 Isopropylbenzene	105		9.354					
89 Cyclohexanone	55		9.437					
135 1,4-Dichlorobutane	55		9.437					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
93 trans-1,4-Dichloro-2-butene	53		9.674					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.852					
96 1,3,5-Trimethylbenzene	105		9.923					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.243					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.575					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.658					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
108 1,3,5-Trichlorobenzene	180		12.022					
109 1,2,4-Trichlorobenzene	180	12.639	12.639	0.0	82	42271	1.06	
110 Hexachlorobutadiene	225		12.817					
111 Naphthalene	128		12.888					
112 1,2,3-Trichlorobenzene	180		13.149					
113 2-Methylnaphthalene	142		14.240					
S 137 Trihalomethanes, Total	1		0.000					
S 11 1,2-Dichloroethene, Total	96				0		8.19	
S 9 1,3-Dichloropropene, Total	75		6.760					
S 114 Xylenes, Total	106		16.530					

Report Date: 21-May-2012 12:17:45 Chrom Revision: 2.0 08-Feb-2012 11:07:54
Data File: \\Ncchrom\ChromData\A3UX16\20120516-10021.b\UXM5935.D
Injection Date: 16-May-2012 12:29:30 Limit Group: MSV 8260DOD ICAL
Client ID: MSA-DMW2A-050312 Instrument ID: A3UX16
Lims Batch ID: 44226 Lims Sample ID: 7
Operator ID: 1904
Column Type: DB-624 Column Dia: 0.18 mm
Y Scaling: Method Defined: Set to Absolute Y Value



Report Date: 21-May-2012 12:17:45 Chrom Revision: 2.0 08-Feb-2012 11:07:54

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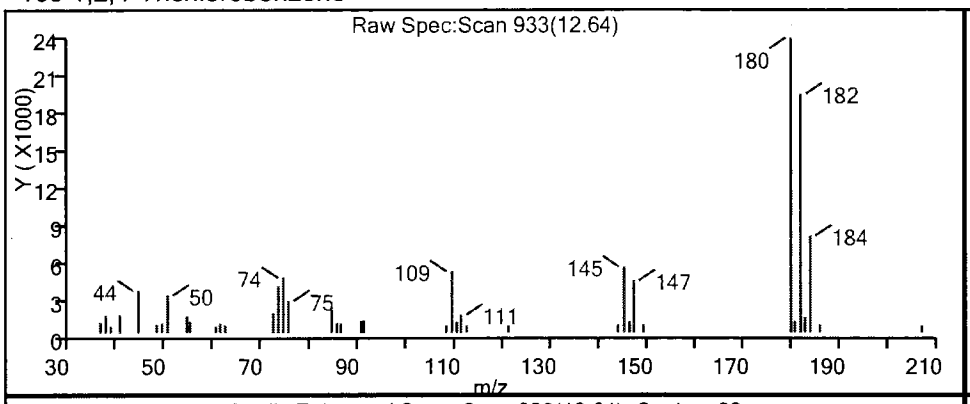
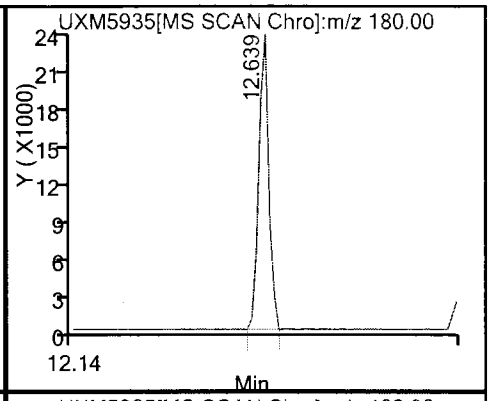
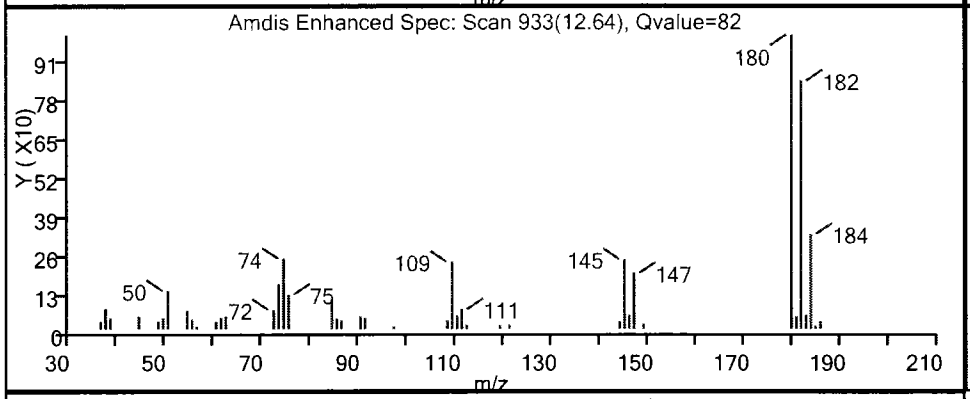
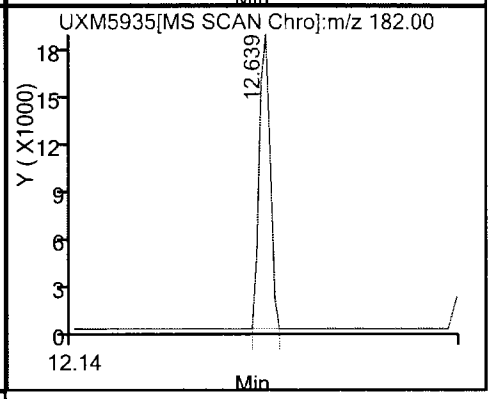
Injection Date:	16-May-2012 12:29:30	Limit Group:	MSV 8260DOD ICAL
Client ID:	MSA-DMW2A-050312	Instrument ID:	A3UX16
Lims Batch ID:	44226	Lims Sample ID:	7
Operator ID:	1904		
Column Type:	DB-624	Column Dia:	0.18 mm

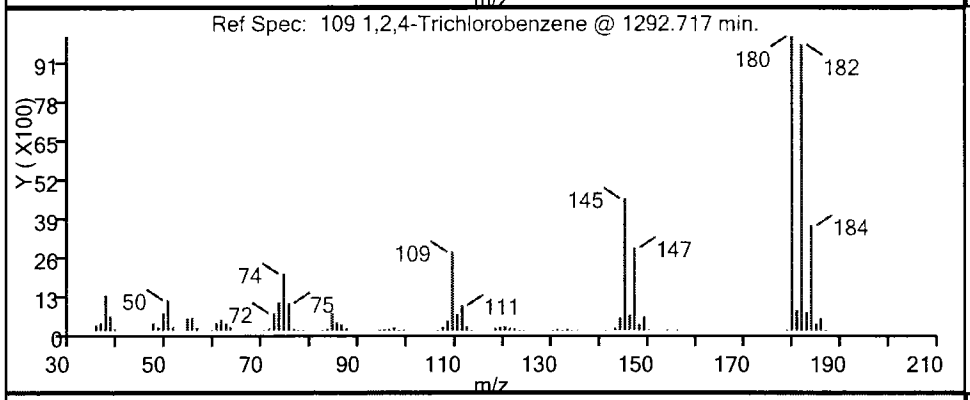
109 1,2,4-Trichlorobenzene

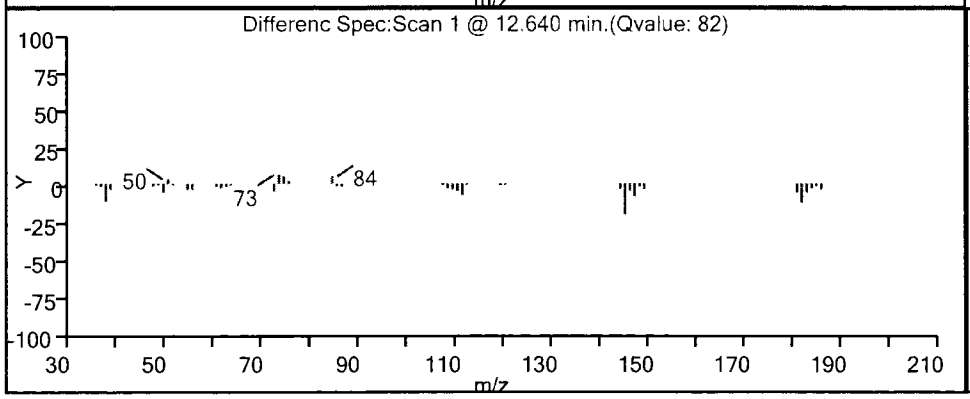


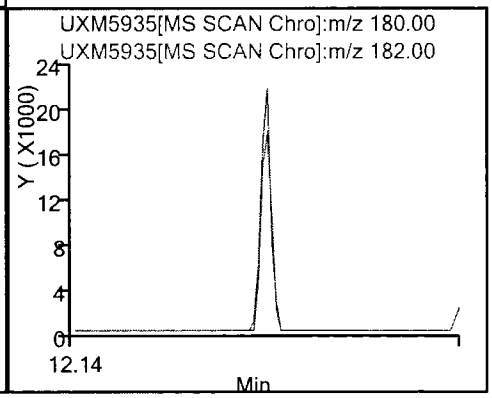












FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MSA-DMW6S-050312	240-10949-1	90	98	97	92
MSA-DMW6I-050312	240-10949-2	84	92	93	90
MSA-DMW6D-050312	240-10949-3	99	101	98	98
MSA-DMW7S-050312	240-10949-4	95	101	102	97
TB-050312	240-10949-5	86	92	89	84
MSA-DMW4I-050312	240-10949-6	90	94	90	89
MSA-DMW4D-050312	240-10949-7	90	96	95	87
MSA-DMW4S-050312	240-10949-8	90	100	99	90
MSA-DMW2A-050312	240-10949-9	87	95	95	89
	MB 240-43549/5	91	98	97	97
	MB 240-43737/5	87	91	89	89
	MB 240-44226/6	91	100	96	91
	LCS 240-43549/4	92	95	101	102
	LCS 240-43737/4	99	97	101	101
	LCS 240-44226/4	91	94	95	93
MSA-DMW2A-050312 MS	240-10949-9 MS	95	100	105	102
	240-10837-D-5 MS	97	100	101	102
	240-11065-E-2 MS	89	93	95	96
MSA-DMW2A-050312 MSD	240-10949-9 MSD	97	101	103	99
	240-10837-E-5 MSD	94	93	95	96
	240-11065-F-2 MSD	92	93	93	94

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5694.D

Lab ID: LCS 240-43549/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	10.8	108	72-116	
1,1,1-Trichloroethane	10.0	10.1	101	74-118	
1,1,2,2-Tetrachloroethane	10.0	9.44	94	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	11.7	117	74-151	
1,1-Dichloroethane	10.0	10.1	101	82-115	
1,1-Dichloroethene	10.0	10.8	108	78-131	
1,1-Dichloropropene	10.0	10.1	101	83-114	
1,2,3-Trichlorobenzene	10.0	8.98	90	54-126	
1,2,3-Trichloropropane	10.0	9.86	99	73-129	
1,2,3-Trimethylbenzene	10.0	8.55	86	70-130	
1,2,4-Trichlorobenzene	10.0	9.37	94	48-135	
1,2,4-Trimethylbenzene	10.0	10.2	102	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.58	96	42-136	
1,2-Dichlorobenzene	10.0	9.69	97	81-110	
1,2-Dichloroethane	10.0	10.4	104	71-127	
1,2-Dichloropropane	10.0	10.4	104	81-115	
1,3-Dichlorobenzene	10.0	9.93	99	80-110	
1,3-Dichloropropane	10.0	10.2	102	79-116	
1,4-Dichlorobenzene	10.0	9.91	99	82-110	
2,2-Dichloropropane	10.0	10.7	107	50-129	
2-Chloroethyl vinyl ether	10.0	9.48 J	95	52-131	
2-Chlorotoluene	10.0	9.87	99	76-116	
2-Hexanone	20.0	21.0	105	55-133	
Bromobenzene	10.0	10.1	101	76-115	
Bromochloromethane	10.0	9.77	98	77-120	
4-Chlorotoluene	10.0	10.1	101	77-115	
p-Isopropyltoluene	10.0	10.6	106	74-120	
Acetone	20.0	17.1	86	43-136	
Benzene	10.0	10.1	101	83-112	
Bromoform	10.0	8.83	88	40-131	
Bromomethane	10.0	8.94	89	11-185	
Carbon disulfide	10.0	10.4	104	62-142	
Carbon tetrachloride	10.0	9.42	94	66-128	
Chlorobenzene	10.0	10.1	101	85-110	
Chloroethane	10.0	8.97	90	25-153	
Chloroform	10.0	9.45	95	79-117	
Chloromethane	10.0	7.85	79	44-126	
cis-1,2-Dichloroethene	10.0	9.56	96	80-113	
cis-1,3-Dichloropropene	10.0	8.48	85	61-115	
Hexachlorobutadiene	10.0	9.10	91	36-134	
Dibromomethane	10.0	11.0	110	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5694.D

Lab ID: LCS 240-43549/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.9	109	72-121	
Dichlorodifluoromethane	10.0	6.12	61	19-129	
Ethylbenzene	10.0	10.5	105	83-112	
1,2-Dibromoethane	10.0	10.0	100	79-113	
Diisopropyl ether	10.0	9.77 J	98	77-118	
Naphthalene	10.0	9.33	93	32-141	
m-Xylene & p-Xylene	20.0	20.7	104	83-113	
n-Butylbenzene	10.0	10.4	104	66-125	
Isopropylbenzene	10.0	10.6	106	75-114	
n-Propylbenzene	10.0	10.3	103	74-121	
2-Butanone	20.0	18.8	94	60-126	
4-Methyl-2-pentanone	20.0	20.3	102	63-128	
sec-Butylbenzene	10.0	10.2	102	70-117	
Methyl tert-butyl ether	10.0	9.74	97	52-144	
Methylene Chloride	10.0	10.0	100	66-131	
o-Xylene	10.0	10.6	106	83-113	
Styrene	10.0	10.7	107	79-114	
tert-Butylbenzene	10.0	10.3	103	71-115	
Tetrachloroethene	10.0	10.6	106	79-114	
Toluene	10.0	10.4	104	84-111	
trans-1,2-Dichloroethene	10.0	9.89	99	83-117	
trans-1,3-Dichloropropene	10.0	9.26	93	58-117	
Trichloroethene	10.0	10.5	105	76-117	
Trichlorofluoromethane	10.0	10.5	105	49-157	
Vinyl acetate	10.0	9.55	96	46-161	
Vinyl chloride	10.0	8.64	86	53-127	
tert-Butyl alcohol	200	192	96	70-130	
Xylenes, Total	30.0	31.3	104	83-112	
Dibromochloromethane	10.0	9.32	93	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5746.D

Lab ID: LCS 240-43737/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	10.7	107	72-116	
1,1,1-Trichloroethane	10.0	10.3	103	74-118	
1,1,2,2-Tetrachloroethane	10.0	10.0	100	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.4	124	74-151	
1,1-Dichloroethane	10.0	10.3	103	82-115	
1,1-Dichloroethene	10.0	10.7	107	78-131	
1,1-Dichloropropene	10.0	10.6	106	83-114	
1,2,3-Trichlorobenzene	10.0	9.43	94	54-126	
1,2,3-Trichloropropane	10.0	9.60	96	73-129	
1,2,3-Trimethylbenzene	10.0	8.74	87	70-130	
1,2,4-Trichlorobenzene	10.0	9.43	94	48-135	
1,2,4-Trimethylbenzene	10.0	10.4	104	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.38	94	42-136	
1,2-Dichlorobenzene	10.0	9.94	99	81-110	
1,2-Dichloroethane	10.0	10.4	104	71-127	
1,2-Dichloropropane	10.0	10.2	102	81-115	
1,3-Dichlorobenzene	10.0	10.2	102	80-110	
1,3-Dichloropropane	10.0	10.0	100	79-116	
1,4-Dichlorobenzene	10.0	9.92	99	82-110	
2,2-Dichloropropane	10.0	10.3	103	50-129	
2-Chloroethyl vinyl ether	10.0	8.67 J	87	52-131	
2-Chlorotoluene	10.0	10.1	101	76-116	
2-Hexanone	20.0	21.3	107	55-133	
Bromobenzene	10.0	9.97	100	76-115	
Bromochloromethane	10.0	9.89	99	77-120	
4-Chlorotoluene	10.0	10.3	103	77-115	
p-Isopropyltoluene	10.0	10.8	108	74-120	
Acetone	20.0	17.5	88	43-136	
Benzene	10.0	10.3	103	83-112	
Bromoform	10.0	10.0	100	40-131	
Bromomethane	10.0	8.35	84	11-185	
Carbon disulfide	10.0	10.2	102	62-142	
Carbon tetrachloride	10.0	9.71	97	66-128	
Chlorobenzene	10.0	10.1	101	85-110	
Chloroethane	10.0	8.81	88	25-153	
Chloroform	10.0	10.1	101	79-117	
Chloromethane	10.0	8.62	86	44-126	
cis-1,2-Dichloroethene	10.0	10.1	101	80-113	
cis-1,3-Dichloropropene	10.0	8.20	82	61-115	
Hexachlorobutadiene	10.0	9.52	95	36-134	
Dibromomethane	10.0	10.5	105	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5746.D

Lab ID: LCS 240-43737/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.5	105	72-121	
Dichlorodifluoromethane	10.0	6.57	66	19-129	
Ethylbenzene	10.0	10.6	106	83-112	
1,2-Dibromoethane	10.0	10.6	106	79-113	
Diisopropyl ether	10.0	9.66 J	97	77-118	
Naphthalene	10.0	9.41	94	32-141	
m-Xylene & p-Xylene	20.0	21.0	105	83-113	
n-Butylbenzene	10.0	10.4	104	66-125	
Isopropylbenzene	10.0	10.5	105	75-114	
n-Propylbenzene	10.0	10.6	106	74-121	
2-Butanone	20.0	18.3	92	60-126	
4-Methyl-2-pentanone	20.0	20.1	101	63-128	
sec-Butylbenzene	10.0	10.2	102	70-117	
Methyl tert-butyl ether	10.0	9.58	96	52-144	
Methylene Chloride	10.0	9.69	97	66-131	
o-Xylene	10.0	10.7	107	83-113	
Styrene	10.0	10.9	109	79-114	
tert-Butylbenzene	10.0	10.3	103	71-115	
Tetrachloroethene	10.0	10.4	104	79-114	
Toluene	10.0	10.4	104	84-111	
trans-1,2-Dichloroethene	10.0	10.3	103	83-117	
trans-1,3-Dichloropropene	10.0	9.56	96	58-117	
Trichloroethene	10.0	10.4	104	76-117	
Trichlorofluoromethane	10.0	10.8	108	49-157	
Vinyl acetate	10.0	8.93	89	46-161	
Vinyl chloride	10.0	9.31	93	53-127	
tert-Butyl alcohol	200	185	93	70-130	
Xylenes, Total	30.0	31.7	106	83-112	
Dibromochloromethane	10.0	9.33	93	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5932.D

Lab ID: LCS 240-44226/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	10.7	107	72-116	
1,1,1-Trichloroethane	10.0	10.1	101	74-118	
1,1,2,2-Tetrachloroethane	10.0	9.69	97	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.4	124	74-151	
1,1-Dichloroethane	10.0	10.5	105	82-115	
1,1-Dichloroethene	10.0	10.4	104	78-131	
1,1-Dichloropropene	10.0	10.4	104	83-114	
1,2,3-Trichlorobenzene	10.0	9.61	96	54-126	
1,2,3-Trichloropropane	10.0	9.81	98	73-129	
1,2,3-Trimethylbenzene	10.0	8.78	88	70-130	
1,2,4-Trichlorobenzene	10.0	9.67	97	48-135	
1,2,4-Trimethylbenzene	10.0	10.3	103	76-120	
1,2-Dibromo-3-Chloropropane	10.0	9.33	93	42-136	
1,2-Dichlorobenzene	10.0	10.2	102	81-110	
1,2-Dichloroethane	10.0	10.7	107	71-127	
1,2-Dichloropropane	10.0	10.5	105	81-115	
1,3-Dichlorobenzene	10.0	10.3	103	80-110	
1,3-Dichloropropane	10.0	10.3	103	79-116	
1,4-Dichlorobenzene	10.0	9.90	99	82-110	
2,2-Dichloropropane	10.0	10.8	108	50-129	
2-Chloroethyl vinyl ether	10.0	9.42 J	94	52-131	
2-Chlorotoluene	10.0	10.3	103	76-116	
2-Hexanone	20.0	22.0	110	55-133	
Bromobenzene	10.0	10.1	101	76-115	
Bromochloromethane	10.0	10.3	103	77-120	
4-Chlorotoluene	10.0	10.3	103	77-115	
p-Isopropyltoluene	10.0	10.8	108	74-120	
Acetone	20.0	19.9	100	43-136	
Benzene	10.0	10.3	103	83-112	
Bromoform	10.0	9.61	96	40-131	
Bromomethane	10.0	8.60	86	11-185	
Carbon disulfide	10.0	9.32	93	62-142	
Carbon tetrachloride	10.0	9.80	98	66-128	
Chlorobenzene	10.0	10.3	103	85-110	
Chloroethane	10.0	8.72	87	25-153	
Chloroform	10.0	9.97	100	79-117	
Chloromethane	10.0	9.44	94	44-126	
cis-1,2-Dichloroethene	10.0	9.89	99	80-113	
cis-1,3-Dichloropropene	10.0	8.67	87	61-115	
Hexachlorobutadiene	10.0	9.76	98	36-134	
Dibromomethane	10.0	10.9	109	81-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5932.D

Lab ID: LCS 240-44226/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Bromodichloromethane	10.0	10.5	105	72-121	
Dichlorodifluoromethane	10.0	7.61	76	19-129	
Ethylbenzene	10.0	10.7	107	83-112	
1,2-Dibromoethane	10.0	10.3	103	79-113	
Diisopropyl ether	10.0	9.66 J	97	77-118	
Naphthalene	10.0	9.59	96	32-141	
m-Xylene & p-Xylene	20.0	21.1	106	83-113	
n-Butylbenzene	10.0	10.3	103	66-125	
Isopropylbenzene	10.0	10.6	106	75-114	
n-Propylbenzene	10.0	10.4	104	74-121	
2-Butanone	20.0	20.4	102	60-126	
4-Methyl-2-pentanone	20.0	21.2	106	63-128	
sec-Butylbenzene	10.0	10.1	101	70-117	
Methyl tert-butyl ether	10.0	9.59	96	52-144	
Methylene Chloride	10.0	10.0	100	66-131	
o-Xylene	10.0	10.7	107	83-113	
Styrene	10.0	10.9	109	79-114	
tert-Butylbenzene	10.0	10.4	104	71-115	
Tetrachloroethene	10.0	10.7	107	79-114	
Toluene	10.0	10.5	105	84-111	
trans-1,2-Dichloroethene	10.0	9.96	100	83-117	
trans-1,3-Dichloropropene	10.0	9.80	98	58-117	
Trichloroethene	10.0	10.5	105	76-117	
Trichlorofluoromethane	10.0	11.1	111	49-157	
Vinyl acetate	10.0	9.65	97	46-161	
Vinyl chloride	10.0	9.41	94	53-127	
tert-Butyl alcohol	200	202	101	70-130	
Xylenes, Total	30.0	31.8	106	83-112	
Dibromochloromethane	10.0	9.43	94	64-119	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5936.D

Lab ID: 240-10949-9 MS Client ID: MSA-DMW2A-050312 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	4170	420 U	4670	112	64-118	
1,1,1-Trichloroethane	4170	420 U	4210	101	68-121	
1,1,2,2-Tetrachloroethane	4170	420 U	4070	98	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	4170	420 U	4960	119	70-152	
1,1-Dichloroethane	4170	420 U	4110	99	79-116	
1,1-Dichloroethene	4170	420 U	4210	101	74-135	
1,1-Dichloropropene	4170	420 U	4330	104	80-114	
1,2,3-Trichlorobenzene	4170	420 U	4070	98	45-129	
1,2,3-Trichloropropane	4170	420 U	4330	104	67-132	
1,2,3-Trimethylbenzene	4170	2100 U	3600	86	70-130	
1,2,4-Trichlorobenzene	4170	440	4380	94	38-138	
1,2,4-Trimethylbenzene	4170	420 U	4250	102	67-124	
1,2-Dibromo-3-Chloropropane	4170	830 U	4130	99	32-139	
1,2-Dichlorobenzene	4170	420 U	4210	101	75-111	
1,2-Dichloroethane	4170	420 U	4710	113	68-129	
1,2-Dichloropropane	4170	420 U	4380	105	78-115	
1,3-Dichlorobenzene	4170	420 U	4210	101	73-110	
1,3-Dichloropropane	4170	420 U	4420	106	74-118	
1,4-Dichlorobenzene	4170	420 U	4170	100	75-110	
2,2-Dichloropropane	4170	420 U	4130	99	38-127	
2-Chloroethyl vinyl ether	4170	4200 U	3970 J	95	10-150	
2-Chlorotoluene	4170	420 U	4160	100	69-117	
2-Hexanone	8330	4200 U	9380	113	47-139	
Bromobenzene	4170	420 U	4110	99	71-116	
Bromochloromethane	4170	420 U	4130	99	73-121	
4-Chlorotoluene	4170	420 U	4290	103	71-116	
p-Isopropyltoluene	4170	420 U	4420	106	64-122	
Acetone	8330	4200 U	8170	98	33-145	
Benzene	4170	420 U	4290	103	72-121	
Bromoform	4170	420 U	4100	99	32-128	
Bromomethane	4170	420 U	3140	75	10-186	
Carbon disulfide	4170	420 U	3610	87	57-147	
Carbon tetrachloride	4170	420 U	4030	97	59-129	
Chlorobenzene	4170	420 U	4290	103	80-110	
Chloroethane	4170	420 U	3300	79	21-165	
Chloroform	4170	420 U	4080	98	76-118	
Chloromethane	4170	420 U	3440	83	33-132	
cis-1,2-Dichloroethene	4170	3400	7630	101	70-120	
cis-1,3-Dichloropropene	4170	420 U	3690	89	51-110	
Hexachlorobutadiene	4170	420 U	3830	92	27-132	
Dibromomethane	4170	420 U	4670	112	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5936.D

Lab ID: 240-10949-9 MS Client ID: MSA-DMW2A-050312 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	4170	420 U	4500	108	67-120	
Dichlorodifluoromethane	4170	420 U	2420	58	17-128	
Ethylbenzene	4170	420 U	4420	106	75-116	
1,2-Dibromoethane	4170	420 U	4460	107	74-113	
Diisopropyl ether	4170	4200 U	3880 J	93	73-118	
Naphthalene	4170	420 U	4030	97	15-158	
m-Xylene & p-Xylene	8330	830 U	8960	108	75-117	
n-Butylbenzene	4170	420 U	4250	102	56-127	
Isopropylbenzene	4170	420 U	4460	107	68-116	
n-Propylbenzene	4170	420 U	4250	102	64-124	
2-Butanone	8330	4200 U	8880	107	54-129	
4-Methyl-2-pentanone	8330	4200 U	9080	109	56-131	
sec-Butylbenzene	4170	420 U	4150	100	60-119	
Methyl tert-butyl ether	4170	2100 U	3850	93	46-144	
Methylene Chloride	4170	420 U	4030	97	63-128	
o-Xylene	4170	420 U	4460	107	76-116	
Styrene	4170	420 U	4540	109	71-117	
tert-Butylbenzene	4170	420 U	4330	104	61-119	
Tetrachloroethene	4170	420 U	4710	113	70-117	
Toluene	4170	420 U	4540	109	78-114	
trans-1,2-Dichloroethene	4170	420 U	4170	100	80-119	
trans-1,3-Dichloropropene	4170	420 U	4120	99	46-116	
Trichloroethene	4170	11000	15800	110	66-120	
Trichlorofluoromethane	4170	420 U	4420	106	46-157	
Vinyl acetate	4170	830 U	3950	95	43-157	
Vinyl chloride	4170	810	4330	85	49-130	
tert-Butyl alcohol	83300	21000 U	83300	100	70-130	
Xylenes, Total	12500	830 U	13400	107	76-116	
Dibromochloromethane	4170	420 U	4030	97	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5937.D

Lab ID: 240-10949-9 MSD Client ID: MSA-DMW2A-050312 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	4170	4670	112	0	30	64-118	
1,1,1-Trichloroethane	4170	4290	103	2	30	68-121	
1,1,2,2-Tetrachloroethane	4170	4330	104	6	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	4170	5000	120	1	30	70-152	
1,1-Dichloroethane	4170	4330	104	5	30	79-116	
1,1-Dichloroethene	4170	4420	106	5	30	74-135	
1,1-Dichloropropene	4170	4540	109	5	30	80-114	
1,2,3-Trichlorobenzene	4170	4380	105	7	30	45-129	
1,2,3-Trichloropropane	4170	4500	108	4	30	67-132	
1,2,3-Trimethylbenzene	4170	3750	90	4	30	70-130	
1,2,4-Trichlorobenzene	4170	4710	102	7	30	38-138	
1,2,4-Trimethylbenzene	4170	4460	107	5	30	67-124	
1,2-Dibromo-3-Chloropropane	4170	4580	110	10	30	32-139	
1,2-Dichlorobenzene	4170	4330	104	3	30	75-111	
1,2-Dichloroethane	4170	4880	117	3	30	68-129	
1,2-Dichloropropane	4170	4580	110	5	30	78-115	
1,3-Dichlorobenzene	4170	4420	106	5	30	73-110	
1,3-Dichloropropane	4170	4500	108	2	30	74-118	
1,4-Dichlorobenzene	4170	4380	105	5	30	75-110	
2,2-Dichloropropane	4170	4330	104	5	30	38-127	
2-Chloroethyl vinyl ether	4170	4060 J	98	2	30	10-150	
2-Chlorotoluene	4170	4380	105	5	30	69-117	
2-Hexanone	8330	10100	122	8	30	47-139	
Bromobenzene	4170	4380	105	6	30	71-116	
Bromochloromethane	4170	4290	103	4	30	73-121	
4-Chlorotoluene	4170	4380	105	2	30	71-116	
p-Isopropyltoluene	4170	4540	109	3	30	64-122	
Acetone	8330	8500	102	4	30	33-145	
Benzene	4170	4380	105	2	30	72-121	
Bromoform	4170	4250	102	3	30	32-128	
Bromomethane	4170	2630	63	18	30	10-186	
Carbon disulfide	4170	3630	87	0	30	57-147	
Carbon tetrachloride	4170	4120	99	2	30	59-129	
Chlorobenzene	4170	4420	106	3	30	80-110	
Chloroethane	4170	3210	77	3	30	21-165	
Chloroform	4170	4290	103	5	30	76-118	
Chloromethane	4170	3560	86	4	30	33-132	
cis-1,2-Dichloroethene	4170	7880	107	3	30	70-120	
cis-1,3-Dichloropropene	4170	3900	94	5	30	51-110	
Hexachlorobutadiene	4170	4170	100	9	30	27-132	
Dibromomethane	4170	4750	114	2	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5937.D

Lab ID: 240-10949-9 MSD Client ID: MSA-DMW2A-050312 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	4170	4500	108	0	30	67-120	
Dichlorodifluoromethane	4170	2400	58	1	30	17-128	
Ethylbenzene	4170	4540	109	3	30	75-116	
1,2-Dibromoethane	4170	4750	114	6	30	74-113	F
Diisopropyl ether	4170	4150 J	100	7	30	73-118	
Naphthalene	4170	4380	105	8	30	15-158	
m-Xylene & p-Xylene	8330	9000	108	0	30	75-117	
n-Butylbenzene	4170	4420	106	4	30	56-127	
Isopropylbenzene	4170	4580	110	3	30	68-116	
n-Propylbenzene	4170	4540	109	7	30	64-124	
2-Butanone	8330	9250	111	4	30	54-129	
4-Methyl-2-pentanone	8330	9670	116	6	30	56-131	
sec-Butylbenzene	4170	4290	103	3	30	60-119	
Methyl tert-butyl ether	4170	4070	98	5	30	46-144	
Methylene Chloride	4170	4250	102	5	30	63-128	
o-Xylene	4170	4630	111	4	30	76-116	
Styrene	4170	4670	112	3	30	71-117	
tert-Butylbenzene	4170	4460	107	3	30	61-119	
Tetrachloroethene	4170	4790	115	2	30	70-117	
Toluene	4170	4540	109	0	30	78-114	
trans-1,2-Dichloroethene	4170	4130	99	1	30	80-119	
trans-1,3-Dichloropropene	4170	4330	104	5	30	46-116	
Trichloroethene	4170	16300	123	3	30	66-120	F
Trichlorofluoromethane	4170	4330	104	2	30	46-157	
Vinyl acetate	4170	4380	105	10	30	43-157	
Vinyl chloride	4170	4460	88	3	30	49-130	
tert-Butyl alcohol	83300	91000	109	9	30	70-130	
Xylenes, Total	12500	13600	109	2	30	76-116	
Dibromochloromethane	4170	4050	97	0	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5716.D

Lab ID: 240-10837-D-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	400	40 U	416	104	64-118	
1,1,1-Trichloroethane	400	40 U	399	100	68-121	
1,1,2,2-Tetrachloroethane	400	40 U	394	99	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	400	40 U	412	103	70-152	
1,1-Dichloroethane	400	40 U	412	103	79-116	
1,1-Dichloroethene	400	16 J	428	103	74-135	
1,1-Dichloropropene	400	40 U	412	103	80-114	
1,2,3-Trichlorobenzene	400	40 U	363	91	45-129	
1,2,3-Trichloropropane	400	40 U	397	99	67-132	
1,2,3-Trimethylbenzene	400	200 U	333	83	70-130	
1,2,4-Trichlorobenzene	400	40 U	354	89	38-138	
1,2,4-Trimethylbenzene	400	40 U	388	97	67-124	
1,2-Dibromo-3-Chloropropane	400	80 U	381	95	32-139	
1,2-Dichlorobenzene	400	40 U	380	95	75-111	
1,2-Dichloroethane	400	40 U	432	108	68-129	
1,2-Dichloropropane	400	40 U	404	101	78-115	
1,3-Dichlorobenzene	400	40 U	387	97	73-110	
1,3-Dichloropropane	400	40 U	400	100	74-118	
1,4-Dichlorobenzene	400	40 U	379	95	75-110	
2,2-Dichloropropane	400	40 U	368	92	38-127	
2-Chloroethyl vinyl ether	400	400 U	400 U	0	10-150	F
2-Chlorotoluene	400	40 U	386	97	69-117	
2-Hexanone	800	400 U	828	104	47-139	
Bromobenzene	400	40 U	397	99	71-116	
Bromochloromethane	400	40 U	395	99	73-121	
4-Chlorotoluene	400	40 U	393	98	71-116	
p-Isopropyltoluene	400	40 U	393	98	64-122	
Acetone	800	400 U	756	95	33-145	
Benzene	400	12 J	416	101	72-121	
Bromoform	400	40 U	368	92	32-128	
Bromomethane	400	40 U	334	83	10-186	
Carbon disulfide	400	40 U	391	98	57-147	
Carbon tetrachloride	400	40 U	366	91	59-129	
Chlorobenzene	400	240	648	103	80-110	
Chloroethane	400	40 U	345	86	21-165	
Chloroform	400	40 U	397	99	76-118	
Chloromethane	400	40 U	306	77	33-132	
cis-1,2-Dichloroethene	400	1400	1820	108	70-120	E
cis-1,3-Dichloropropene	400	40 U	320	80	51-110	
Hexachlorobutadiene	400	40 U	311	78	27-132	
Dibromomethane	400	40 U	432	108	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5716.D

Lab ID: 240-10837-D-5 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	400	40 U	424	106	67-120	
Dichlorodifluoromethane	400	40 U	219	55	17-128	
Ethylbenzene	400	40 U	388	97	75-116	
1,2-Dibromoethane	400	40 U	399	100	74-113	
Diisopropyl ether	400	400 U	385 J	96	73-118	
Naphthalene	400	40 U	369	92	15-158	
m-Xylene & p-Xylene	800	80 U	788	99	75-117	
n-Butylbenzene	400	40 U	374	94	56-127	
Isopropylbenzene	400	40 U	384	96	68-116	
n-Propylbenzene	400	40 U	393	98	64-124	
2-Butanone	800	400 U	400 U	0	54-129	F
4-Methyl-2-pentanone	800	400 U	820	103	56-131	
sec-Butylbenzene	400	40 U	368	92	60-119	
Methyl tert-butyl ether	400	200 U	375	94	46-144	
Methylene Chloride	400	40 U	386	97	63-128	
o-Xylene	400	40 U	398	100	76-116	
Styrene	400	40 U	408	102	71-117	
tert-Butylbenzene	400	40 U	382	95	61-119	
Tetrachloroethene	400	40 U	389	97	70-117	
Toluene	400	6.0 J	404	100	78-114	
trans-1,2-Dichloroethene	400	14 J	404	98	80-119	
trans-1,3-Dichloropropene	400	40 U	355	89	46-116	
Trichloroethene	400	50	460	103	66-120	
Trichlorofluoromethane	400	40 U	384	96	46-157	
Vinyl acetate	400	80 U	376	94	43-157	
Vinyl chloride	400	910	1240	83	49-130	
tert-Butyl alcohol	8000	2000 U	7820	98	70-130	
Xylenes, Total	1200	80 U	1190	99	76-116	
Dibromochloromethane	400	40 U	359	90	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5717.D

Lab ID: 240-10837-E-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	400	391	98	6	30	64-118	
1,1,1-Trichloroethane	400	412	103	3	30	68-121	
1,1,2,2-Tetrachloroethane	400	408	102	3	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	400	424	106	3	30	70-152	
1,1-Dichloroethane	400	420	105	2	30	79-116	
1,1-Dichloroethene	400	440	106	3	30	74-135	
1,1-Dichloropropene	400	404	101	2	30	80-114	
1,2,3-Trichlorobenzene	400	386	97	6	30	45-129	
1,2,3-Trichloropropane	400	412	103	4	30	67-132	
1,2,3-Trimethylbenzene	400	345	86	4	30	70-130	
1,2,4-Trichlorobenzene	400	368	92	4	30	38-138	
1,2,4-Trimethylbenzene	400	408	102	5	30	67-124	
1,2-Dibromo-3-Chloropropane	400	362	91	5	30	32-139	
1,2-Dichlorobenzene	400	391	98	3	30	75-111	
1,2-Dichloroethane	400	424	106	2	30	68-129	
1,2-Dichloropropane	400	416	104	3	30	78-115	
1,3-Dichlorobenzene	400	392	98	1	30	73-110	
1,3-Dichloropropane	400	408	102	2	30	74-118	
1,4-Dichlorobenzene	400	389	97	3	30	75-110	
2,2-Dichloropropane	400	390	98	6	30	38-127	
2-Chloroethyl vinyl ether	400	400 U	0	NC	30	10-150	F
2-Chlorotoluene	400	400	100	4	30	69-117	
2-Hexanone	800	804	101	3	30	47-139	
Bromobenzene	400	408	102	3	30	71-116	
Bromochloromethane	400	412	103	4	30	73-121	
4-Chlorotoluene	400	404	101	3	30	71-116	
p-Isopropyltoluene	400	408	102	4	30	64-122	
Acetone	800	780	98	3	30	33-145	
Benzene	400	416	101	0	30	72-121	
Bromoform	400	363	91	1	30	32-128	
Bromomethane	400	350	88	5	30	10-186	
Carbon disulfide	400	398	100	2	30	57-147	
Carbon tetrachloride	400	378	95	3	30	59-129	
Chlorobenzene	400	640	101	1	30	80-110	
Chloroethane	400	364	91	5	30	21-165	
Chloroform	400	404	101	2	30	76-118	
Chloromethane	400	315	79	3	30	33-132	
cis-1,2-Dichloroethene	400	1790	102	1	30	70-120	E
cis-1,3-Dichloropropene	400	350	88	9	30	51-110	
Hexachlorobutadiene	400	338	85	8	30	27-132	
Dibromomethane	400	432	108	0	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5717.D

Lab ID: 240-10837-E-5 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	400	420	105	1	30	67-120	
Dichlorodifluoromethane	400	214	54	2	30	17-128	
Ethylbenzene	400	400	100	3	30	75-116	
1,2-Dibromoethane	400	397	99	1	30	74-113	
Diisopropyl ether	400	395 J	99	2	30	73-118	
Naphthalene	400	392	98	6	30	15-158	
m-Xylene & p-Xylene	800	784	98	1	30	75-117	
n-Butylbenzene	400	388	97	4	30	56-127	
Isopropylbenzene	400	383	96	0	30	68-116	
n-Propylbenzene	400	408	102	4	30	64-124	
2-Butanone	800	400 U	0	NC	30	54-129	F
4-Methyl-2-pentanone	800	856	107	4	30	56-131	
sec-Butylbenzene	400	384	96	4	30	60-119	
Methyl tert-butyl ether	400	395	99	5	30	46-144	
Methylene Chloride	400	393	98	2	30	63-128	
o-Xylene	400	396	99	1	30	76-116	
Styrene	400	400	100	2	30	71-117	
tert-Butylbenzene	400	398	100	4	30	61-119	
Tetrachloroethene	400	381	95	2	30	70-117	
Toluene	400	397	98	2	30	78-114	
trans-1,2-Dichloroethene	400	416	101	3	30	80-119	
trans-1,3-Dichloropropene	400	363	91	2	30	46-116	
Trichloroethene	400	460	103	0	30	66-120	
Trichlorofluoromethane	400	400	100	4	30	46-157	
Vinyl acetate	400	390	98	4	30	43-157	
Vinyl chloride	400	1240	82	0	30	49-130	
tert-Butyl alcohol	8000	8060	101	3	30	70-130	
Xylenes, Total	1200	1180	98	1	30	76-116	
Dibromochloromethane	400	362	91	1	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5768.D

Lab ID: 240-11065-E-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	80.0	8.0 U	77.4	97	64-118	
1,1,1-Trichloroethane	80.0	8.0 U	72.6	91	68-121	
1,1,2,2-Tetrachloroethane	80.0	8.0 U	80.8	101	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	80.0	8.0 U	83.2	104	70-152	
1,1-Dichloroethane	80.0	8.0 U	76.7	96	79-116	
1,1-Dichloroethene	80.0	8.0 U	77.3	97	74-135	
1,1-Dichloropropene	80.0	8.0 U	76.6	96	80-114	
1,2,3-Trichlorobenzene	80.0	8.0 U	76.2	95	45-129	
1,2,3-Trichloropropane	80.0	8.0 U	84.8	106	67-132	
1,2,3-Trimethylbenzene	80.0	40 U	66.3	83	70-130	
1,2,4-Trichlorobenzene	80.0	8.0 U	71.7	90	38-138	
1,2,4-Trimethylbenzene	80.0	8.0 U	76.4	96	67-124	
1,2-Dibromo-3-Chloropropane	80.0	16 U	81.6	102	32-139	
1,2-Dichlorobenzene	80.0	8.0 U	76.4	96	75-111	
1,2-Dichloroethane	80.0	8.0 U	80.0	100	68-129	
1,2-Dichloropropane	80.0	8.0 U	78.0	98	78-115	
1,3-Dichlorobenzene	80.0	8.0 U	75.3	94	73-110	
1,3-Dichloropropane	80.0	8.0 U	80.8	101	74-118	
1,4-Dichlorobenzene	80.0	8.0 U	75.5	94	75-110	
2,2-Dichloropropane	80.0	8.0 U	67.0	84	38-127	
2-Chloroethyl vinyl ether	80.0	80 U	80 U	0	10-150	F
2-Chlorotoluene	80.0	8.0 U	74.4	93	69-117	
2-Hexanone	160	80 U	168	105	47-139	
Bromobenzene	80.0	8.0 U	76.1	95	71-116	
Bromochloromethane	80.0	8.0 U	73.7	92	73-121	
4-Chlorotoluene	80.0	8.0 U	77.1	96	71-116	
p-Isopropyltoluene	80.0	8.0 U	78.2	98	64-122	
Acetone	160	80 U	150	94	33-145	
Benzene	80.0	8.0 U	76.2	95	72-121	
Bromoform	80.0	8.0 U	76.0	95	32-128	
Bromomethane	80.0	8.0 U	56.3	70	10-186	
Carbon disulfide	80.0	8.0 U	72.6	91	57-147	
Carbon tetrachloride	80.0	6.4 J	71.7	82	59-129	
Chlorobenzene	80.0	8.0 U	75.7	95	80-110	
Chloroethane	80.0	8.0 U	62.9	79	21-165	
Chloroform	80.0	8.0 U	73.8	92	76-118	
Chloromethane	80.0	8.0 U	61.2	77	33-132	
cis-1,2-Dichloroethene	80.0	8.0 U	72.1	90	70-120	
cis-1,3-Dichloropropene	80.0	8.0 U	62.0	78	51-110	
Hexachlorobutadiene	80.0	8.0 U	59.7	75	27-132	
Dibromomethane	80.0	8.0 U	81.6	102	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5768.D

Lab ID: 240-11065-E-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Bromodichloromethane	80.0	8.0 U	80.0	100	67-120	
Dichlorodifluoromethane	80.0	8.0 U	45.4	57	17-128	
Ethylbenzene	80.0	8.0 U	75.4	94	75-116	
1,2-Dibromoethane	80.0	8.0 U	81.6	102	74-113	
Diisopropyl ether	80.0	80 U	66.8 J	84	73-118	
Naphthalene	80.0	8.0 U	80.0	100	15-158	
m-Xylene & p-Xylene	160	16 U	150	94	75-117	
n-Butylbenzene	80.0	8.0 U	72.3	90	56-127	
Isopropylbenzene	80.0	8.0 U	73.8	92	68-116	
n-Propylbenzene	80.0	8.0 U	78.2	98	64-124	
2-Butanone	160	80 U	155	97	54-129	
4-Methyl-2-pentanone	160	80 U	165	103	56-131	
sec-Butylbenzene	80.0	8.0 U	72.0	90	60-119	
Methyl tert-butyl ether	80.0	40 U	72.6	91	46-144	
Methylene Chloride	80.0	8.0 U	71.5	89	63-128	
o-Xylene	80.0	8.0 U	77.2	97	76-116	
Styrene	80.0	8.0 U	79.0	99	71-117	
tert-Butylbenzene	80.0	8.0 U	74.7	93	61-119	
Tetrachloroethene	80.0	8.0 U	76.4	96	70-117	
Toluene	80.0	8.0 U	76.6	96	78-114	
trans-1,2-Dichloroethene	80.0	8.0 U	73.3	92	80-119	
trans-1,3-Dichloropropene	80.0	8.0 U	72.7	91	46-116	
Trichloroethene	80.0	180	247	89	66-120	
Trichlorofluoromethane	80.0	8.0 U	71.2	89	46-157	
Vinyl acetate	80.0	16 U	71.4	89	43-157	
Vinyl chloride	80.0	8.0 U	64.3	80	49-130	
tert-Butyl alcohol	1600	400 U	1640	103	70-130	
Xylenes, Total	240	16 U	227	95	76-116	
Dibromochloromethane	80.0	8.0 U	72.8	91	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5769.D

Lab ID: 240-11065-F-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	80.0	80.0	100	3	30	64-118	
1,1,1-Trichloroethane	80.0	74.7	93	3	30	68-121	
1,1,2,2-Tetrachloroethane	80.0	81.6	102	1	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	80.0	78.7	98	6	30	70-152	
1,1-Dichloroethane	80.0	78.6	98	2	30	79-116	
1,1-Dichloroethene	80.0	77.7	97	1	30	74-135	
1,1-Dichloropropene	80.0	77.7	97	1	30	80-114	
1,2,3-Trichlorobenzene	80.0	78.0	98	2	30	45-129	
1,2,3-Trichloropropane	80.0	80.8	101	5	30	67-132	
1,2,3-Trimethylbenzene	80.0	65.0	81	2	30	70-130	
1,2,4-Trichlorobenzene	80.0	72.6	91	1	30	38-138	
1,2,4-Trimethylbenzene	80.0	76.5	96	0	30	67-124	
1,2-Dibromo-3-Chloropropane	80.0	78.9	99	3	30	32-139	
1,2-Dichlorobenzene	80.0	75.3	94	1	30	75-111	
1,2-Dichloroethane	80.0	80.8	101	1	30	68-129	
1,2-Dichloropropane	80.0	78.6	98	1	30	78-115	
1,3-Dichlorobenzene	80.0	76.8	96	2	30	73-110	
1,3-Dichloropropane	80.0	78.6	98	3	30	74-118	
1,4-Dichlorobenzene	80.0	74.1	93	2	30	75-110	
2,2-Dichloropropane	80.0	69.7	87	4	30	38-127	
2-Chloroethyl vinyl ether	80.0	80 U	0	NC	30	10-150	F
2-Chlorotoluene	80.0	76.6	96	3	30	69-117	
2-Hexanone	160	168	105	0	30	47-139	
Bromobenzene	80.0	76.7	96	1	30	71-116	
Bromochloromethane	80.0	77.2	97	5	30	73-121	
4-Chlorotoluene	80.0	76.7	96	1	30	71-116	
p-Isopropyltoluene	80.0	77.1	96	1	30	64-122	
Acetone	160	149	93	1	30	33-145	
Benzene	80.0	76.7	96	1	30	72-121	
Bromoform	80.0	75.5	94	1	30	32-128	
Bromomethane	80.0	63.7	80	12	30	10-186	
Carbon disulfide	80.0	74.3	93	2	30	57-147	
Carbon tetrachloride	80.0	73.8	84	3	30	59-129	
Chlorobenzene	80.0	75.4	94	0	30	80-110	
Chloroethane	80.0	63.5	79	1	30	21-165	
Chloroform	80.0	75.8	95	3	30	76-118	
Chloromethane	80.0	63.0	79	3	30	33-132	
cis-1,2-Dichloroethene	80.0	74.9	94	4	30	70-120	
cis-1,3-Dichloropropene	80.0	63.0	79	2	30	51-110	
Hexachlorobutadiene	80.0	61.8	77	4	30	27-132	
Dibromomethane	80.0	82.4	103	1	30	77-121	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM5769.D

Lab ID: 240-11065-F-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Bromodichloromethane	80.0	80.8	101	1	30	67-120	
Dichlorodifluoromethane	80.0	45.0	56	1	30	17-128	
Ethylbenzene	80.0	76.3	95	1	30	75-116	
1,2-Dibromoethane	80.0	82.4	103	1	30	74-113	
Diisopropyl ether	80.0	71.0 J	89	6	30	73-118	
Naphthalene	80.0	80.8	101	1	30	15-158	
m-Xylene & p-Xylene	160	153	96	2	30	75-117	
n-Butylbenzene	80.0	72.8	91	1	30	56-127	
Isopropylbenzene	80.0	75.2	94	2	30	68-116	
n-Propylbenzene	80.0	78.5	98	0	30	64-124	
2-Butanone	160	154	97	1	30	54-129	
4-Methyl-2-pentanone	160	165	103	0	30	56-131	
sec-Butylbenzene	80.0	72.4	91	1	30	60-119	
Methyl tert-butyl ether	80.0	74.4	93	3	30	46-144	
Methylene Chloride	80.0	73.4	92	3	30	63-128	
o-Xylene	80.0	77.4	97	0	30	76-116	
Styrene	80.0	79.1	99	0	30	71-117	
tert-Butylbenzene	80.0	76.2	95	2	30	61-119	
Tetrachloroethene	80.0	76.5	96	0	30	70-117	
Toluene	80.0	77.5	97	1	30	78-114	
trans-1,2-Dichloroethene	80.0	76.4	96	4	30	80-119	
trans-1,3-Dichloropropene	80.0	73.0	91	0	30	46-116	
Trichloroethene	80.0	243	84	2	30	66-120	
Trichlorofluoromethane	80.0	74.5	93	5	30	46-157	
Vinyl acetate	80.0	74.9	94	5	30	43-157	
Vinyl chloride	80.0	65.3	82	1	30	49-130	
tert-Butyl alcohol	1600	1660	104	1	30	70-130	
Xylenes, Total	240	230	96	1	30	76-116	
Dibromochloromethane	80.0	72.3	90	1	30	56-118	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: STD8260 240-43409/4 Date Analyzed: 05/09/2012 17:35

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): UXM5662.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1744720	5.70	1311107	8.39	771411	10.64
UPPER LIMIT		3489440	6.20	2622214	8.89	1542822	11.14
LOWER LIMIT		872360	5.20	655554	7.89	385706	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43409/8		1716805	5.70	1288543	8.39	755167	10.64
CCVIS 240-43549/2		1685929	5.70	1198706	8.39	696224	10.64
CCVIS 240-43737/2		1445219	5.70	1138123	8.39	647237	10.64
CCVIS 240-44226/2		1431152	5.70	1043947	8.39	623349	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCVIS 240-43549/2 Date Analyzed: 05/10/2012 10:53

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5692.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1685929	5.70	1198706	8.39	696224	10.64
UPPER LIMIT		3371858	6.20	2397412	8.89	1392448	11.14
LOWER LIMIT		842965	5.20	599353	7.89	348112	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-43549/3		1693016	5.70	1283426	8.39	677855	10.64
LCS 240-43549/4		1679901	5.70	1201426	8.39	713156	10.64
MB 240-43549/5		1644585	5.70	1222754	8.39	644299	10.64
240-10949-1	MSA-DMW6S-050312	1600848	5.70	1129571	8.39	608646	10.64
240-10949-2	MSA-DMW6I-050312	1620651	5.70	1181918	8.39	633805	10.64
240-10949-3	MSA-DMW6D-050312	1490455	5.70	1075584	8.39	603254	10.64
240-10837-D-5 MS		1587604	5.70	1149469	8.39	664336	10.64
240-10837-E-5 MSD		1579177	5.70	1228432	8.39	675357	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCVIS 240-43737/2 Date Analyzed: 05/11/2012 10:56

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): UXM5744.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1445219	5.70	1138123	8.39	647237	10.64
UPPER LIMIT		2890438	6.20	2276246	8.89	1294474	11.14
LOWER LIMIT		722610	5.20	569062	7.89	323619	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-43737/3		1506826	5.70	1088061	8.39	605848	10.64
LCS 240-43737/4		1527568	5.70	1076685	8.39	649449	10.64
MB 240-43737/5		1650525	5.70	1169906	8.39	658804	10.64
240-10949-4	MSA-DMW7S-050312	1485346	5.70	1082285	8.39	573985	10.64
240-10949-5	TB-050312	1670909	5.70	1254062	8.39	651050	10.64
240-10949-6	MSA-DMW4I-050312	1623448	5.70	1200354	8.39	636867	10.64
240-10949-7	MSA-DMW4D-050312	1541549	5.70	1163340	8.39	614049	10.64
240-10949-8	MSA-DMW4S-050312	1636624	5.70	1174531	8.39	605685	10.64
240-11065-E-2 MS		1630836	5.70	1171016	8.39	669621	10.64
240-11065-F-2 MSD		1702427	5.70	1225385	8.39	698223	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCVIS 240-44226/2 Date Analyzed: 05/16/2012 09:54

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5930.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1431152	5.70	1043947	8.39	623349	10.64
UPPER LIMIT		2862304	6.20	2087894	8.89	1246698	11.14
LOWER LIMIT		715576	5.20	521974	7.89	311675	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-44226/3		1530378	5.70	1038707	8.39	578888	10.64
LCS 240-44226/4		1499962	5.70	1071768	8.39	652380	10.64
MB 240-44226/6		1411308	5.70	1050405	8.39	560127	10.64
240-10949-9	MSA-DMW2A-050312	1479096	5.70	1053667	8.39	579480	10.64
240-10949-9 MS	MSA-DMW2A-050312 MS	1453774	5.70	1006051	8.39	624875	10.64
240-10949-9 MSD	MSA-DMW2A-050312 MSD	1445993	5.70	1016584	8.39	615571	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: 0510001.D DFTPP Injection Date: 05/10/2012

Instrument ID: A4AG2 DFTPP Injection Time: 09:03

Analysis Batch No.: 43482

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	35.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	37.8	
70	Less than 2.0% of mass 69	0.1	(0.3)1
127	25.0 - 75.0% of mass 198	50.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	27.0	
365	Greater than 0.75% of mass 198	3.5	
441	Present, but less than mass 443	14.7	
442	40.0 - 110.0% of mass 198	99.0	
443	15.0 - 24.0% of mass 442	18.7	(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-43482/2	0510002.D	05/10/2012	09:21
	STD8 240-43482/3	0510003.D	05/10/2012	09:38
	STD7 240-43482/4	0510004.D	05/10/2012	09:56
	STD6 240-43482/5	0510005.D	05/10/2012	10:14
	STD5 240-43482/6	0510006.D	05/10/2012	10:32
	STD4 240-43482/7	0510007.D	05/10/2012	10:49
	STD3 240-43482/8	0510008.D	05/10/2012	11:07
	STD2 240-43482/9	0510009.D	05/10/2012	11:25
	STD1 240-43482/10	0510010.D	05/10/2012	11:42
	ICV 240-43482/11	0510011.D	05/10/2012	12:00

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43482

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/10/2012 09:21 Calibration End Date: 05/10/2012 11:42 Calibration ID: 8622

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-43482/10	0510010.D
Level 2	STD2 240-43482/9	0510009.D
Level 3	STD3 240-43482/8	0510008.D
Level 4	STD4 240-43482/7	0510007.D
Level 5	STD5 240-43482/6	0510006.D
Level 6	STD6 240-43482/5	0510005.D
Level 7	STD7 240-43482/4	0510004.D
Level 8	STD8 240-43482/3	0510003.D
Level 9	STD9 240-43482/2	0510002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5394	0.5843 0.5364	0.5815 0.5650	0.5556 0.5247	0.5466	Ave		0.5542				3.9		15.0			
N-Nitrosodimethylamine	0.8697	0.8409 0.8725	0.9252 0.9166	0.9064 0.8550	0.9010	Ave		0.8859				3.5		15.0			
Pyridine	1.4648	1.0841 1.4833	1.3951 1.5485	1.3999 1.4647	1.4294	Ave		1.4087				9.9		15.0			
Ethyl methacrylate	1.1770	1.2330 1.1863	1.2939 1.2226	1.2500 1.1367	1.2310	Ave		1.2163				4.0		15.0			
3-Chloropropionitrile	0.7800	0.8044 0.7740	0.8440 0.8162	0.8361 0.7598	0.8152	Ave		0.8037				3.7		15.0			
Malononitrile	1.5421	1.6157 1.2971	1.7921 1.1383	1.7815 0.9252	1.7394	Qua	-0.096	1.9332	-0.040						1.0000		0.9900
Benzoic acid	0.2364	+++++ 0.2488	+++++ 0.2608	0.1283 0.2773	0.2010	Qua	-0.394	0.2298	0.0011						1.0000		0.9900
Phenol	1.8327	1.7310 1.8415	1.9160 1.9281	1.8892 1.8161	1.8630	Ave		1.8522				3.4		15.0			
Benzaldehyde	1.3383 0.7698	1.3111	1.3080	1.2437	1.1726	Ave		1.1906				18.0	*	15.0			
Aniline	2.3929	1.9559 2.6427	2.3562 2.7008	2.2966 2.4211	2.5021	Ave		2.4085				9.5		15.0			
Bis(2-chloroethyl)ether	1.5035	1.7535 1.3749	1.7166 1.4856	1.6910 1.4499	1.4647	Ave		1.5550				9.2		15.0			
2-Chlorophenol	1.5290	1.3908 1.5415	1.5628 1.6021	1.5457 1.4942	1.5384	Ave		1.5256				4.1		15.0			
1,3-Dichlorobenzene	1.5515	1.5902 1.5713	1.6245 1.6422	1.6097 1.5147	1.5826	Ave		1.5859				2.6		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-43482/11 Calibration Date: 05/10/2012 12:00

Instrument ID: A4AG2 Calib Start Date: 05/10/2012 09:21

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/10/2012 11:42

Lab File ID: 0510011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5542	0.5311		9.58	10.0	-4.2	50.0
N-Nitrosodimethylamine	Ave	0.8859	0.9007		10.2	10.0	1.7	50.0
Pyridine	Ave	1.409	1.471		10.4	10.0	4.4	50.0
Ethyl methacrylate	Ave	1.216	1.214		9.98	10.0	-0.2	50.0
3-Chloropropionitrile	Ave	0.8037	0.8206		10.2	10.0	2.1	50.0
Malononitrile	Qua		1.598		10.7	10.0	7.0	50.0
Benzaldehyde	Ave	1.191	0.6839		5.74	10.0	-42.6	50.0
Phenol	Ave	1.852	1.865		10.1	10.0	0.7	20.0
Aniline	Ave	2.409	2.339		9.71	10.0	-2.9	50.0
Bis(2-chloroethyl)ether	Ave	1.555	1.676		10.8	10.0	7.8	50.0
2-Chlorophenol	Ave	1.526	1.547		10.1	10.0	1.4	50.0
1,3-Dichlorobenzene	Ave	1.586	1.570		9.90	10.0	-1.0	50.0
1,4-Dichlorobenzene	Ave	1.642	1.617		9.85	10.0	-1.5	20.0
Benzyl alcohol	Ave	0.9268	0.9651		10.4	10.0	4.1	50.0
1,2-Dichlorobenzene	Ave	1.515	1.497		9.88	10.0	-1.2	50.0
2-Methylphenol	Ave	1.376	1.398		10.2	10.0	1.6	50.0
bis (2-chloroisopropyl) ether	Ave	1.942	1.945		10.0	10.0	0.1	50.0
3 & 4 Methylphenol	Ave	1.420	1.476		10.4	10.0	4.0	50.0
N-Nitrosodi-n-propylamine	Ave	1.064	1.112	0.0500	10.5	10.0	4.5	50.0
Acetophenone	Ave	2.006	2.045		10.2	10.0	1.9	50.0
Hexachloroethane	Ave	0.5848	0.5848		10.0	10.0	0.0	50.0
Nitrobenzene	Ave	0.3746	0.3740		9.98	10.0	-0.2	50.0
Isophorone	Ave	0.6824	0.7006		10.3	10.0	2.7	50.0
2,4-Dimethylphenol	Ave	0.3651	0.3726		10.2	10.0	2.1	50.0
2-Nitrophenol	Qua		0.2023		9.61	10.0	-3.9	20.0
1,3,5-Trichlorobenzene	Ave	0.3040	0.3004		9.88	10.0	-1.2	50.0
Bis(2-chloroethoxy)methane	Ave	0.4078	0.4151		10.2	10.0	1.8	50.0
Benzoic acid	Qua		0.2344		20.2	20.0	1.0	50.0
2,4-Dichlorophenol	Qua		0.2795		9.76	10.0	-2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.2985	0.2912		9.76	10.0	-2.4	50.0
Naphthalene	Ave	1.132	1.097		9.69	10.0	-3.1	50.0
4-Chloroaniline	Ave	0.4598	0.4686		10.2	10.0	1.9	50.0
Hexachlorobutadiene	Ave	0.1420	0.1418		9.98	10.0	-0.2	20.0
1,2,3-Trichlorobenzene	Ave	0.2776	0.2773		9.99	10.0	-0.1	50.0
Caprolactam	Ave	0.1215	0.1281		10.5	10.0	5.4	50.0
4-Chloro-3-methylphenol	Qua		0.3220		9.95	10.0	-0.5	20.0
2-Methylnaphthalene	Ave	0.7252	0.7174		9.89	10.0	-1.1	50.0
1-Methylnaphthalene	Ave	0.6893	0.6825		9.90	10.0	-1.0	50.0
Hexachlorocyclopentadiene	Ave	0.2853	0.3002	0.0500	10.5	10.0	5.2	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4792	0.4725		9.86	10.0	-1.4	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: 0511001.D DFTPP Injection Date: 05/11/2012

Instrument ID: A4AG2 DFTPP Injection Time: 07:16

Analysis Batch No.: 43638

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	40.2	
68	Less than 2.0% of mass 69	0.4	(0.9)1
69	Mass 69 relative abundance	42.1	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	53.5	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	25.5	
365	Greater than 0.75% of mass 198	3.4	
441	Present, but less than mass 443	12.4	
442	40.0 - 110.0% of mass 198	82.7	
443	15.0 - 24.0% of mass 442	15.8	(19.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43638/2	0511002.D	05/11/2012	07:34
	LCS 240-43293/22-A	0511007.D	05/11/2012	09:02
MSA-DMW6S-050312	240-10949-1	0511022.D	05/11/2012	13:45
MSA-DMW6I-050312	240-10949-2	0511032.D	05/11/2012	16:43
MSA-DMW6D-050312	240-10949-3	0511033.D	05/11/2012	17:01
MSA-DMW7S-050312	240-10949-4	0511034.D	05/11/2012	17:18
MSA-DMW4D-050312	240-10949-7	0511036.D	05/11/2012	17:54
MSA-DMW4S-050312	240-10949-8	0511037.D	05/11/2012	18:12

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43638/2 Calibration Date: 05/11/2012 07:34

Instrument ID: A4AG2 Calib Start Date: 05/10/2012 09:21

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/10/2012 11:42

Lab File ID: 0511002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5542	0.5605		10.1	10.0	1.1	50.0
N-Nitrosodimethylamine	Ave	0.8859	0.9090		10.3	10.0	2.6	50.0
Pyridine	Ave	1.409	1.512		10.7	10.0	7.3	50.0
Ethyl methacrylate	Ave	1.216	1.266		10.4	10.0	4.1	50.0
3-Chloropropionitrile	Ave	0.8037	0.8423		10.5	10.0	4.8	50.0
Malononitrile	Qua		1.649		11.2	10.0	12.0	50.0
Benzaldehyde	Ave	1.191	0.7010		5.89	10.0	-41.1	50.0
Phenol	Ave	1.852	1.890		10.2	10.0	2.0	20.0
Aniline	Ave	2.409	2.270		9.42	10.0	-5.8	50.0
Bis(2-chloroethyl)ether	Ave	1.555	1.677		10.8	10.0	7.8	50.0
2-Chlorophenol	Ave	1.526	1.542		10.1	10.0	1.1	50.0
1,3-Dichlorobenzene	Ave	1.586	1.574		9.92	10.0	-0.8	50.0
1,4-Dichlorobenzene	Ave	1.642	1.614		9.83	10.0	-1.7	50.0
Benzyl alcohol	Ave	0.9268	0.9479		10.2	10.0	2.3	50.0
1,2-Dichlorobenzene	Ave	1.515	1.496		9.88	10.0	-1.2	50.0
2-Methylphenol	Ave	1.376	1.392		10.1	10.0	1.2	50.0
bis (2-chloroisopropyl) ether	Ave	1.942	2.014		10.4	10.0	3.7	50.0
3 & 4 Methylphenol	Ave	1.420	1.464		10.3	10.0	3.1	50.0
N-Nitrosodi-n-propylamine	Ave	1.064	1.114	0.0500	10.5	10.0	4.7	50.0
Acetophenone	Ave	2.006	2.039		10.2	10.0	1.7	50.0
Hexachloroethane	Ave	0.5848	0.5949		10.2	10.0	1.7	50.0
Nitrobenzene	Ave	0.3746	0.3839		10.2	10.0	2.5	50.0
Isophorone	Ave	0.6824	0.6967		10.2	10.0	2.1	50.0
2,4-Dimethylphenol	Ave	0.3651	0.3751		10.3	10.0	2.8	50.0
2-Nitrophenol	Qua		0.2001		9.50	10.0	-5.0	20.0
1,3,5-Trichlorobenzene	Ave	0.3040	0.2982		9.81	10.0	-1.9	50.0
Benzoic acid	Qua		0.2002		17.7	20.0	-11.5	50.0
Bis(2-chloroethoxy)methane	Ave	0.4078	0.4166		10.2	10.0	2.2	50.0
2,4-Dichlorophenol	Qua		0.2781		9.72	10.0	-2.8	20.0
1,2,4-Trichlorobenzene	Ave	0.2985	0.2899		9.71	10.0	-2.9	50.0
Naphthalene	Ave	1.132	1.097		9.69	10.0	-3.1	50.0
4-Chloroaniline	Ave	0.4598	0.4844		10.5	10.0	5.3	50.0
Hexachlorobutadiene	Ave	0.1420	0.1374		9.68	10.0	-3.2	20.0
1,2,3-Trichlorobenzene	Ave	0.2776	0.2719		9.79	10.0	-2.1	50.0
Caprolactam	Ave	0.1215	0.1193		9.82	10.0	-1.8	50.0
4-Chloro-3-methylphenol	Qua		0.3203		9.90	10.0	-1.0	20.0
2-Methylnaphthalene	Ave	0.7252	0.7124		9.82	10.0	-1.8	50.0
1-Methylnaphthalene	Ave	0.6893	0.6745		9.78	10.0	-2.2	50.0
Hexachlorocyclopentadiene	Ave	0.2853	0.2827	0.0500	9.91	10.0	-0.9	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4792	0.4637		9.68	10.0	-3.2	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: 0513001.D DFTPP Injection Date: 05/13/2012

Instrument ID: A4AG2 DFTPP Injection Time: 06:50

Analysis Batch No.: 43845

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	38.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	42.1	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	54.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	25.5	
365	Greater than 0.75% of mass 198	3.4	
441	Present, but less than mass 443	12.1	
442	40.0 - 110.0% of mass 198	80.8	
443	15.0 - 24.0% of mass 442	15.3	(19.0)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-43845/2	0513002.D	05/13/2012	07:08
MSA-DMW4I-050312	240-10949-6	0513020.D	05/13/2012	12:25
MSA-DMW2A-050312	240-10949-9	0513021.D	05/13/2012	12:43

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43845/2 Calibration Date: 05/13/2012 07:08

Instrument ID: A4AG2 Calib Start Date: 05/10/2012 09:21

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/10/2012 11:42

Lab File ID: 0513002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5542	0.5101		9.20	10.0	-8.0	50.0
N-Nitrosodimethylamine	Ave	0.8859	0.8578		9.68	10.0	-3.2	50.0
Pyridine	Ave	1.409	1.472		10.5	10.0	4.5	50.0
Ethyl methacrylate	Ave	1.216	1.159		9.53	10.0	-4.7	50.0
3-Chloropropionitrile	Ave	0.8037	0.7996		9.95	10.0	-0.5	50.0
Malononitrile	Qua		1.592		10.6	10.0	6.0	50.0
Benzaldehyde	Ave	1.191	0.8583		7.21	10.0	-27.9	50.0
Phenol	Ave	1.852	1.888		10.2	10.0	1.9	20.0
Aniline	Ave	2.409	2.323		9.65	10.0	-3.5	50.0
Bis(2-chloroethyl)ether	Ave	1.555	1.546		9.94	10.0	-0.6	50.0
2-Chlorophenol	Ave	1.526	1.551		10.2	10.0	1.7	50.0
1,3-Dichlorobenzene	Ave	1.586	1.544		9.74	10.0	-2.6	50.0
1,4-Dichlorobenzene	Ave	1.642	1.591		9.69	10.0	-3.1	50.0
Benzyl alcohol	Ave	0.9268	0.9764		10.5	10.0	5.3	50.0
1,2-Dichlorobenzene	Ave	1.515	1.489		9.83	10.0	-1.7	50.0
2-Methylphenol	Ave	1.376	1.451		10.5	10.0	5.5	50.0
bis (2-chloroisopropyl) ether	Ave	1.942	1.894		9.75	10.0	-2.5	50.0
3 & 4 Methylphenol	Ave	1.420	1.502		10.6	10.0	5.8	50.0
N-Nitrosodi-n-propylamine	Ave	1.064	1.094	0.0500	10.3	10.0	2.8	50.0
Acetophenone	Ave	2.006	2.061		10.3	10.0	2.7	50.0
Hexachloroethane	Ave	0.5848	0.5991		10.2	10.0	2.4	50.0
Nitrobenzene	Ave	0.3746	0.3806		10.2	10.0	1.6	50.0
Isophorone	Ave	0.6824	0.6977		10.2	10.0	2.2	50.0
2,4-Dimethylphenol	Ave	0.3651	0.3787		10.4	10.0	3.7	50.0
2-Nitrophenol	Qua		0.2039		9.68	10.0	-3.2	20.0
1,3,5-Trichlorobenzene	Ave	0.3040	0.2983		9.81	10.0	-1.9	50.0
Bis(2-chloroethoxy)methane	Ave	0.4078	0.4208		10.3	10.0	3.2	50.0
Benzoic acid	Qua		0.2486		21.2	20.0	6.0	50.0
2,4-Dichlorophenol	Qua		0.2776		9.70	10.0	-3.0	20.0
1,2,4-Trichlorobenzene	Ave	0.2985	0.2873		9.63	10.0	-3.7	50.0
Naphthalene	Ave	1.132	1.094		9.66	10.0	-3.4	50.0
4-Chloroaniline	Ave	0.4598	0.4693		10.2	10.0	2.1	50.0
Hexachlorobutadiene	Ave	0.1420	0.1388		9.78	10.0	-2.2	20.0
1,2,3-Trichlorobenzene	Ave	0.2776	0.2716		9.78	10.0	-2.2	50.0
Caprolactam	Ave	0.1215	0.1293		10.6	10.0	6.4	50.0
4-Chloro-3-methylphenol	Qua		0.3357		10.4	10.0	4.0	20.0
2-Methylnaphthalene	Ave	0.7252	0.7196		9.92	10.0	-0.8	50.0
1-Methylnaphthalene	Ave	0.6893	0.6833		9.91	10.0	-0.9	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4792	0.4585		9.57	10.0	-4.3	50.0
Hexachlorocyclopentadiene	Ave	0.2853	0.2787	0.0500	9.77	10.0	-2.3	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: 0515001.D DFTPP Injection Date: 05/15/2012

Instrument ID: A4AG2 DFTPP Injection Time: 11:52

Analysis Batch No.: 44095

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	43.3	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	45.8	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	57.9	
197	Less than 1.0% of mass 198	0.2	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.7	
275	10.0- 30.0% of mass 198	25.4	
365	Greater than 0.75% of mass 198	3.8	
441	Present, but less than mass 443	11.7	
442	40.0 - 110.0% of mass 198	78.5	
443	15.0 - 24.0% of mass 442	15.1	(19.2)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-44095/2	0515002.D	05/15/2012	12:10
	STD8 240-44095/3	0515003.D	05/15/2012	12:28
	STD7 240-44095/4	0515004.D	05/15/2012	12:45
	STD6 240-44095/5	0515005.D	05/15/2012	13:03
	STD5 240-44095/6	0515006.D	05/15/2012	13:21
	STD4 240-44095/7	0515007.D	05/15/2012	13:38
	STD3 240-44095/8	0515008.D	05/15/2012	13:56
	STD2 240-44095/9	0515009.D	05/15/2012	14:14
	STD1 240-44095/10	0515010.D	05/15/2012	14:32
	ICV 240-44095/11	0515011.D	05/15/2012	14:49
	ICV 240-44095/21	0515021.D	05/15/2012	17:46
	MB 240-43293/21-A	0515022.D	05/15/2012	18:04

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 44095

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/15/2012 12:10 Calibration End Date: 05/15/2012 14:32 Calibration ID: 8713

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-44095/10	0515010.D
Level 2	STD2 240-44095/9	0515009.D
Level 3	STD3 240-44095/8	0515008.D
Level 4	STD4 240-44095/7	0515007.D
Level 5	STD5 240-44095/6	0515006.D
Level 6	STD6 240-44095/5	0515005.D
Level 7	STD7 240-44095/4	0515004.D
Level 8	STD8 240-44095/3	0515003.D
Level 9	STD9 240-44095/2	0515002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5744	0.5828 0.5680	0.5747 0.5831	0.6150 0.5358	0.5519	Ave		0.5732				4.1		15.0			
N-Nitrosodimethylamine	0.9288	0.9627 0.9200	0.9366 0.9512	0.9676 0.8749	0.9390	Ave		0.9351				3.1		15.0			
Pyridine	1.5650	1.0304 1.5673	1.1266 1.6307	1.4840 1.4855	1.4923	Ave		1.4227				15.0		15.0			
Ethyl methacrylate	1.2987	1.3171 1.2804	1.3332 1.3158	1.4153 1.1965	1.3080	Ave		1.3081				4.6		15.0			
3-Chloropropionitrile	0.8620	0.9260 0.8578	0.8862 0.8728	0.9383 0.8018	0.8741	Ave		0.8774				4.8		15.0			
Malononitrile	1.6211	1.6255 1.3528	1.8031 1.1581	1.8813 0.9313	1.7925	Qua	-0.186	2.0599	-0.045						1.0000		0.9900
Benzoic acid	0.2417	+++++ 0.2587	+++++ 0.2748	0.1015 0.2821	0.2206	Qua	-0.580	0.2593	0.0007						1.0000		0.9900
Phenol	1.9356	1.7624 1.9416	1.8677 2.0105	1.9952 1.8377	1.9381	Ave		1.9111				4.4		15.0			
Benzaldehyde	1.4182 0.8032	1.3429	1.3618	1.3905	1.2334	Ave		1.2583				18.0	*	15.0			
Aniline	2.3984	1.7056 2.6398	2.1233 2.6445	2.3469 2.3775	2.4531	Ave		2.3361				13.0		15.0			
Bis(2-chloroethyl)ether	1.6074	1.7974 1.4532	1.7578 1.5736	1.8823 1.4905	1.5281	Ave		1.6363				9.6		15.0			
2-Chlorophenol	1.5623	1.4161 1.5717	1.5031 1.6463	1.5836 1.5003	1.5575	Ave		1.5426				4.5		15.0			
1,3-Dichlorobenzene	1.5652	1.5673 1.5797	1.5747 1.6440	1.6602 1.4977	1.5595	Ave		1.5811				3.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-44095/11 Calibration Date: 05/15/2012 14:49

Instrument ID: A4AG2 Calib Start Date: 05/15/2012 12:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/15/2012 14:32

Lab File ID: 0515011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5732	0.5828		10.2	10.0	1.7	50.0
N-Nitrosodimethylamine	Ave	0.9351	0.9673		10.3	10.0	3.4	50.0
Pyridine	Ave	1.423	1.540		10.8	10.0	8.2	50.0
Ethyl methacrylate	Ave	1.308	1.335		10.2	10.0	2.0	50.0
3-Chloropropionitrile	Ave	0.8774	0.9022		10.3	10.0	2.8	50.0
Malononitrile	Qua		1.666		10.6	10.0	6.0	50.0
Benzaldehyde	Ave	1.258	0.7293		5.80	10.0	-42.0	50.0
Phenol	Ave	1.911	1.979		10.4	10.0	3.6	20.0
Aniline	Ave	2.336	2.400		10.3	10.0	2.7	50.0
Bis(2-chloroethyl)ether	Ave	1.636	1.711		10.5	10.0	4.5	50.0
2-Chlorophenol	Ave	1.543	1.584		10.3	10.0	2.7	50.0
1,3-Dichlorobenzene	Ave	1.581	1.589		10.1	10.0	0.5	50.0
1,4-Dichlorobenzene	Ave	1.631	1.643		10.1	10.0	0.8	20.0
Benzyl alcohol	Ave	0.9291	0.9900		10.7	10.0	6.6	50.0
1,2-Dichlorobenzene	Ave	1.523	1.560		10.2	10.0	2.5	50.0
2-Methylphenol	Ave	1.434	1.489		10.4	10.0	3.9	50.0
bis (2-chloroisopropyl) ether	Ave	2.102	2.146		10.2	10.0	2.1	50.0
3 & 4 Methylphenol	Ave	1.447	1.518		10.5	10.0	4.9	50.0
N-Nitrosodi-n-propylamine	Ave	1.139	1.192	0.0500	10.5	10.0	4.6	50.0
Acetophenone	Ave	2.083	2.142		10.3	10.0	2.8	50.0
Hexachloroethane	Ave	0.6172	0.6261		10.1	10.0	1.4	50.0
Nitrobenzene	Ave	0.4065	0.4059		9.99	10.0	-0.1	50.0
Isophorone	Ave	0.7367	0.7442		10.1	10.0	1.0	50.0
2,4-Dimethylphenol	Ave	0.3884	0.3961		10.2	10.0	2.0	50.0
2-Nitrophenol	Ave	0.1972	0.2066		10.5	10.0	4.7	20.0
1,3,5-Trichlorobenzene	Ave	0.2991	0.2952		9.87	10.0	-1.3	50.0
Bis(2-chloroethoxy)methane	Ave	0.4311	0.4350		10.1	10.0	0.9	50.0
Benzoic acid	Qua		0.2131		17.8	20.0	-11.0	50.0
2,4-Dichlorophenol	Ave	0.2665	0.2711		10.2	10.0	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.2923	0.2861		9.79	10.0	-2.1	50.0
Naphthalene	Ave	1.146	1.120		9.77	10.0	-2.3	50.0
4-Chloroaniline	Ave	0.4580	0.4794		10.5	10.0	4.7	50.0
Hexachlorobutadiene	Ave	0.1378	0.1373		9.96	10.0	-0.4	20.0
1,2,3-Trichlorobenzene	Ave	0.2725	0.2702		9.92	10.0	-0.8	50.0
Caprolactam	Qua		0.1283		9.59	10.0	-4.1	50.0
4-Chloro-3-methylphenol	Ave	0.3289	0.3471		10.6	10.0	5.5	20.0
2-Methylnaphthalene	Ave	0.7304	0.7299		10.0	10.0	-0.0	50.0
1-Methylnaphthalene	Ave	0.6927	0.6903		9.96	10.0	-0.4	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4679	0.4707		10.1	10.0	0.6	50.0
Hexachlorocyclopentadiene	Ave	0.2876	0.3013	0.0500	10.5	10.0	4.7	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: 0515022.D Lab Sample ID: MB 240-43293/21-A

Matrix: Water Date Extracted: 05/09/2012 08:35

Instrument ID: A4AG2 Date Analyzed: 05/15/2012 18:04

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-43293/22-A	0511007.D	05/11/2012 09:02
MSA-DMW6S-050312	240-10949-1	0511022.D	05/11/2012 13:45
MSA-DMW6I-050312	240-10949-2	0511032.D	05/11/2012 16:43
MSA-DMW6D-050312	240-10949-3	0511033.D	05/11/2012 17:01
MSA-DMW7S-050312	240-10949-4	0511034.D	05/11/2012 17:18
MSA-DMW4D-050312	240-10949-7	0511036.D	05/11/2012 17:54
MSA-DMW4S-050312	240-10949-8	0511037.D	05/11/2012 18:12
MSA-DMW4I-050312	240-10949-6	0513020.D	05/13/2012 12:25
MSA-DMW2A-050312	240-10949-9	0513021.D	05/13/2012 12:43

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43293/21-A

Matrix: Water | Lab File ID: 0515022.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1000(mL) | Date Analyzed: 05/15/2012 18:04

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44095 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	65		28-110
367-12-4	2-Fluorophenol (Surr)	67		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	45		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	66		27-111
4165-62-2	Phenol-d5 (Surr)	67		10-110
1718-51-0	Terphenyl-d14 (Surr)	82		37-119

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: 0516001.D DFTPP Injection Date: 05/16/2012

Instrument ID: A4AG2 DFTPP Injection Time: 08:18

Analysis Batch No.: 44186

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	45.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	47.3	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	59.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	24.6	
365	Greater than 0.75% of mass 198	3.6	
441	Present, but less than mass 443	10.8	
442	40.0 - 110.0% of mass 198	72.2	
443	15.0 - 24.0% of mass 442	14.0	(19.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-44186/2	0516002.D	05/16/2012	08:36
	MB 240-43872/22-A	0516006.D	05/16/2012	09:47
	LCS 240-43872/23-A	0516007.D	05/16/2012	10:04
MSA-DMW6S-050312 RE	240-10949-1 RE	0516008.D	05/16/2012	10:22
	240-11101-T-10-A MS	0516036.D	05/16/2012	18:38
	240-11101-W-10-A MSD	0516037.D	05/16/2012	18:55
MSA-DMW4I-050312 RE	240-10949-6 RE	0516040.D	05/16/2012	19:49

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-44186/2 Calibration Date: 05/16/2012 08:36

Instrument ID: A4AG2 Calib Start Date: 05/15/2012 12:10

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/15/2012 14:32

Lab File ID: 0516002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5732	0.5745		10.0	10.0	0.2	50.0
N-Nitrosodimethylamine	Ave	0.9351	0.9548		10.2	10.0	2.1	50.0
Pyridine	Ave	1.423	1.594		11.2	10.0	12.1	50.0
Ethyl methacrylate	Ave	1.308	1.337		10.2	10.0	2.2	50.0
3-Chloropropionitrile	Ave	0.8774	0.9044		10.3	10.0	3.1	50.0
Malononitrile	Qua		1.682		10.8	10.0	8.0	50.0
Benzaldehyde	Ave	1.258	0.8100		6.44	10.0	-35.6	50.0
Phenol	Ave	1.911	2.026		10.6	10.0	6.0	20.0
Aniline	Ave	2.336	2.423		10.4	10.0	3.7	50.0
Bis(2-chloroethyl)ether	Ave	1.636	1.735		10.6	10.0	6.1	50.0
2-Chlorophenol	Ave	1.543	1.599		10.4	10.0	3.6	50.0
1,3-Dichlorobenzene	Ave	1.581	1.626		10.3	10.0	2.9	50.0
1,4-Dichlorobenzene	Ave	1.631	1.665		10.2	10.0	2.1	50.0
Benzyl alcohol	Ave	0.9291	0.9624		10.4	10.0	3.6	50.0
1,2-Dichlorobenzene	Ave	1.523	1.583		10.4	10.0	4.0	50.0
2-Methylphenol	Ave	1.434	1.503		10.5	10.0	4.9	50.0
bis (2-chloroisopropyl) ether	Ave	2.102	2.211		10.5	10.0	5.2	50.0
3 & 4 Methylphenol	Ave	1.447	1.547		10.7	10.0	6.9	50.0
N-Nitrosodi-n-propylamine	Ave	1.139	1.213	0.0500	10.6	10.0	6.5	50.0
Acetophenone	Ave	2.083	2.209		10.6	10.0	6.0	50.0
Hexachloroethane	Ave	0.6172	0.6467		10.5	10.0	4.8	50.0
Nitrobenzene	Ave	0.4065	0.4093		10.1	10.0	0.7	50.0
Isophorone	Ave	0.7367	0.7456		10.1	10.0	1.2	50.0
2,4-Dimethylphenol	Ave	0.3884	0.3799		9.78	10.0	-2.2	50.0
2-Nitrophenol	Ave	0.1972	0.2082		10.6	10.0	5.5	20.0
1,3,5-Trichlorobenzene	Ave	0.2991	0.2940		9.83	10.0	-1.7	50.0
Benzoic acid	Qua		0.1986		16.8	20.0	-16.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4311	0.4357		10.1	10.0	1.1	50.0
2,4-Dichlorophenol	Ave	0.2665	0.2682		10.1	10.0	0.6	20.0
1,2,4-Trichlorobenzene	Ave	0.2923	0.2839		9.71	10.0	-2.9	50.0
Naphthalene	Ave	1.146	1.135		9.90	10.0	-1.0	50.0
4-Chloroaniline	Ave	0.4580	0.4816		10.5	10.0	5.1	50.0
Hexachlorobutadiene	Ave	0.1378	0.1373		9.97	10.0	-0.3	20.0
1,2,3-Trichlorobenzene	Ave	0.2725	0.2688		9.86	10.0	-1.4	50.0
Caprolactam	Qua		0.1292		9.66	10.0	-3.4	50.0
4-Chloro-3-methylphenol	Ave	0.3289	0.3344		10.2	10.0	1.7	20.0
2-Methylnaphthalene	Ave	0.7304	0.7285		9.97	10.0	-0.3	50.0
1-Methylnaphthalene	Ave	0.6927	0.6898		9.96	10.0	-0.4	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.4679	0.4542		9.71	10.0	-2.9	50.0
Hexachlorocyclopentadiene	Ave	0.2876	0.2440	0.0500	8.48	10.0	-15.2	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab File ID: 0516006.D Lab Sample ID: MB 240-43872/22-A

Matrix: Water Date Extracted: 05/14/2012 07:44

Instrument ID: A4AG2 Date Analyzed: 05/16/2012 09:47

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-43872/23-A	0516007.D	05/16/2012 10:04
MSA-DMW6S-050312 RE	240-10949-1 RE	0516008.D	05/16/2012 10:22
	240-11101-T-10-A MS	0516036.D	05/16/2012 18:38
	240-11101-W-10-A MSD	0516037.D	05/16/2012 18:55
MSA-DMW4I-050312 RE	240-10949-6 RE	0516040.D	05/16/2012 19:49

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43872/22-A

Matrix: Water | Lab File ID: 0516006.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/14/2012 07:44

Sample wt/vol: 1000(mL) | Date Analyzed: 05/16/2012 09:47

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44186 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	55		28-110
367-12-4	2-Fluorophenol (Surr)	60		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	29		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	56		27-111
4165-62-2	Phenol-d5 (Surr)	62		10-110
1718-51-0	Terphenyl-d14 (Surr)	65		37-119

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MSA-DMW6S-050312	240-10949-1	13	13	11 X	12 X	14 X	13 X
MSA-DMW6S-050312 RE	240-10949-1 RE	42	35	49	52	59	63
MSA-DMW6I-050312	240-10949-2	57	55	55	53	53	64
MSA-DMW6D-050312	240-10949-3	48	46	45	43	40	52
MSA-DMW7S-050312	240-10949-4	55	51	50	50	55	57
MSA-DMW4I-050312	240-10949-6	30	31	28	29	30	33 X
MSA-DMW4I-050312 RE	240-10949-6 RE	56	36	42	31	43	44
MSA-DMW4D-050312	240-10949-7	56	55	53	51	51	58
MSA-DMW4S-050312	240-10949-8	44	44	42	42	45	54
MSA-DMW2A-050312	240-10949-9	50	55	50	54	69	59
	MB 240-43293/21-A	67	67	66	65	45	82
	MB 240-43872/22-A	60	62	56	55	29	65
	LCS 240-43293/22-A	73	74	69	65	60	72
	LCS 240-43872/23-A	74	77	74	66	56	75
	240-11101-T-10-A MS	65	63	59	55	52	62
	240-11101-W-10-A MSD	67	66	63	60	53	65

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0511007.D

Lab ID: LCS 240-43293/22-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.9	65	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0516007.D

Lab ID: LCS 240-43872/23-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.9	65	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0516036.D

Lab ID: 240-11101-T-10-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.0	41	54.3	72	10-110	E

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0516037.D

Lab ID: 240-11101-W-10-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	58.7	95	8	30	10-110	E

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: STD6 240-43482/5 Date Analyzed: 05/10/2012 10:14

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0510005.D Heated Purge: (Y/N) N

Calibration ID: 8622

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		236852	3.67	964869	4.57	536410	5.84
UPPER LIMIT		473704	4.17	1929738	5.07	1072820	6.34
LOWER LIMIT		118426	3.17	482435	4.07	268205	5.34
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43482/11		284077	3.67	1183702	4.57	673354	5.84
CCV 240-43638/2 CCVIS		197728	3.63	815983	4.52	452236	5.79
CCV 240-43845/2 CCVIS		178640	3.57	735885	4.47	410138	5.74

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: STD6 240-43482/5 Date Analyzed: 05/10/2012 10:14

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0510005.D Heated Purge: (Y/N) N

Calibration ID: 8622

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		852309	6.93	773125	8.92	684061	10.48
UPPER LIMIT		1704618	7.43	1546250	9.42	1368122	10.98
LOWER LIMIT		426155	6.43	386563	8.42	342031	9.98
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43482/11		1077607	6.94	985734	8.93	877157	10.48
CCV 240-43638/2 CCVIS		705757	6.88	624421	8.86	546178	10.36
CCV 240-43845/2 CCVIS		647880	6.83	565927	8.80	503156	10.28

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCV 240-43638/2 Date Analyzed: 05/11/2012 07:34

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0511002.D Heated Purge: (Y/N) N

Calibration ID: 8626

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		197728	3.63	815983	4.52	452236	5.79
UPPER LIMIT		395456	4.13	1631966	5.02	904472	6.29
LOWER LIMIT		98864	3.13	407992	4.02	226118	5.29
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-43293/22-A		201259	3.63	859591	4.52	498600	5.79
240-10949-1	MSA-DMW6S-050312	192085	3.63	863531	4.53	536527	5.80
240-10949-2	MSA-DMW6I-050312	136779	3.63	592545	4.53	370400	5.80
240-10949-3	MSA-DMW6D-050312	203616	3.63	897443	4.53	553818	5.80
240-10949-4	MSA-DMW7S-050312	166421	3.63	734785	4.53	468565	5.80
240-10949-7	MSA-DMW4D-050312	206172	3.63	885789	4.53	551254	5.80
240-10949-8	MSA-DMW4S-050312	201425	3.63	877751	4.53	543240	5.80

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCV 240-43638/2 Date Analyzed: 05/11/2012 07:34

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0511002.D Heated Purge: (Y/N) N

Calibration ID: 8626

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		705757	6.88	624421	8.86	546178	10.36
UPPER LIMIT		1411514	7.38	1248842	9.36	1092356	10.86
LOWER LIMIT		352879	6.38	312211	8.36	273089	9.86
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-43293/22-A		809868	6.88	724124	8.86	631514	10.37
240-10949-1	MSA-DMW6S-050312	926626	6.89	854537	8.87	804456	10.41
240-10949-2	MSA-DMW6I-050312	628580	6.89	591580	8.88	570071	10.43
240-10949-3	MSA-DMW6D-050312	942584	6.90	863666	8.88	823865	10.43
240-10949-4	MSA-DMW7S-050312	771464	6.89	729409	8.88	688355	10.43
240-10949-7	MSA-DMW4D-050312	913970	6.89	860950	8.88	796044	10.43
240-10949-8	MSA-DMW4S-050312	903280	6.89	843148	8.88	791551	10.42

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCV 240-43845/2 Date Analyzed: 05/13/2012 07:08

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0513002.D Heated Purge: (Y/N) N

Calibration ID: 8626

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		178640	3.57	735885	4.47	410138	5.74
UPPER LIMIT		357280	4.07	1471770	4.97	820276	6.24
LOWER LIMIT		89320	3.07	367943	3.97	205069	5.24
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-10949-6	MSA-DMW4I-050312	193923	3.57	810151	4.47	455313	5.74
240-10949-9	MSA-DMW2A-050312	225290	3.57	936986	4.47	523776	5.74

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCV 240-43845/2 Date Analyzed: 05/13/2012 07:08

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0513002.D Heated Purge: (Y/N) N

Calibration ID: 8626

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		647880	6.83	565927	8.80	503156	10.28
UPPER LIMIT		1295760	7.33	1131854	9.30	1006312	10.78
LOWER LIMIT		323940	6.33	282964	8.30	251578	9.78
LAB SAMPLE ID	CLIENT SAMPLE ID						
240-10949-6	MSA-DMW4I-050312	724574	6.83	641361	8.80	602533	10.29
240-10949-9	MSA-DMW2A-050312	826110	6.83	705327	8.80	678076	10.30

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: STD6 240-44095/5 Date Analyzed: 05/15/2012 13:03

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0515005.D Heated Purge: (Y/N) N

Calibration ID: 8713

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		170690	3.67	696968	4.56	378402	5.83
UPPER LIMIT		341380	4.17	1393936	5.06	756804	6.33
LOWER LIMIT		85345	3.17	348484	4.06	189201	5.33
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-44095/11		189404	3.67	797002	4.56	441563	5.83
ICV 240-44095/21		200788	3.66	832717	4.56	466086	5.83
MB 240-43293/21-A		154496	3.67	632640	4.56	350176	5.82
CCV 240-44186/2 CCVIS		149650	3.63	639038	4.52	353626	5.79

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: STD6 240-44095/5 Date Analyzed: 05/15/2012 13:03

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0515005.D Heated Purge: (Y/N) N

Calibration ID: 8713

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		587418	6.91	515457	8.89	449886	10.41
UPPER LIMIT		1174836	7.41	1030914	9.39	899772	10.91
LOWER LIMIT		293709	6.41	257729	8.39	224943	9.91
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-44095/11		694432	6.91	628228	8.89	527410	10.41
ICV 240-44095/21		730455	6.91	619876	8.89	536727	10.42
MB 240-43293/21-A		550700	6.91	446540	8.89	398723	10.41
CCV 240-44186/2 CCVIS		559600	6.88	481629	8.85	407631	10.34

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCV 240-44186/2 Date Analyzed: 05/16/2012 08:36

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0516002.D Heated Purge: (Y/N) N

Calibration ID: 8717

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		149650	3.63	639038	4.52	353626	5.79
UPPER LIMIT		299300	4.13	1278076	5.02	707252	6.29
LOWER LIMIT		74825	3.13	319519	4.02	176813	5.29
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-43872/22-A		162738	3.63	681675	4.52	377280	5.79
LCS 240-43872/23-A		144124	3.63	620491	4.52	355119	5.79
240-10949-1 RE	MSA-DMW6S-050312 RE	155922	3.63	589632	4.52	361955	5.79
240-11101-T-10-A MS		150720	3.63	629517	4.52	384222	5.79
240-11101-W-10-A MSD		165858	3.63	689060	4.52	405356	5.79
240-10949-6 RE	MSA-DMW4I-050312 RE	166778	3.63	483836	4.53	310281	5.79

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCV 240-44186/2 Date Analyzed: 05/16/2012 08:36

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0516002.D Heated Purge: (Y/N) N

Calibration ID: 8717

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		559600	6.88	481629	8.85	407631	10.34
UPPER LIMIT		1119200	7.38	963258	9.35	815262	10.84
LOWER LIMIT		279800	6.38	240815	8.35	203816	9.84
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-43872/22-A		608454	6.88	491090	8.84	438135	10.33
LCS 240-43872/23-A		573733	6.88	485656	8.84	416016	10.34
240-10949-1 RE	MSA-DMW6S-050312 RE	648604	6.88	567517	8.85	505135	10.35
240-11101-T-10-A MS		594452	6.88	524701	8.86	440931	10.36
240-11101-W-10-A MSD		635701	6.88	547968	8.86	468440	10.36
240-10949-6 RE	MSA-DMW4I-050312 RE	560164	6.88	475742	8.86	428246	10.36

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: YPID Start Date: 05/09/2012 10:59

Analysis Batch Number: 43312 End Date: 05/09/2012 21:17

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/09/2012 10:59	1		RTX-VRX 0.45(mm)
CCV 240-43312/5 CCVRT		05/09/2012 12:16	1	YF050905.D	RTX-VRX 0.45(mm)
MB 240-43312/6		05/09/2012 12:55	1	YF050906.D	RTX-VRX 0.45(mm)
LCS 240-43312/7		05/09/2012 13:34	1	YF050907.D	RTX-VRX 0.45(mm)
ZZZZZ		05/09/2012 14:12	5		RTX-VRX 0.45(mm)
240-10949-1	MSA-DMW6S-050312	05/09/2012 14:51	1	YF050909.D	RTX-VRX 0.45(mm)
240-10949-1 MS	MSA-DMW6S-050312 MS	05/09/2012 15:30	1	YF050910.D	RTX-VRX 0.45(mm)
240-10949-1 MSD	MSA-DMW6S-050312 MSD	05/09/2012 16:09	1	YF050911.D	RTX-VRX 0.45(mm)
240-10949-4	MSA-DMW7S-050312	05/09/2012 16:48	10	YF050912.D	RTX-VRX 0.45(mm)
240-10949-8	MSA-DMW4S-050312	05/09/2012 17:27	2	YF050913.D	RTX-VRX 0.45(mm)
CCV 240-43312/14		05/09/2012 18:06	1	YF050914.D	RTX-VRX 0.45(mm)
ZZZZZ		05/09/2012 18:45	1		RTX-VRX 0.45(mm)
ZZZZZ		05/09/2012 19:24	1		RTX-VRX 0.45(mm)
ZZZZZ		05/09/2012 20:02	100		RTX-VRX 0.45(mm)
CCV 240-43312/19		05/09/2012 21:17	1		RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43312/5 Calibration Date: 05/09/2012 12:16

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050905.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	308724		824	800	3.0	15.0
C6-C12	Ave	336931	340644		809	800	1.1	15.0
Trifluorotoluene (Surr)	Ave	420494	303612		7.22	10.0	-27.8*	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43312/14 Calibration Date: 05/09/2012 18:06

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF050914.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	310006		827	800	3.4	15.0
C6-C12	Ave	336931	342231		813	800	1.6	15.0
Trifluorotoluene (Surr)	Ave	420494	291375		6.93	10.0	-30.7*	15.0

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: MB 240-43312/6

Matrix: Water Date Extracted: 05/09/2012 12:55

Lab File ID:(1) YF050906.D Lab File ID:(2)

Date Analyzed:(1) 05/09/2012 12:55 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-43312/7	05/09/2012 13:34	
MSA-DMW6S-050312	240-10949-1	05/09/2012 14:51	
MSA-DMW6S-050312 MS	240-10949-1 MS	05/09/2012 15:30	
MSA-DMW6S-050312 MSD	240-10949-1 MSD	05/09/2012 16:09	
MSA-DMW7S-050312	240-10949-4	05/09/2012 16:48	
MSA-DMW4S-050312	240-10949-8	05/09/2012 17:27	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-43312/6

Matrix: Water Lab File ID: YF050906.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/09/2012 12:55

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 43312 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	28.9	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	59		10-150

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MSA-DMW6S-050312	240-10949-1	60
MSA-DMW7S-050312	240-10949-4	57
MSA-DMW4S-050312	240-10949-8	62
	MB 240-43312/6	59
	LCS 240-43312/7	69
MSA-DMW6S-050312 MS	240-10949-1 MS	71
MSA-DMW6S-050312 MSD	240-10949-1 MSD	66

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050907.D

Lab ID: LCS 240-43312/7 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	896	112	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050910.D

Lab ID: 240-10949-1 MS Client ID: MSA-DMW6S-050312 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	42 J	940	112	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF050911.D

Lab ID: 240-10949-1 MSD Client ID: MSA-DMW6S-050312 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	866	103	8	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCV 240-43312/5 Date Analyzed: 05/09/2012 12:16

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF050905.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.76		
UPPER LIMIT				9.86		
LOWER LIMIT				9.66		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-43312/5 CCVRT		05/09/2012 12:16	YF050905.D	9.76		
MB 240-43312/6		05/09/2012 12:55	YF050906.D	9.75		
LCS 240-43312/7		05/09/2012 13:34	YF050907.D	9.76		
240-10949-1	MSA-DMW6S-050312	05/09/2012 14:51	YF050909.D	9.75		
240-10949-1 MS	MSA-DMW6S-050312 MS	05/09/2012 15:30	YF050910.D	9.76		
240-10949-1 MSD	MSA-DMW6S-050312 MSD	05/09/2012 16:09	YF050911.D	9.76		
240-10949-4	MSA-DMW7S-050312	05/09/2012 16:48	YF050912.D	9.75		
240-10949-8	MSA-DMW4S-050312	05/09/2012 17:27	YF050913.D	9.75		
CCV 240-43312/14		05/09/2012 18:06	YF050914.D	9.76		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: A2HP6F Start Date: 04/26/2012 12:11

Analysis Batch Number: 41691 End Date: 04/26/2012 22:33

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-41691/4 IC		04/26/2012 12:11	1	P6F04264.D	RTX-5 0.53(mm)
STD2 240-41691/5 IC		04/26/2012 12:42	1	P6F04265.D	RTX-5 0.53(mm)
STD3 240-41691/6 IC		04/26/2012 13:13	1	P6F04266.D	RTX-5 0.53(mm)
STD4 240-41691/7 IC		04/26/2012 13:45	1	P6F04267.D	RTX-5 0.53(mm)
STD5 240-41691/8 IC		04/26/2012 14:16	1	P6F04268.D	RTX-5 0.53(mm)
ICV 240-41691/9		04/26/2012 14:47	1	P6F04269.D	RTX-5 0.53(mm)
STD1 240-41691/10 IC		04/26/2012 15:18	1		RTX-5 0.53(mm)
STD2 240-41691/11 IC		04/26/2012 15:49	1		RTX-5 0.53(mm)
STD3 240-41691/12 IC		04/26/2012 16:20	1		RTX-5 0.53(mm)
STD4 240-41691/13 IC		04/26/2012 16:51	1		RTX-5 0.53(mm)
STD5 240-41691/14 IC		04/26/2012 17:23	1		RTX-5 0.53(mm)
ICV 240-41691/15		04/26/2012 17:54	1		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 18:25	500		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 18:56	1		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 19:27	5		RTX-5 0.53(mm)
ZZZZZ		04/26/2012 19:58	5		RTX-5 0.53(mm)
RINSE 240-41691/20		04/26/2012 20:29	1		RTX-5 0.53(mm)
CCV 240-41691/21		04/26/2012 20:59	1		RTX-5 0.53(mm)
CCV 240-41691/24		04/26/2012 22:33	1		RTX-5 0.53(mm)

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: A2HP6F Start Date: 05/11/2012 09:07

Analysis Batch Number: 43655 End Date: 05/11/2012 16:15

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-43655/4		05/11/2012 09:07	1	P6F05114.D	RTX-5 0.53(mm)
MB 240-43296/10-A		05/11/2012 10:08	1	P6F05116.D	RTX-5 0.53(mm)
LCS 240-43296/11-A		05/11/2012 10:38	1	P6F05117.D	RTX-5 0.53(mm)
CCV 240-43655/8		05/11/2012 11:08	1	P6F05118.D	RTX-5 0.53(mm)
240-10949-1	MSA-DMW6S-050312	05/11/2012 11:39	1	P6F05119.D	RTX-5 0.53(mm)
240-10949-4	MSA-DMW7S-050312	05/11/2012 12:09	1	P6F05120.D	RTX-5 0.53(mm)
240-10949-8	MSA-DMW4S-050312	05/11/2012 12:40	1	P6F05121.D	RTX-5 0.53(mm)
ZZZZZ		05/11/2012 13:10	1		RTX-5 0.53(mm)
ZZZZZ		05/11/2012 13:41	1		RTX-5 0.53(mm)
ZZZZZ		05/11/2012 14:12	1		RTX-5 0.53(mm)
ZZZZZ		05/11/2012 14:42	1		RTX-5 0.53(mm)
ZZZZZ		05/11/2012 15:13	1		RTX-5 0.53(mm)
CCV 240-43655/18		05/11/2012 16:15	1	P6F05128.D	RTX-5 0.53(mm)

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198430 174115	188482	182432	173562	Ave		183404.386				5.7		20.0			
n-Nonane	213382 212758	214563	217346	210050	Ave		213619.735				1.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	LVL 1	LVL 2	LVL 3	LVL 4	LVL 5						RT WINDOW	AVG RT
Diesel	9.493	9.493	9.493	9.493	9.493						5.280 - 13.709	9.493
n-Nonane	4.296	4.295	4.296	4.296	4.298						4.246 - 4.346	4.296

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICV 240-41691/9 Calibration Date: 04/26/2012 14:47

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F04269.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	171101		467	500	-6.7	20.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCVRT 240-43655/4 Calibration Date: 05/11/2012 09:07

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F05114.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	197644		539	500	7.8	15.0
n-Nonane	Ave	213620	232531		54.4	50.0	8.9	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43655/8 Calibration Date: 05/11/2012 11:08

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F05118.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	198997		543	500	8.5	15.0
n-Nonane	Ave	213620	229918		53.8	50.0	7.6	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: CCV 240-43655/18 Calibration Date: 05/11/2012 16:15

Instrument ID: A2HP6F Calib Start Date: 04/26/2012 12:11

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 04/26/2012 14:16

Lab File ID: P6F05128.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	183404	186140		508	500	1.5	15.0
n-Nonane	Ave	213620	219613		51.4	50.0	2.8	15.0

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: MB 240-43296/10-A

Matrix: Water Date Extracted: 05/09/2012 08:43

Lab File ID:(1) P6F05116.D Lab File ID:(2)

Date Analyzed:(1) 05/11/2012 10:08 Date Analyzed:(2)

Instrument ID:(1) A2HP6F Instrument ID:(2)

GC Column:(1) RTX-5 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-43296/11-A	05/11/2012 10:38	
MSA-DMW6S-050312	240-10949-1	05/11/2012 11:39	
MSA-DMW7S-050312	240-10949-4	05/11/2012 12:09	
MSA-DMW4S-050312	240-10949-8	05/11/2012 12:40	

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-43296/10-A

Matrix: Water | Lab File ID: P6F05116.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3520C | Date Extracted: 05/09/2012 08:43

Sample wt/vol: 1000(mL) | Date Analyzed: 05/11/2012 10:08

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43655 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	337	J	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	40		10-110

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-5 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	C91 #
MSA-DMW6S-050312	240-10949-1	19
MSA-DMW7S-050312	240-10949-4	47
MSA-DMW4S-050312	240-10949-8	39
	MB 240-43296/10-A	40
	LCS 240-43296/11-A	55

	QC LIMITS
C9 = n-Nonane	10-110

Column to be used to flag recovery values

FORM II 8015B

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P6F05117.D

Lab ID: LCS 240-43296/11-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	1950	78	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Sample No.: CCVRT 240-43655/4 Date Analyzed: 05/11/2012 09:07

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm)

Lab File ID (Standard): P6F05114.D Heated Purge: (Y/N) N

Calibration ID: 8406

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				4.33		
UPPER LIMIT				4.43		
LOWER LIMIT				4.23		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-43655/4		05/11/2012 09:07	P6F05114.D	4.33		
MB 240-43296/10-A		05/11/2012 10:08	P6F05116.D	4.33		
LCS 240-43296/11-A		05/11/2012 10:38	P6F05117.D	4.33		
CCV 240-43655/8		05/11/2012 11:08	P6F05118.D	4.33		
240-10949-1	MSA-DMW6S-050312	05/11/2012 11:39	P6F05119.D	4.33		
240-10949-4	MSA-DMW7S-050312	05/11/2012 12:09	P6F05120.D	4.33		
240-10949-8	MSA-DMW4S-050312	05/11/2012 12:40	P6F05121.D	4.33		
CCV 240-43655/18		05/11/2012 16:15	P6F05128.D	4.33		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/11/2012 05:49 End Date: 05/11/2012 14:51

Lab Sample ID	D/F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-43857/1			05:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-43857/2 IC	1		05:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-43857/3 IC	1		06:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-43857/4 IC	1		06:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-43857/5	1		06:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-43857/6	1		06:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-43857/7	1		06:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-43857/8	1		06:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-43857/9	1		06:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-43857/10			06:47																				
CCB 240-43857/11			06:54																				
ZZZZZZ			07:00																				
ZZZZZZ			07:05																				
ZZZZZZ			07:11																				
CCV 240-43857/15	1		07:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/16	1		07:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			07:30																				
ZZZZZZ			07:35																				
ZZZZZZ			07:41																				
ZZZZZZ			07:47																				
ZZZZZZ			07:52																				
ZZZZZZ			07:58																				
ZZZZZZ			08:04																				
ZZZZZZ			08:09																				
ZZZZZZ			08:15																				
MB 240-43497/1-A	1	R	08:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-43857/27	1		08:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/28	1		08:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-43497/2-A	1	R	08:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:46																				
240-10925-H-1-B SD ^5	5	R	08:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-H-1-C MS	1	R	08:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10925-H-1-D MSD	1	R	09:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			09:13																				
ZZZZZZ			09:18																				
ZZZZZZ			09:24																				
ZZZZZZ			09:30																				
ZZZZZZ			09:35																				
CCV 240-43857/39	1		09:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/40	1		09:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			09:54																				
ZZZZZZ			10:00																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/11/2012 05:49 End Date: 05/11/2012 14:51

Lab Sample ID	D/F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			10:05																			
ZZZZZZ			10:11																			
ZZZZZZ			10:16																			
ZZZZZZ			10:22																			
240-10949-1	1	R	10:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-1	1	D	10:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-2	1	R	10:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-2	1	D	10:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-43857/51	1		10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/52	1		10:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-3	1	R	11:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-3	1	D	11:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-4	1	R	11:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-4	1	D	11:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-43857/57	1		11:26	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-43857/58	1		11:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			11:39																			
ZZZZZZ			11:45																			
ZZZZZZ			11:51																			
ZZZZZZ			11:57																			
ZZZZZZ			12:04																			
ZZZZZZ			12:10																			
ZZZZZZ			12:15																			
ZZZZZZ			12:23																			
CCV 240-43857/67			12:30																			
CCB 240-43857/68			12:37																			
ZZZZZZ			12:43																			
ZZZZZZ			12:49																			
ZZZZZZ			12:54																			
ZZZZZZ			13:00																			
ZZZZZZ			13:06																			
ZZZZZZ			13:11																			
ZZZZZZ			13:17																			
ZZZZZZ			13:23																			
ZZZZZZ			13:28																			
ZZZZZZ			13:34																			
CCV 240-43857/79			13:40																			
CCB 240-43857/80			13:47																			
ZZZZZZ			13:53																			
ZZZZZZ			13:58																			
ZZZZZZ			14:04																			
ZZZZZZ			14:10																			

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/11/2012 05:49 End Date: 05/11/2012 14:51

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			14:15																					
ZZZZZZ			14:21																					
ZZZZZZ			14:27																					
ZZZZZZ			14:33																					
ZZZZZZ			14:38																					
CCV 240-43857/90			14:44																					
CCB 240-43857/91			14:51																					

Prep Types

D = Dissolved

R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/14/2012 07:53 End Date: 05/14/2012 16:44

Lab Sample ID	D/F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-44022/1			07:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-44022/2 IC	1		07:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-44022/3 IC	1		08:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-44022/4 IC	1		08:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-44022/5	1		08:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-44022/6	1		08:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-44022/7	1		08:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-44022/8	1		08:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-44022/9	1		08:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44022/10			08:47																				
CCB 240-44022/11			08:54																				
CCV 240-44022/12	1		09:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44022/13	1		09:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-43699/1-A	1	R	09:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-43699/2-A	1	R	09:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			09:25																				
CCV 240-44022/17	1		09:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44022/18	1		09:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-6	1	R	09:43	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-6 SD	5	R	09:49	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-6 MS	1	R	09:55	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-6 MSD	1	R	10:02	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-6	1	D	10:09	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-7	1	R	10:15	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-7	1	D	10:21	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-8	1	R	10:26	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-8	1	D	10:32	X	X		X	X	X	X	X	X	X			X		X		X			
240-10949-9	1	R	10:38	X	X		X	X	X	X	X	X	X			X		X		X			
CCV 240-44022/29	1		10:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44022/30	1		10:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-10949-9	1	D	10:56	X	X		X	X	X	X	X	X	X			X		X		X			
ZZZZZZ			11:01																				
ZZZZZZ			11:07																				
ZZZZZZ			11:13																				
ZZZZZZ			11:18																				
ZZZZZZ			11:24																				
ZZZZZZ			11:29																				
ZZZZZZ			11:35																				
ZZZZZZ			11:41																				
ZZZZZZ			11:46																				
CCV 240-44022/41	1		11:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44022/42	1		12:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/14/2012 07:53 End Date: 05/14/2012 16:44

Lab Sample ID	D/F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			12:05																				
ZZZZZZ			12:11																				
ZZZZZZ			12:17																				
ZZZZZZ			12:22																				
ZZZZZZ			12:30																				
ZZZZZZ			12:35																				
ZZZZZZ			12:41																				
ZZZZZZ			12:48																				
ZZZZZZ			12:56																				
ZZZZZZ			13:01																				
CCV 240-44022/53			13:07																				
CCB 240-44022/54			13:15																				
ZZZZZZ			13:20																				
ZZZZZZ			13:26																				
ZZZZZZ			13:32																				
ZZZZZZ			13:37																				
ZZZZZZ			13:43																				
ZZZZZZ			13:48																				
ZZZZZZ			13:54																				
ZZZZZZ			14:00																				
ZZZZZZ			14:05																				
ZZZZZZ			14:11																				
CCV 240-44022/65	1		14:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-44022/66	1		14:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			14:29																				
ZZZZZZ			14:35																				
ZZZZZZ			14:41																				
ZZZZZZ			14:46																				
ZZZZZZ			14:52																				
ZZZZZZ			14:58																				
240-10949-6	5	R	15:03			X								X	X		X		X				
240-10949-6 SD	25	D	15:09			X								X	X		X		X				
240-10949-6 MS	5	R	15:15			X								X	X		X		X				
240-10949-6 MSD	5	R	15:21			X								X	X		X		X				
CCV 240-44022/77	1		15:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-44022/78	1		15:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
240-10949-6	5	D	15:40			X								X	X		X		X				
240-10949-7	10	R	15:46			X								X	X		X		X				
ZZZZZZ			15:52																				
240-10949-7	10	D	15:57			X								X	X		X		X				
ZZZZZZ			16:03																				
240-10949-8	5	R	16:09			X								X	X		X		X				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/14/2012 07:53 End Date: 05/14/2012 16:44

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
240-10949-8	5	D	16:14			X								X	X		X		X				
240-10949-9	5	R	16:20			X								X	X		X		X				
240-10949-9	5	D	16:26			X								X	X		X		X				
ZZZZZZ			16:31																				
CCV 240-44022/89	1		16:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44022/90	1		16:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

Prep Types

D = Dissolved

R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D/F	Type	Time	Analytes
				Hg
IC 240-43898/1-A			10:13	X
IC 240-43898/2-A			10:15	X
IC 240-43898/3-A			10:17	X
IC 240-43898/4-A			10:19	X
IC 240-43898/5-A			10:21	X
IC 240-43898/6-A			10:23	X
ICV 240-43898/7-A	1		10:25	X
ICB 240-43898/8-A	1		10:27	X
CRA 240-43898/9-A	1		10:28	X
CCVL 240-43898/10-A	1		10:30	X
CCB 240-43898/11-A	1		10:33	X
ZZZZZZ			10:35	
ZZZZZZ			10:36	
ZZZZZZ			10:38	
ZZZZZZ			10:40	
ZZZZZZ			10:43	
ZZZZZZ			10:44	
MB 240-43721/1-A	1	T	10:47	X
LCS 240-43721/2-A	1	T	10:49	X
ZZZZZZ			10:51	
240-11088-P-1-B MS	1	D	10:53	X
CCV 240-43898/12-A	1		10:55	X
CCB 240-43898/11-A	1		10:57	X
240-11088-P-1-C MSD	1	D	10:59	X
ZZZZZZ			11:01	
ZZZZZZ			11:03	
ZZZZZZ			11:05	
ZZZZZZ			11:07	
ZZZZZZ			11:09	
ZZZZZZ			11:10	
ZZZZZZ			11:12	
ZZZZZZ			11:14	
ZZZZZZ			11:16	
CCV 240-43898/12-A	1		11:18	X
CCB 240-43898/11-A	1		11:20	X
240-10949-7	1	T	11:22	X
240-10949-7	1	D	11:24	X
240-10949-8	1	T	11:26	X
240-10949-8	1	D	11:28	X
240-10949-9	1	T	11:30	X
240-10949-9	1	D	11:31	X
ZZZZZZ			11:34	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			11:37																					
ZZZZZZ			11:39																					
ZZZZZZ			11:41																					
CCV 240-43898/12-A	1		11:43	X																				
CCB 240-43898/11-A	1		11:45	X																				
ZZZZZZ			11:47																					
ZZZZZZ			11:49																					
ZZZZZZ			11:51																					
ZZZZZZ			11:53																					
ZZZZZZ			11:54																					
ZZZZZZ			11:56																					
ZZZZZZ			11:58																					
ZZZZZZ			12:00																					
ZZZZZZ			12:02																					
ZZZZZZ			12:04																					
CCV 240-43898/12-A	1		12:06	X																				
CCB 240-43898/11-A	1		12:09	X																				
MB 240-43597/1-A	1	T	12:10	X																				
LCS 240-43597/2-A	1	T	12:13	X																				
ZZZZZZ			12:14																					
240-11146-C-1-B MS	1	T	12:16	X																				
240-11146-C-1-C MSD	1	T	12:18	X																				
ZZZZZZ			12:20																					
ZZZZZZ			12:23																					
ZZZZZZ			12:24																					
ZZZZZZ			12:26																					
ZZZZZZ			12:29																					
CCV 240-43898/12-A	1		12:31	X																				
CCB 240-43898/11-A	1		12:33	X																				
240-10949-1	1	T	12:35	X																				
240-10949-2	1	T	12:37	X																				
240-10949-3	1	T	12:39	X																				
240-10949-4	1	T	12:41	X																				
240-10949-6	1	T	12:43	X																				
ZZZZZZ			12:45																					
ZZZZZZ			12:47																					
ZZZZZZ			12:49																					
ZZZZZZ			12:51																					
240-10949-1	1	D	12:54	X																				
CCV 240-43898/12-A	1		12:57	X																				
CCB 240-43898/11-A	1		12:59	X																				
240-10949-2	1	D	13:01	X																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D / F	Type	Time	Analytes: Hg
240-10949-3	1	D	13:03	X
240-10949-4	1	D	13:05	X
240-10949-6	1	D	13:07	X
ZZZZZZ			13:09	
ZZZZZZ			13:11	
ZZZZZZ			13:14	
ZZZZZZ			13:15	
ZZZZZZ			13:18	
ZZZZZZ			13:19	
CCV 240-43898/12-A	1		13:22	X
CCB 240-43898/11-A	1		13:24	X
ZZZZZZ			13:26	
ZZZZZZ			13:28	
ZZZZZZ			13:29	
ZZZZZZ			13:31	
ZZZZZZ			13:33	
ZZZZZZ			13:35	
ZZZZZZ			13:37	
ZZZZZZ			13:39	
ZZZZZZ			13:41	
ZZZZZZ			13:44	
CCV 240-43898/12-A			13:46	
CCB 240-43898/11-A			13:47	
ZZZZZZ			13:49	
ZZZZZZ			13:51	
ZZZZZZ			13:53	
ZZZZZZ			13:55	
ZZZZZZ			13:57	
ZZZZZZ			13:59	
ZZZZZZ			14:01	
ZZZZZZ			14:03	
CCV 240-43898/12-A			14:05	
CCB 240-43898/11-A			14:07	
CCV 240-43898/12-A			16:01	
CCB 240-43898/11-A			16:03	
ZZZZZZ			16:05	
ZZZZZZ			16:08	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:14	
ZZZZZZ			16:16	
ZZZZZZ			16:18	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/15/2012 10:13 End Date: 05/15/2012 17:10

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			16:20																					
ZZZZZZ			16:22																					
ZZZZZZ			16:24																					
CCV 240-43898/12-A			16:26																					
CCB 240-43898/11-A			16:28																					
ZZZZZZ			16:30																					
ZZZZZZ			16:32																					
ZZZZZZ			16:35																					
ZZZZZZ			16:37																					
ZZZZZZ			16:39																					
ZZZZZZ			16:41																					
ZZZZZZ			16:43																					
ZZZZZZ			16:45																					
ZZZZZZ			16:47																					
ZZZZZZ			16:49																					
CCV 240-43898/12-A			16:51																					
CCB 240-43898/11-A			16:54																					
ZZZZZZ			16:56																					
ZZZZZZ			16:58																					
ZZZZZZ			17:00																					
ZZZZZZ			17:02																					
ZZZZZZ			17:04																					
ZZZZZZ			17:06																					
CCV 240-43898/12-A			17:08																					
CCB 240-43898/11-A			17:10																					

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	ICV 240-43857/5 05/11/2012 06:15				CCV 240-43857/15 05/11/2012 07:17				CCV 240-43857/27 05/11/2012 08:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	81.6		80.0	102	98.0		100	98	98.1		100	98
Arsenic	80.4		80.0	101	101		100	101	101		100	101
Barium	80.1		80.0	100	99.1		100	99	99.4		100	99
Beryllium	78.8		80.0	99	98.6		100	99	97.7		100	98
Cadmium	81.7		80.0	102	102		100	102	102		100	102
Chromium	80.4		80.0	100	100		100	100	101		100	101
Cobalt	81.1		80.0	101	101		100	101	101		100	101
Copper	82.5		80.0	103	103		100	103	103		100	103
Lead	84.4		80.0	106	105		100	105	105		100	105
Molybdenum	81.2		80.0	101	102		100	102	100		100	100
Nickel	82.8		80.0	104	102		100	102	102		100	102
Selenium	80.2		80.0	100	101		100	101	101		100	101
Silver	83.0		80.0	104	103		100	103	102		100	102
Thallium	84.2		80.0	105	106		100	106	105		100	105
Tungsten	80.3		80.0	100	102		100	102	101		100	101
Vanadium	80.1		80.0	100	99.5		100	100	100		100	100
Zinc	82.3		80.0	103	102		100	102	102		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	CCV 240-43857/39 05/11/2012 09:41				CCV 240-43857/51 05/11/2012 10:50				CCV 240-43857/57 05/11/2012 11:26			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	98.2		100	98	99.5		100	100	100		100	100
Arsenic	101		100	101	99.8		100	100	101		100	101
Barium	99.1		100	99	99.8		100	100	101		100	101
Beryllium	96.8		100	97	97.9		100	98	99.4		100	99
Cadmium	102		100	102	103		100	103	104		100	104
Chromium	100		100	100	101		100	101	102		100	102
Cobalt	101		100	101	102		100	102	102		100	102
Copper	102		100	102	102		100	102	103		100	103
Lead	106		100	106	107		100	107	106		100	106
Molybdenum	101		100	101	102		100	102	101		100	101
Nickel	102		100	102	102		100	102	102		100	102
Selenium	101		100	101	99.0		100	99	101		100	101
Silver	102		100	102	103		100	103	103		100	103
Thallium	107		100	107	106		100	106	105		100	105
Tungsten	102		100	102	102		100	102	102		100	102
Vanadium	100		100	100	99.9		100	100	101		100	101
Zinc	102		100	102	102		100	102	103		100	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	ICV 240-44022/5 05/14/2012 08:18				CCV 240-44022/12 05/14/2012 09:00				CCV 240-44022/17 05/14/2012 09:31			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	83.3		80.0	104	98.5		100	98	99.3		100	99
Arsenic	80.0		80.0	100	99.1		100	99	99.4		100	99
Barium	81.1		80.0	101	98.7		100	99	98.8		100	99
Beryllium	78.0		80.0	98	96.2		100	96	96.0		100	96
Cadmium	81.3		80.0	102	99.9		100	100	99.8		100	100
Chromium	80.2		80.0	100	98.3		100	98	99.2		100	99
Cobalt	80.4		80.0	101	99.2		100	99	98.9		100	99
Copper	81.9		80.0	102	99.6		100	100	99.4		100	99
Lead	87.0		80.0	109	105		100	105	106		100	106
Molybdenum	82.5		80.0	103	102		100	102	102		100	102
Nickel	82.2		80.0	103	99.5		100	100	99.7		100	100
Selenium	80.8		80.0	101	99.4		100	99	100		100	100
Silver	82.8		80.0	104	101		100	101	102		100	102
Thallium	85.6		80.0	107	105		100	105	106		100	106
Tungsten	80.9		80.0	101	100		100	100	101		100	101
Vanadium	79.6		80.0	100	98.6		100	99	98.5		100	98
Zinc	81.2		80.0	101	100		100	100	100		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	CCV 240-44022/29 05/14/2012 10:43				CCV 240-44022/41 05/14/2012 11:53				CCV 240-44022/65 05/14/2012 14:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	99.3		100	99	98.6		100	99	98.8		100	99
Arsenic	99.1		100	99	99.1		100	99	97.9		100	98
Barium	97.9		100	98	98.2		100	98	98.3		100	98
Beryllium	95.4		100	95	94.1		100	94	92.4		100	92
Cadmium	100		100	100	99.4		100	99	100		100	100
Chromium	99.0		100	99	98.2		100	98	97.8		100	98
Cobalt	99.7		100	100	98.5		100	98	97.8		100	98
Copper	101		100	101	99.4		100	99	98.8		100	99
Lead	106		100	106	107		100	107	107		100	107
Molybdenum	103		100	103	101		100	101	101		100	101
Nickel	100		100	100	99.5		100	100	98.6		100	99
Selenium	99.2		100	99	98.3		100	98	99.4		100	99
Silver	102		100	102	101		100	101	101		100	101
Thallium	95.2		100	95	105		100	105	105		100	105
Tungsten	102		100	102	101		100	101	100		100	100
Vanadium	98.0		100	98	97.7		100	98	96.8		100	97
Zinc	100		100	100	100		100	100	100		100	100

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	CCV 240-44022/77 05/14/2012 15:27				CCV 240-44022/89 05/14/2012 16:37							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	97.2		100	97	97.4		100	97				
Arsenic	98.5		100	99	98.1		100	98				
Barium	97.9		100	98	98.1		100	98				
Beryllium	92.2		100	92	92.8		100	93				
Cadmium	98.7		100	99	99.5		100	100				
Chromium	97.8		100	98	97.6		100	98				
Cobalt	97.8		100	98	98.2		100	98				
Copper	99.3		100	99	99.3		100	99				
Lead	106		100	106	107		100	107				
Molybdenum	100		100	100	101		100	101				
Nickel	98.3		100	98	98.4		100	98				
Selenium	98.4		100	98	98.8		100	99				
Silver	99.2		100	99	100		100	100				
Thallium	106		100	106	106		100	106				
Tungsten	100		100	100	100		100	100				
Vanadium	96.9		100	97	97.2		100	97				
Zinc	100		100	100	101		100	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTHGICVW_00296 Concentration Units: ug/L

CCV Source: MTHGCALW_00193

Analyte	ICV 240-43898/7-A 05/15/2012 10:25				CCVL 240-43898/10-A 05/15/2012 10:30				CCV 240-43898/12-A 05/15/2012 10:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.37		2.50	95	5.22		5.00	104	5.28		5.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTHGICVW_00296 Concentration Units: ug/L

CCV Source: MTHGCALW_00193

Analyte	CCV 240-43898/12-A 05/15/2012 11:18				CCV 240-43898/12-A 05/15/2012 11:43				CCV 240-43898/12-A 05/15/2012 12:06			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.24		5.00	105	5.27		5.00	105	5.38		5.00	108

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICV Source: MTHGICVW_00296 Concentration Units: ug/L

CCV Source: MTHGCALW_00193

Analyte	CCV 240-43898/12-A 05/15/2012 12:31				CCV 240-43898/12-A 05/15/2012 12:57				CCV 240-43898/12-A 05/15/2012 13:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.29		5.00	106	5.25		5.00	105	5.25		5.00	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-43857/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.90	J	95	50-150
Arsenic	2.00	1.97	J	99	50-150
Barium	1.00	0.883	J	88	50-150
Beryllium	1.00	0.973	J	97	50-150
Cadmium	0.500	0.471	J	94	50-150
Chromium	2.00	2.12		106	50-150
Cobalt	1.00	1.02		102	50-150
Copper	2.00	2.18		109	50-150
Lead	1.00	1.37		137	50-150
Molybdenum	10.0	9.62	J	96	50-150
Nickel	2.00	2.31		116	50-150
Selenium	2.00	2.11	J	106	50-150
Silver	0.500	0.521	J	104	50-150
Thallium	1.00	1.14	J	114	50-150
Vanadium	5.00	4.76	J	95	50-150
Tungsten	10.0	9.37	J	94	50-150
Zinc	10.0	9.70	J	97	50-150

Lab Sample ID: CRI 240-44022/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.92	J	96	50-150
Arsenic	2.00	2.04	J	102	50-150
Barium	1.00	0.984	J	98	50-150
Beryllium	1.00	0.886	J	89	50-150
Cadmium	0.500	0.506	J	101	50-150
Chromium	2.00	2.02		101	50-150
Cobalt	1.00	1.01		101	50-150
Copper	2.00	2.11		105	50-150
Lead	1.00	1.42		142	50-150
Molybdenum	10.0	9.18	J	92	50-150
Nickel	2.00	2.19		109	50-150
Selenium	2.00	2.15	J	108	50-150
Silver	0.500	0.528	J	106	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-44022/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Thallium	1.00	1.10	J	110	50-150
Vanadium	5.00	4.78	J	96	50-150
Tungsten	10.0	9.23	J	92	50-150
Zinc	10.0	9.63	J	96	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-43898/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00193

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.236		118	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-43857/6 05/11/2012 06:23		CCB 240-43857/16 05/11/2012 07:24		CCB 240-43857/28 05/11/2012 08:34		CCB 240-43857/40 05/11/2012 09:48	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.540	J	0.784	J	0.519	J	0.515	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.317	J	0.280	J	0.267	J	0.372	J
Tungsten	10	0.711	J	0.610	J	0.513	J	0.593	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-43857/52 05/11/2012 10:58		CCB 240-43857/58 05/11/2012 11:34					
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U				
Arsenic	5.0	5.0	U	5.0	U				
Barium	5.0	5.0	U	5.0	U				
Beryllium	1.0	1.0	U	1.0	U				
Cadmium	1.0	1.0	U	1.0	U				
Chromium	2.0	2.0	U	2.0	U				
Cobalt	1.0	1.0	U	1.0	U				
Copper	2.0	2.0	U	2.0	U				
Lead	1.0	1.0	U	1.0	U				
Molybdenum	10	0.504	J	0.497	J				
Nickel	2.0	2.0	U	2.0	U				
Selenium	5.0	5.0	U	5.0	U				
Silver	1.0	1.0	U	1.0	U				
Thallium	2.0	0.315	J	0.328	J				
Tungsten	10	0.557	J	0.579	J				
Vanadium	20	20	U	20	U				
Zinc	20	20	U	20	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44022/6 05/14/2012 08:24		CCB 240-44022/13 05/14/2012 09:06		CCB 240-44022/18 05/14/2012 09:38		CCB 240-44022/30 05/14/2012 10:50	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	10	U	0.302	J	10	U	10	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.198	J	0.251	J	0.214	J	0.210	J
Tungsten	10	0.401	J	0.399	J	10	U	10	U
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-44022/42 05/14/2012 12:00		CCB 240-44022/66 05/14/2012 14:24		CCB 240-44022/78 05/14/2012 15:34		CCB 240-44022/90 05/14/2012 16:44	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	10	U	10	U	10	U	10	U
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.219	J	0.233	J	0.317	J	0.231	J
Tungsten	10	10	U	10	U	10	U	10	U
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-43898/8-A 05/15/2012 10:27		CCB 240-43898/11-A 05/15/2012 10:33		CCB 240-43898/11-A 05/15/2012 10:57		CCB 240-43898/11-A 05/15/2012 11:20	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-43898/11-A 05/15/2012 11:45		CCB 240-43898/11-A 05/15/2012 12:09		CCB 240-43898/11-A 05/15/2012 12:33		CCB 240-43898/11-A 05/15/2012 12:59	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-43898/11-A 05/15/2012 13:24							
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43497/1-A

Instrument Code: I8 Batch No.: 43857

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.940	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.642	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.153	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	3.41	J		6020

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43699/1-A

Instrument Code: I8 Batch No.: 44022

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.556	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.312	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	10	U		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	6.03	J		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43597/1-A

Instrument Code: H4 Batch No.: 44211

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-43721/1-A

Instrument Code: H4 Batch No.: 44211

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICSA 240-43857/8 Instrument ID: I8

Lab File ID: I8051112A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.179**	
Arsenic		**0.525**	
Barium		**0.114**	
Beryllium		**0.0140**	
Cadmium		**-0.0100**	
Chromium		**0.630**	
Cobalt		**0.0910**	
Copper		**0.521**	
Lead		**0.135**	
Molybdenum	**1000**	**994**	**99**
Nickel		**0.424**	
Selenium		**0.137**	
Silver		**0.0450**	
Thallium		**0.146**	
Tungsten		**0.409**	
Vanadium		**0.301**	
Zinc		**1.01**	
Aluminum	*50000*	*51300*	*103*
Boron		*1.07*	
Calcium	*50000*	*52190*	*104*
Iron	*50000*	*51150*	*102*
Magnesium	*50000*	*51950*	*104*
Manganese		*0.0880*	
Potassium	*50000*	*52560*	*105*
Sodium	*50000*	*51930*	*104*
Strontium		*0.298*	
Tin		*0.0630*	
Titanium	*1000*	*1044*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICSAB 240-43857/9 Instrument ID: I8

Lab File ID: I8051112A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Antimony	**100**	**100**	**100**
Arsenic	**100**	**101**	**101**
Barium	**100**	**102**	**102**
Beryllium	**100**	**101**	**101**
Cadmium	**100**	**101**	**101**
Chromium	**100**	**108**	**108**
Cobalt	**100**	**101**	**101**
Copper	**100**	**102**	**102**
Lead	**100**	**109**	**109**
Molybdenum	**1100**	**1124**	**102**
Nickel	**100**	**106**	**106**
Selenium	**100**	**101**	**101**
Silver	**100**	**102**	**102**
Thallium	**100**	**110**	**110**
Tungsten	**100**	**101**	**101**
Vanadium	**100**	**102**	**102**
Zinc	**100**	**104**	**104**
Aluminum	*50000*	*51280*	*103*
Boron	*100*	*104*	*104*
Calcium	*50000*	*52530*	*105*
Iron	*50000*	*51620*	*103*
Magnesium	*50000*	*52600*	*105*
Manganese	*100*	*106*	*106*
Potassium	*50000*	*53190*	*106*
Sodium	*50000*	*52220*	*104*
Strontium	*100*	*96.3*	*96*
Tin	*100*	*99.5*	*99*
Titanium	*1100*	*1161*	*106*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICSA 240-44022/8 Instrument ID: I8

Lab File ID: I8051412A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.167**	
Arsenic		**0.661**	
Barium		**0.130**	
Beryllium		**0.0190**	
Cadmium		**0.0020**	
Chromium		**0.580**	
Cobalt		**0.0920**	
Copper		**0.545**	
Lead		**0.149**	
Molybdenum	**1000**	**1024**	**102**
Nickel		**0.435**	
Selenium		**0.0710**	
Silver		**0.0460**	
Thallium		**0.0520**	
Tungsten		**0.116**	
Vanadium		**-0.0520**	
Zinc		**1.43**	
Aluminum	*50000*	*49180*	*98*
Boron		*1.03*	
Calcium	*50000*	*51850*	*104*
Iron	*50000*	*50440*	*101*
Magnesium	*50000*	*51240*	*102*
Manganese		*0.504*	
Potassium	*50000*	*52680*	*105*
Sodium	*50000*	*51540*	*103*
Strontium		*0.298*	
Tin		*0.117*	
Titanium	*1000*	*1063*	*106*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Lab Sample ID: ICSAB 240-44022/9 Instrument ID: I8

Lab File ID: I8051412A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**101**	**101**
Arsenic	**100**	**98.5**	**98**
Barium	**100**	**101**	**101**
Beryllium	**100**	**97.9**	**98**
Cadmium	**100**	**98.6**	**99**
Chromium	**100**	**106**	**106**
Cobalt	**100**	**99.1**	**99**
Copper	**100**	**99.1**	**99**
Lead	**100**	**112**	**112**
Molybdenum	**1100**	**1127**	**102**
Nickel	**100**	**104**	**104**
Selenium	**100**	**97.2**	**97**
Silver	**100**	**100**	**100**
Thallium	**100**	**108**	**108**
Tungsten	**100**	**102**	**102**
Vanadium	**100**	**101**	**101**
Zinc	**100**	**101**	**101**
Aluminum	*50000*	*48600*	*97*
Boron	*100*	*99.6*	*100*
Calcium	*50000*	*51700*	*103*
Iron	*50000*	*50860*	*102*
Magnesium	*50000*	*51450*	*103*
Manganese	*100*	*108*	*108*
Potassium	*50000*	*52630*	*105*
Sodium	*50000*	*51350*	*103*
Strontium	*100*	*94.7*	*95*
Tin	*100*	*99.8*	*100*
Titanium	*1100*	*1154*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MSA-DMW4I-050312 MS
Lab ID: 240-10949-6 MS
Lab Name: TestAmerica Canton
Job No.: 240-10949-1
SDG No.:
Matrix: Water
Concentration Units: ug/L
% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	92.1		10	U	100	92	44-153		6020
Arsenic	931		17		1000	91	82-123		6020
Barium	912		23	J	1000	89	45-144		6020
Beryllium	942		6.1		1000	94	77-124		6020
Cadmium	955		14		1000	94	78-117		6020
Chromium	940		21		1000	92	72-110		6020
Cobalt	955		62		1000	89	67-114		6020
Copper	1060		150		1000	90	60-123		6020
Lead	932		5.2		1000	93	73-115		6020
Molybdenum	93.9		1.0	J	100	93	80-110		6020
Nickel	947		41		1000	91	72-111		6020
Selenium	947		14		1000	93	72-148		6020
Silver	94.0		0.26	J	100	94	10-139		6020
Thallium	230		10	U	250	92	69-117		6020
Vanadium	945		30		1000	91	70-112		6020
Tungsten	79.8		50	U	100	80	43-133		6020
Zinc	1110		200		1000	91	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10925-H-1-C MS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	97.1		0.20	J	100	97	44-153		6020
Arsenic	1000		6.6		1000	99	82-123		6020
Barium	960		16		1000	94	45-144		6020
Beryllium	970		0.60	J	1000	97	77-124		6020
Cadmium	967		1.0	U	1000	97	78-117		6020
Chromium	968		3.5		1000	96	72-110		6020
Cobalt	968		9.7		1000	96	67-114		6020
Copper	963		7.8		1000	96	60-123		6020
Lead	912		0.48	J	1000	91	73-115		6020
Molybdenum	97.8		0.74	J	100	97	80-110		6020
Nickel	973		17		1000	96	72-111		6020
Selenium	983		1.8	J	1000	98	72-148		6020
Silver	97.1		1.0	U	100	97	10-139		6020
Thallium	234		0.48	J	250	93	69-117		6020
Vanadium	965		1.8	J	1000	96	70-112		6020
Tungsten	92.0		0.69	J	100	91	43-133		6020
Zinc	1010		45		1000	96	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-11146-C-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.00		0.20	U	1.00	100	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-11088-P-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.770		0.20	U	1.00	77	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MSA-DMW4I-050312 MSD | Lab ID: 240-10949-6 MSD

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	89.9		100	90	44-153	2	20		6020
Arsenic	902		1000	89	82-123	3	20		6020
Barium	885		1000	86	45-144	3	20		6020
Beryllium	913		1000	91	77-124	3	20		6020
Cadmium	934		1000	92	78-117	2	20		6020
Chromium	910		1000	89	72-110	3	20		6020
Cobalt	925		1000	86	67-114	3	20		6020
Copper	1030		1000	87	60-123	3	20		6020
Lead	908		1000	90	73-115	3	20		6020
Molybdenum	92.3		100	91	80-110	2	20		6020
Nickel	917		1000	88	72-111	3	20		6020
Selenium	915		1000	90	72-148	3	20		6020
Silver	92.2		100	92	10-139	2	20		6020
Thallium	225		250	90	69-117	2	20		6020
Vanadium	913		1000	88	70-112	3	20		6020
Tungsten	77.9		100	78	43-133	2	20		6020
Zinc	1080		1000	88	49-156	3	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-10925-H-1-D MSD

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	93.5		100	93	44-153	4	20		6020
Arsenic	970		1000	96	82-123	3	20		6020
Barium	932		1000	92	45-144	3	20		6020
Beryllium	933		1000	93	77-124	4	20		6020
Cadmium	933		1000	93	78-117	4	20		6020
Chromium	937		1000	93	72-110	3	20		6020
Cobalt	940		1000	93	67-114	3	20		6020
Copper	934		1000	93	60-123	3	20		6020
Lead	885		1000	88	73-115	3	20		6020
Molybdenum	93.9		100	93	80-110	4	20		6020
Nickel	942		1000	93	72-111	3	20		6020
Selenium	951		1000	95	72-148	3	20		6020
Silver	93.4		100	93	10-139	4	20		6020
Thallium	226		250	90	69-117	3	20		6020
Vanadium	933		1000	93	70-112	3	20		6020
Tungsten	88.9		100	88	43-133	3	20		6020
Zinc	980		1000	94	49-156	3	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-11146-C-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.915	1.00	91	69-134	9	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-11088-P-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	1.02	1.00	102	69-134	28	20	F	7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-43497/2-A

Lab Name: TestAmerica Canton Job No.: 240-10949-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	90.4		90	80	120		6020
Arsenic	1000	917		92	80	120		6020
Barium	1000	896		90	80	120		6020
Beryllium	1000	857		86	80	120		6020
Cadmium	1000	926		93	80	120		6020
Chromium	1000	919		92	80	120		6020
Cobalt	1000	915		92	80	120		6020
Copper	1000	951		95	80	120		6020
Lead	1000	934		93	80	120		6020
Molybdenum	100	87.8		88	80	120		6020
Nickel	1000	929		93	80	120		6020
Selenium	1000	929		93	80	120		6020
Silver	100	94.3		94	80	120		6020
Thallium	250	234		94	80	120		6020
Vanadium	1000	900		90	80	120		6020
Tungsten	100	88.1		88	80	120		6020
Zinc	1000	969		97	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-43699/2-A

Lab Name: TestAmerica Canton Job No.: 240-10949-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	101		101	80	120		6020
Arsenic	1000	988		99	80	120		6020
Barium	1000	997		100	80	120		6020
Beryllium	1000	939		94	80	120		6020
Cadmium	1000	1010		101	80	120		6020
Chromium	1000	997		100	80	120		6020
Cobalt	1000	981		98	80	120		6020
Copper	1000	1030		103	80	120		6020
Lead	1000	1040		104	80	120		6020
Molybdenum	100	99.1		99	80	120		6020
Nickel	1000	1020		102	80	120		6020
Selenium	1000	1000		100	80	120		6020
Silver	100	105		105	80	120		6020
Thallium	250	254		102	80	120		6020
Vanadium	1000	975		98	80	120		6020
Tungsten	100	96.7		97	80	120		6020
Zinc	1000	1040		104	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-43721/2-A

Lab Name: TestAmerica Canton Job No.: 240-10949-1

Sample Matrix: Water LCS Source: MTHGICVW_00295

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.74		95	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-43597/2-A

Lab Name: TestAmerica Canton Job No.: 240-10949-1

Sample Matrix: Water LCS Source: MTHGICVW_00295

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.79		96	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-10949-6

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10949-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	17		18.7	J	NC		6020
Beryllium	6.1		5.81		NC		6020
Cadmium	14		14.1		NC		6020
Chromium	21		21.4		NC		6020
Cobalt	62		64.3		NC		6020
Copper	150		165		NC		6020
Molybdenum	1.0	J	50	U	NC		6020
Nickel	41		42.4		NC		6020
Selenium	14		16.3	J	NC		6020
Silver	0.26	J	5.0	U	NC		6020
Vanadium	30		30.8	J	NC		6020
Zinc	200		211		NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 240-10949-6

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10949-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	10	U	50	U	NC		6020
Barium	9.8	J	21.3	J	NC		6020
Lead	2.3	J	5.25	J	NC		6020
Thallium	10	U	50	U	NC		6020
Tungsten	50	U	250	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-10925-H-1-B SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-10949-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.20	J	10	U	NC		6020
Arsenic	6.6		7.29	J	NC		6020
Barium	16		16.0	J	NC		6020
Beryllium	0.60	J	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Chromium	3.5		3.88	J	NC		6020
Cobalt	9.7		9.88		NC		6020
Copper	7.8		8.14	J	NC		6020
Lead	0.48	J	5.0	U	NC		6020
Molybdenum	0.74	J	1.32	J	NC		6020
Nickel	17		18.6		NC		6020
Selenium	1.8	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.48	J	1.16	J	NC		6020
Vanadium	1.8	J	2.40	J	NC		6020
Tungsten	0.69	J	50	U	NC		6020
Zinc	45		48.8	J	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-10949-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10949-1

SDG No.:

Instrument ID: I8 Date: 05/03/2012 17:05

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Antimony		1000	6020
Arsenic		10000	6020
Barium		10000	6020
Beryllium		10000	6020
Cadmium		10000	6020
Chromium		10000	6020
Cobalt		10000	6020
Copper		10000	6020
Lead		10000	6020
Molybdenum		1500	6020
Nickel		10000	6020
Selenium		10000	6020
Silver		1000	6020
Thallium		10000	6020
Vanadium		5000	6020
Tungsten		1000	6020
Zinc		10000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-10949-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43497/1-A	05/10/2012 08:52	43497		50	50
LCS 240-43497/2-A	05/10/2012 08:52	43497		50	50
240-10925-H-1-C MS	05/10/2012 08:52	43497		50	50
240-10925-H-1-D MSD	05/10/2012 08:52	43497		50	50
240-10949-1	05/10/2012 08:52	43497		50	50
240-10949-1	05/10/2012 08:52	43497		50	50
240-10949-2	05/10/2012 08:52	43497		50	50
240-10949-2	05/10/2012 08:52	43497		50	50
240-10949-3	05/10/2012 08:52	43497		50	50
240-10949-3	05/10/2012 08:52	43497		50	50
240-10949-4	05/10/2012 08:52	43497		50	50
240-10949-4	05/10/2012 08:52	43497		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43699/1-A	05/11/2012 09:35	43699		50	50
LCS 240-43699/2-A	05/11/2012 09:35	43699		50	50
240-10949-6	05/11/2012 09:35	43699		50	50
240-10949-6 MS	05/11/2012 09:35	43699		50	50
240-10949-6 MSD	05/11/2012 09:35	43699		50	50
240-10949-6	05/11/2012 09:35	43699		50	50
240-10949-7	05/11/2012 09:35	43699		50	50
240-10949-7	05/11/2012 09:35	43699		50	50
240-10949-8	05/11/2012 09:35	43699		50	50
240-10949-8	05/11/2012 09:35	43699		50	50
240-10949-9	05/11/2012 09:35	43699		50	50
240-10949-9	05/11/2012 09:35	43699		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43597/1-A	05/11/2012 14:50	43597		100	100
LCS 240-43597/2-A	05/11/2012 14:50	43597		100	100
240-11146-C-1-B MS	05/11/2012 14:50	43597		100	100
240-11146-C-1-C MSD	05/11/2012 14:50	43597		100	100
240-10949-1	05/11/2012 14:50	43597		100	100
240-10949-2	05/11/2012 14:50	43597		100	100
240-10949-3	05/11/2012 14:50	43597		100	100
240-10949-4	05/11/2012 14:50	43597		100	100
240-10949-6	05/11/2012 14:50	43597		100	100
240-10949-1	05/11/2012 14:50	43597		100	100
240-10949-2	05/11/2012 14:50	43597		100	100
240-10949-3	05/11/2012 14:50	43597		100	100
240-10949-4	05/11/2012 14:50	43597		100	100
240-10949-6	05/11/2012 14:50	43597		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-43721/1-A	05/11/2012 14:50	43721		100	100
LCS 240-43721/2-A	05/11/2012 14:50	43721		100	100
240-11088-P-1-B MS	05/11/2012 14:50	43721		100	100
240-11088-P-1-C MSD	05/11/2012 14:50	43721		100	100
240-10949-7	05/11/2012 14:50	43721		100	100
240-10949-7	05/11/2012 14:50	43721		100	100
240-10949-8	05/11/2012 14:50	43721		100	100
240-10949-8	05/11/2012 14:50	43721		100	100
240-10949-9	05/11/2012 14:50	43721		100	100
240-10949-9	05/11/2012 14:50	43721		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/11/2012 End Date: 05/11/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-43857/2 IC	05:55	90		91		98		95		95	
STD3 240-43857/3 IC	06:02	79		87		97		93		94	
STD4 240-43857/4 IC	06:10	106		104		99		99		98	
ICV 240-43857/5	06:15	98		99		100		97		97	
ICB 240-43857/6	06:23	110		108		98		98		98	
CRI 240-43857/7	06:28	114		112		100		98		99	
ICSA 240-43857/8	06:34	89		88		93		94		95	
ICSAB 240-43857/9	06:40	87		88		97		96		97	
CCV 240-43857/15	07:17	87		86		105		101		101	
CCB 240-43857/16	07:24	101		100		102		102		102	
MB 240-43497/1-A	08:21	119		113		99		99		99	
CCV 240-43857/27	08:26	98		95		95		93		94	
CCB 240-43857/28	08:34	113		106		95		94		95	
LCS 240-43497/2-A	08:39	108		102		93		92		96	
240-10925-H-1-B SD	08:52	103		98		97		96		97	
240-10925-H-1-C MS	08:58	77		82		95		93		95	
240-10925-H-1-D MSD	09:05	73		80		98		96		98	
CCV 240-43857/39	09:41	94		92		95		92		94	
CCB 240-43857/40	09:48	105		100		93		92		94	
240-10949-1	10:28	73		77		87		87		91	
240-10949-1	10:33	72		76		86		87		90	
240-10949-2	10:39	82		85		90		90		91	
240-10949-2	10:45	83		87		92		91		93	
CCV 240-43857/51	10:50	88		91		94		93		94	
CCB 240-43857/52	10:58	106		102		91		92		94	
240-10949-3	11:03	104		101		88		89		90	
240-10949-3	11:09	104		102		91		91		91	
240-10949-4	11:15	81		86		91		88		89	
240-10949-4	11:21	72		80		93		90		91	
CCV 240-43857/57	11:26	89		92		94		92		93	
CCB 240-43857/58	11:34	105		103		91		92		93	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/11/2012 End Date: 05/11/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-43857/2 IC	05:55			97							
STD3 240-43857/3 IC	06:02			95							
STD4 240-43857/4 IC	06:10			99							
ICV 240-43857/5	06:15			97							
ICB 240-43857/6	06:23			97							
CRI 240-43857/7	06:28			99							
ICSA 240-43857/8	06:34			93							
ICSAB 240-43857/9	06:40			94							
CCV 240-43857/15	07:17			100							
CCB 240-43857/16	07:24			100							
MB 240-43497/1-A	08:21			98							
CCV 240-43857/27	08:26			95							
CCB 240-43857/28	08:34			95							
LCS 240-43497/2-A	08:39			95							
240-10925-H-1-B SD	08:52			98							
240-10925-H-1-C MS	08:58			102							
240-10925-H-1-D MSD	09:05			104							
CCV 240-43857/39	09:41			95							
CCB 240-43857/40	09:48			94							
240-10949-1	10:28			95							
240-10949-1	10:33			95							
240-10949-2	10:39			108							
240-10949-2	10:45			109							
CCV 240-43857/51	10:50			97							
CCB 240-43857/52	10:58			94							
240-10949-3	11:03			94							
240-10949-3	11:09			96							
240-10949-4	11:15			110							
240-10949-4	11:21			113							
CCV 240-43857/57	11:26			97							
CCB 240-43857/58	11:34			94							

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/14/2012 End Date: 05/14/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-44022/2 IC	07:59	83		89		102		99		99	
STD3 240-44022/3 IC	08:05	71		81		100		96		97	
STD4 240-44022/4 IC	08:12	93		95		100		100		99	
ICV 240-44022/5	08:18	87		91		103		100		99	
ICB 240-44022/6	08:24	98		96		98		99		98	
CRI 240-44022/7	08:30	100		100		101		100		100	
ICSA 240-44022/8	08:35	77		79		93		93		95	
ICSAB 240-44022/9	08:41	73		77		96		97		98	
CCV 240-44022/12	09:00	84		89		103		99		99	
CCB 240-44022/13	09:06	98		95		99		99		98	
MB 240-43699/1-A	09:12	99		98		99		100		99	
LCS 240-43699/2-A	09:18	91		92		99		98		99	
CCV 240-44022/17	09:31	84		88		100		96		96	
CCB 240-44022/18	09:38	97		94		96		96		96	
240-10949-6	09:43	70		79		96		95		94	
240-10949-6 SD	09:49	81		84		97		97		97	
240-10949-6 MS	09:55	60		71		98		96		95	
240-10949-6 MSD	10:02	57		69		99		96		95	
240-10949-6	10:09	55		68		102		101		98	
240-10949-7	10:15	68		79		106		109		101	
240-10949-7	10:21	69		79		106		109		101	
240-10949-8	10:26	67		77		102		99		99	
240-10949-8	10:32	66		76		101		99		98	
240-10949-9	10:38	64		73		98		95		94	
CCV 240-44022/29	10:43	75		80		105		102		101	
CCB 240-44022/30	10:50	85		87		102		101		100	
240-10949-9	10:56	67		75		98		97		95	
CCV 240-44022/41	11:53	77		79		99		96		96	
CCB 240-44022/42	12:00	89		87		98		98		98	
CCV 240-44022/65	14:17	82		83		97		93		94	
CCB 240-44022/66	14:24	92		89		95		94		94	
240-10949-6	15:03	92		85		88		87		88	
240-10949-6 MS	15:15	85		83		88		87		88	
240-10949-6 MSD	15:21	83		81		88		87		89	
CCV 240-44022/77	15:27	81		83		96		91		93	
CCB 240-44022/78	15:34	93		91		93		91		92	
240-10949-6	15:40	87		86		91		90		91	
240-10949-7	15:46	92		91		97		97		96	
240-10949-7	15:52	95		94		97		96		96	
240-10949-7	15:57	95		93		96		95		95	
240-10949-7	16:03	96		94		95		95		94	
240-10949-8	16:09	93		90		94		92		92	

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/14/2012 End Date: 05/14/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
240-10949-8	16:14	91		89		94		92		93	
240-10949-9	16:20	86		84		88		88		89	
240-10949-9	16:26	86		84		90		88		89	
CCV 240-44022/89	16:37	80		84		94		91		92	
CCB 240-44022/90	16:44	94		93		93		92		93	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/14/2012 End Date: 05/14/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-44022/2 IC	07:59			101							
STD3 240-44022/3 IC	08:05			99							
STD4 240-44022/4 IC	08:12			101							
ICV 240-44022/5	08:18			101							
ICB 240-44022/6	08:24			98							
CRI 240-44022/7	08:30			100							
ICSA 240-44022/8	08:35			93							
ICSAB 240-44022/9	08:41			97							
CCV 240-44022/12	09:00			101							
CCB 240-44022/13	09:06			99							
MB 240-43699/1-A	09:12			101							
LCS 240-43699/2-A	09:18			102							
CCV 240-44022/17	09:31			99							
CCB 240-44022/18	09:38			98							
240-10949-6	09:43			162	*						
240-10949-6 SD	09:49			112							
240-10949-6 MS	09:55			165	*						
240-10949-6 MSD	10:02			164	*						
240-10949-6	10:09			174	*						
240-10949-7	10:15			252	*						
240-10949-7	10:21			261	*						
240-10949-8	10:26			128	*						
240-10949-8	10:32			123	*						
240-10949-9	10:38			146	*						
CCV 240-44022/29	10:43			104							
CCB 240-44022/30	10:50			102							
240-10949-9	10:56			144	*						
CCV 240-44022/41	11:53			99							
CCB 240-44022/42	12:00			99							
CCV 240-44022/65	14:17			98							
CCB 240-44022/66	14:24			96							
240-10949-6	15:03			103							
240-10949-6 MS	15:15			106							
240-10949-6 MSD	15:21			106							
CCV 240-44022/77	15:27			95							
CCB 240-44022/78	15:34			95							
240-10949-6	15:40			108							
240-10949-7	15:46			113							
240-10949-7	15:52			104							
240-10949-7	15:57			111							
240-10949-7	16:03			105							
240-10949-8	16:09			101							

FORM XV - IN

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-10949-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/14/2012 End Date: 05/14/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
240-10949-8	16:14			101							
240-10949-9	16:20			103							
240-10949-9	16:26			102							
CCV 240-44022/89	16:37			95							
CCB 240-44022/90	16:44			96							

MTMSCCBDILH20-49

TestAmerica ICP/MS Data Review Checklist

Run Date: 5-11-12 Analyst: KW Instrument: I8

Review Items

A. Tune/Daily performance	Yes	No	N/A	2nd Level
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass?	✓			✓
2. Performance check within recommended specifications? (Be>8000cps) (In >300,000 cps) (Pb >100,000 cps) (Co>100000) (Mg>10000) (CeO/Ce<0.03) (Ba++/Ba<0.03) (Background < 30cps @ Mass 220) CCT Performance Check (In > 75000) (Se< 20 cps)	✓			✓
B. Calibration/Instrument Run QC				
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels? Correlation coefficient > 0.995?	✓			✓
1. ICV/CCV analyzed at appropriate frequency and within control limits? *(ICV: = 90 – 110%) (CCV: 90 – 110%, 200.8 = 85 -115%)*	✓			✓
2. ICB/CCB analyzed at appropriate frequency and within +/- RL?	✓			✓
3. CRI run and recovered within QC limits (+/-50%) or project limits?	✓			✓
4. ICSA/ICSAB run at required frequency and within SOP control limits?	✓			✓
C. Sample Results				
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed?	✓			✓
2. All reported results bracketed by in control QC?	✓			✓
3. Were the internal standards within acceptance criteria for all results reported?	✓			✓
4. Sample analyses done within holding time?	✓			✓
D. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits?	✓			✓
2. Method blank done per prep batch and < RL?	✓			✓
3. MS run at required frequency and within limits?	✓			✓
4. MSD or DU run at required frequency and RPD within SOP limits?	✓			✓
5. Serial dilution done per prep batch?	✓			✓
6. Post digest spike analyzed if required?	✓			✓
E. Other				
1. Are all nonconformance's documented appropriately?	✓			✓
2. Current IDL/LR data on file?	✓			✓
3. Calculations checked for error?	✓			✓
4. Transcriptions checked for error?	✓			✓
5. All client/project specific requirements met?	✓			✓
6. Date/time of analysis verified as correct?	✓			✓

Level I Analyst: Karen H Counts Date: 5-14-12 Time: 5:49-14:51

Level I Analyst: _____ Date: _____ Time: _____

Level II Reviewer: Natalie J Musselman Date: 5-14-12 Time: 05:49-14:51

Level II Reviewer: _____ Date: _____ Time: _____

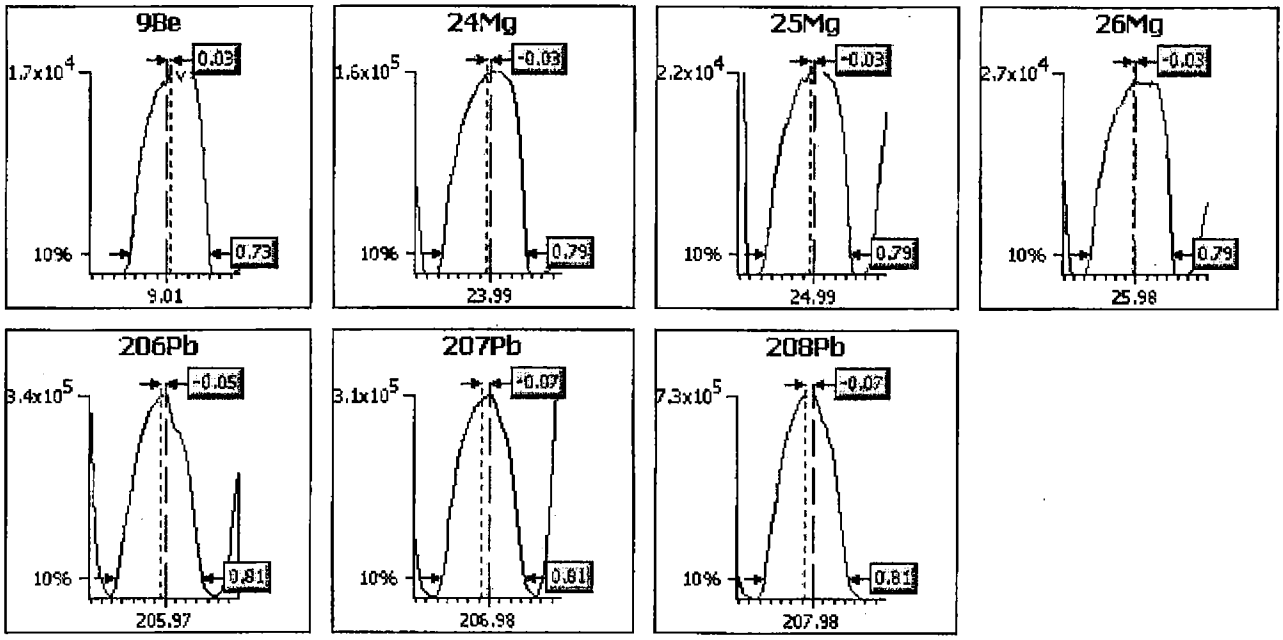
Comments: _____

Performance Report

Sample details
Acquired at : 5/11/2012 05:31:31
Report name : STD MODE PERF REPORT [8/11/2009 07:18:25]

Mass Calibration verification

Acquisition parameters
Sweeps : 10
Dwell : 5.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 10% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.73	0.03
24Mg	0.85	0.65	0.10	0.79	-0.03
25Mg	0.85	0.65	0.10	0.79	-0.03
26Mg	0.85	0.65	0.10	0.79	-0.03
206Pb	0.85	0.65	0.10	0.81	-0.05
207Pb	0.85	0.65	0.10	0.81	-0.07
208Pb	0.85	0.65	0.10	0.81	-0.07

Sample details
Acquired at : 5/11/2012 05:31:31
Report name : STD MODE PERF REPORT [8/11/2009 07:18:25]

Tune conditions

Major	
Extraction	-78.4
Lens 1	-1153
Lens 2	-80.0
Focus	12.5
D1	-42.4
D2	-140
Pole Bias	0.0
Hexapole Bias	-4.0
Nebuliser	0.78

Minor	
Lens 3	-195.3
Forward power	1349
Horizontal	50
Vertical	550
DA	-46.3
Cool	13.0
Auxiliary	0.90
Sampling Depth	130

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1975
PC Detector	3275

Add. Gases	
He_H2	0.00
He-Not In Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	58Ni	9Be	24Mg	25Mg	26Mg	59Co	137Ba++	101Bkg	115In
Dwell (mSecs)		100.0	10.0	10.0	10.0	10.0	10.0	30.0	100.0	10.0
Limits	%RSD	-	5.0%	-	5.0%	-	5.0%	-	-	5.0%
	Countrate	-	>8000	>10000	>10000	>10000	>100000	-	-	>300000
1	05:32:05	0.000	17115.450	162562.28	21810.929	26016.957	197371.79	751.128	0.000	746045.31
2	05:32:23	0.000	17666.024	162370.42	21784.227	26053.681	197881.11	745.572	0.000	739990.82
3	05:32:41	0.000	17415.761	161088.07	21881.021	25292.510	196218.29	724.460	0.667	737013.14
4	05:32:59	0.000	16885.216	160408.23	21593.980	25509.507	195442.59	695.570	0.333	744101.23
5	05:33:17	0.000	17589.277	160472.17	21196.804	25349.263	193985.72	696.681	0.000	738402.66
x		0.000	17334.346	161380.23	21653.392	25644.384	196179.90	722.682	0.200	741110.63
σ		0.00	328.35	1028.65	276.47	365.87	1555.17	26.21	0.30	3829.86
%RSD		0.000	1.894	0.637	1.277	1.427	0.793	3.626	149.071	0.517

Run	Time	137Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	30.0	10.0	10.0	10.0	100.0
Limits	%RSD	-	-	-	-	-	5.0%	-
	Countrate	-	-	-	>100000	>100000	>100000	<30
1	05:32:05	85562.399	668534.53	16206.765	344861.35	309982.79	748250.96	0.333
2	05:32:23	84389.776	663689.89	17263.381	344432.62	310943.77	741958.82	0.000
3	05:32:41	84811.911	662302.99	16239.018	343976.68	307269.91	746954.71	0.000
4	05:32:59	84614.243	660451.65	16772.880	341367.17	308376.74	742916.77	0.667
5	05:33:17	84192.114	662556.09	16854.073	340469.08	307212.19	733189.93	0.000
x		84714.089	663507.03	16667.223	343021.38	308757.08	742654.24	0.200
σ		528.39	3041.32	446.34	1971.06	1660.35	5914.87	0.30
%RSD		0.624	0.458	2.678	0.575	0.538	0.796	149.071

Ratio results

Run	Time	137Ba++/137Ba	156Ce O/140Ce
Ratio limits		<0.0300	<0.0300
1	05:32:05	0.009	0.024
2	05:32:23	0.009	0.026
3	05:32:41	0.009	0.025
4	05:32:59	0.008	0.025
5	05:33:17	0.008	0.025
x		0.0085	0.0251
σ		0.00	0.00
%RSD		3.2941	2.8865

Result : The performance report passed.

Performance Report

Sample details
Acquired at : 5/11/2012 05:44:34
Report name : CCT MODE PERF REPORT [5/20/2011 11:37:05]

Tune conditions

Major	
Extraction	-78.4
Lens 1	-1153
Lens 2	-80.0
Focus	-4.9
D1	-52.5
D2	-140
Pole Bias	-14.0
Hexapole Bias	-17.0
Nebuliser	0.78

Minor	
Lens 3	-195.3
Forward power	1349
Horizontal	50
Vertical	550
DA	-46.3
Cool	13.0
Auxiliary	0.90
Sampling Depth	130

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1975
PC Detector	3275

Add. Gases	
He_H2	3.49
He-Not In Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	78Se	115In
	Dwell (mSecs)	100.0	10.0
Limits	%RSD	*	5.0%
	Countrate	<20	>75000
1	05:44:35	12.333	278744.97
2	05:44:40	17.667	274546.13
3	05:44:44	11.667	276816.56
4	05:44:50	15.333	278219.63
5	05:44:55	13.000	277243.57
x̄		14.000	277114.17
σ		2.47	1626.48
%RSD		17.658	0.587

Result : The performance report passed.

MTMSCCBDILH20-49

TestAmerica ICP/MS Data Review Checklist

Run Date: 5-14-12 Analyst: KW Instrument: I8

Review Items

A. Tune/Daily performance	Yes	No	N/A	2nd Level
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass?	✓			✓
2. Performance check within recommended specifications? (Be>8000cps) (In >300,000 cps) (Pb >100,000 cps) (Co>100000) (Mg>10000) (CeO/Ce<0.03) (Ba++/Ba<0.03) (Background < 30cps @ Mass 220) CCT Performance Check (In > 75000) (Se< 20 cps)	✓			✓
B. Calibration/Instrument Run QC				
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels? Correlation coefficient ≥ 0.995?	✓			✓
1. ICV/CCV analyzed at appropriate frequency and within control limits? (*ICV:* = 90 – 110%) (*CCV:* 90 – 110%, 200.8 = 85 -115%)	✓			✓
2. ICB/CCB analyzed at appropriate frequency and within +/- RL?	✓			✓
3. CRI run and recovered within QC limits (+/-50%) or project limits?	✓			✓
4. ICSA/ICSAB run at required frequency and within SOP control limits?	✓			✓
C. Sample Results				✓
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed?	✓			✓
2. All reported results bracketed by in control QC?	✓			✓
3. Were the internal standards within acceptance criteria for all results reported?	✓			✓
4. Sample analyses done within holding time?	✓			✓
D. Preparation/Matrix QC				✓
1. LCS done per prep batch and within QC limits?	✓			✓
2. Method blank done per prep batch and < RL?	✓			✓
3. MS run at required frequency and within limits?	✓			✓
4. MSD or DU run at required frequency and RPD within SOP limits?	✓			✓
5. Serial dilution done per prep batch?	✓			✓
6. Post digest spike analyzed if required?	✓			✓
E. Other				✓
1. Are all nonconformance's documented appropriately?	✓			✓
2. Current IDL/LR data on file?	✓			✓
3. Calculations checked for error?	✓			✓
4. Transcriptions checked for error?	✓			✓
5. All client/project specific requirements met?	✓			✓
6. Date/time of analysis verified as correct?	✓			✓

Level I Analyst: Kara M Coutz Date: 5-15-12 Time: 7:53-16:44
Level I Analyst: _____ Date: _____ Time: _____

Level II Reviewer: [signature] Date: 5-15-12 Time: 7:53-16:44
Level II Reviewer: _____ Date: _____ Time: _____

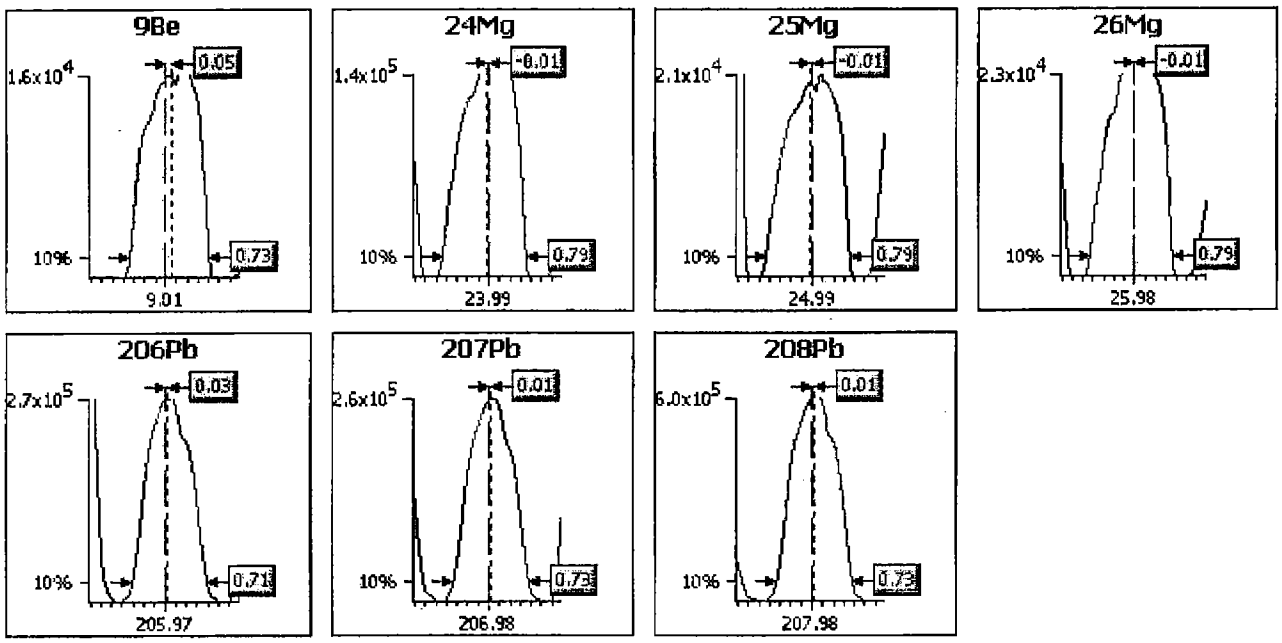
Comments: _____

Performance Report

Sample details
Acquired at : 5/14/2012 06:26:58
Report name : STD MODE PERF REPORT [8/11/2009 07:18:25]

Mass Calibration verification

Acquisition parameters
Sweeps : 10
Dwell : 5.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 10% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.73	0.05
24Mg	0.85	0.65	0.10	0.79	-0.01
25Mg	0.85	0.65	0.10	0.79	-0.01
26Mg	0.85	0.65	0.10	0.79	-0.01
206Pb	0.85	0.65	0.10	0.71	0.03
207Pb	0.85	0.65	0.10	0.73	0.01
208Pb	0.85	0.65	0.10	0.73	0.01

Sample details
Acquired at : 5/14/2012 06:26:58
Report name : STD MODE PERF REPORT [8/11/2009 07:18:25]

Tune conditions

Major	
Extraction	-74.5
Lens 1	-1153
Lens 2	-80.0
Focus	12.7
D1	-43.9
D2	-140
Pole Bias	0.0
Hexapole Bias	-4.0
Nebuliser	0.79

Minor	
Lens 3	-195.3
Forward power	1349
Horizontal	50
Vertical	500
DA	-46.3
Cool	13.0
Auxiliary	0.90
Sampling Depth	130

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1975
PC Detector	3275

Add. Gases	
He_H2	0.00
He-Not In Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	59Co	137Ba++	101Bkg	115In
Dwell (mSecs)		100.0	10.0	10.0	10.0	10.0	10.0	30.0	100.0	10.0
Limits	%RSD	-	5.0%	-	5.0%	-	5.0%	-	-	5.0%
	Countrate	-	>8000	>10000	>10000	>10000	>100000	-	-	>300000
1	06:27:32	0.000	15897.578	151666.96	20639.438	24544.727	192687.45	596.677	0.333	644387.48
2	06:27:50	0.333	16471.469	149833.82	19981.971	24331.080	189406.83	598.900	0.000	637465.44
3	06:28:08	0.333	15940.953	150530.06	20505.940	23519.917	187825.76	591.122	0.000	634038.36
4	06:28:26	0.000	15797.483	150647.78	20566.014	24054.012	187822.39	637.790	0.000	630542.76
5	06:28:44	0.000	15530.566	148925.74	19985.309	23720.201	187731.37	593.344	0.333	635062.95
x		0.133	15927.610	150320.87	20335.735	24033.987	189094.76	603.566	0.133	636299.39
σ		0.18	343.31	1018.11	324.88	421.97	2126.79	19.36	0.18	5161.31
%RSD		136.931	2.155	0.677	1.598	1.756	1.125	3.208	136.931	0.811

Run	Time	137Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	30.0	10.0	10.0	10.0	100.0
Limits	%RSD	-	-	-	-	-	5.0%	-
	Countrate	-	-	-	>100000	>100000	>100000	<30
1	06:27:32	74479.378	589141.80	16029.927	276748.78	249672.86	600631.17	0.333
2	06:27:50	73598.812	573113.90	14943.363	274142.91	247629.38	593771.84	0.000
3	06:28:08	72129.074	572975.94	15886.457	276592.89	249639.03	595602.10	0.000
4	06:28:26	74419.109	579885.52	16293.516	273475.41	248113.16	595836.95	0.000
5	06:28:44	73200.397	567765.43	15092.386	272055.79	249642.41	592918.93	0.000
x		73565.354	576576.52	15649.130	274603.15	248939.37	595752.20	0.067
σ		969.74	8237.49	596.79	2033.19	990.01	2990.96	0.15
%RSD		1.318	1.429	3.814	0.740	0.398	0.502	223.607

Ratio results

Run	Time	137Ba++/137Ba	156Ce O/140Ce
Ratio limits		<0.0300	<0.0300
1	06:27:32	0.008	0.027
2	06:27:50	0.008	0.026
3	06:28:08	0.008	0.028
4	06:28:26	0.009	0.028
5	06:28:44	0.008	0.027
x		0.0082	0.0271
σ		0.00	0.00
%RSD		2.6245	3.0350

Result : The performance report passed.

Performance Report

Sample details
Acquired at : 5/14/2012 06:37:49
Report name : CCT MODE PERF REPORT [5/20/2011 11:37:05]

Tune conditions

Major	
Extraction	-74.5
Lens 1	-1153
Lens 2	-80.0
Focus	-2.7
D1	-51.8
D2	-140
Pole Bias	-14.0
Hexapole Bias	-17.0
Nebuliser	0.79

Minor	
Lens 3	-195.3
Forward power	1349
Horizontal	50
Vertical	500
DA	-46.3
Cool	13.0
Auxiliary	0.90
Sampling Depth	130

Global	
Standard resolution	125
High resolution	125
Analogue Detector	1975
PC Detector	3275

Add. Gases	
He_H2	3.25
He-Not In Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	78Se	115In
	Dwell (mSecs)	100.0	10.0
Limits	%RSD	-	5.0%
	Countrate	<20	>75000
1	06:37:50	11.667	269338.86
2	06:37:55	10.667	267106.70
3	06:38:00	14.000	270534.66
4	06:38:05	11.333	266456.41
5	06:38:10	15.000	270453.36
X		12.533	268778.00
σ		1.86	1896.72
%RSD		14.879	0.706

Result : The performance report passed.

TestAmerica North Canton Hg Data Review Checklist

Run/Project Information:

Circle Methods used: (7470A / 245.1 : CORP-MT-0005 Rev 1) 7471: CORP-MT-0007 Rev 1

Run Date: 5/15/2012 Analyst: ASutherland Instrument: H4

Review Items

	Yes	No	N/A	2nd Level
A. Calibration/Instrument Run QC				
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels?	✓			✓
2. ICV/CCV analyzed at appropriate frequency and within control limits?	✓			✓
3. ICB/CCB analyzed at appropriate frequency and within +/- RL?	✓			✓
4. CRA run?	✓			✓
B. Sample Results				
1. Were samples with concentrations > high calibration standard diluted and reanalyzed?			✓	
2. All reported results bracketed by in control QC?	✓			✓
3. Sample analyses done within holding time?	✓			✓
C. Preparation, Matrix QC				
1. LCS done per prep batch and within QC limits?	✓			✓
2. Method blank done per prep batch and < RL?	✓			✓
3. MS run at required frequency and within limits?	✓			✓
4. MSD or DU run at required frequency and RPD within SOP limits?	✓			✓
D. Other				
1. Are all nonconformances documented appropriately?	✓			✓
2. Current IDL/MDL data on file?	✓			✓
3. Calculations and Transcription checked for error?	✓			✓
4. All client/project specific requirements met?	✓			✓
5. Date of analysis verified as correct?	✓			✓

Level I Analyst: [signature] Date/Time: 5/16/2012

Level I Analyst: _____ Date/Time: _____

Comments: _____

2nd Level Reviewer: Natalie J Munch Date/Time: 5-16-12

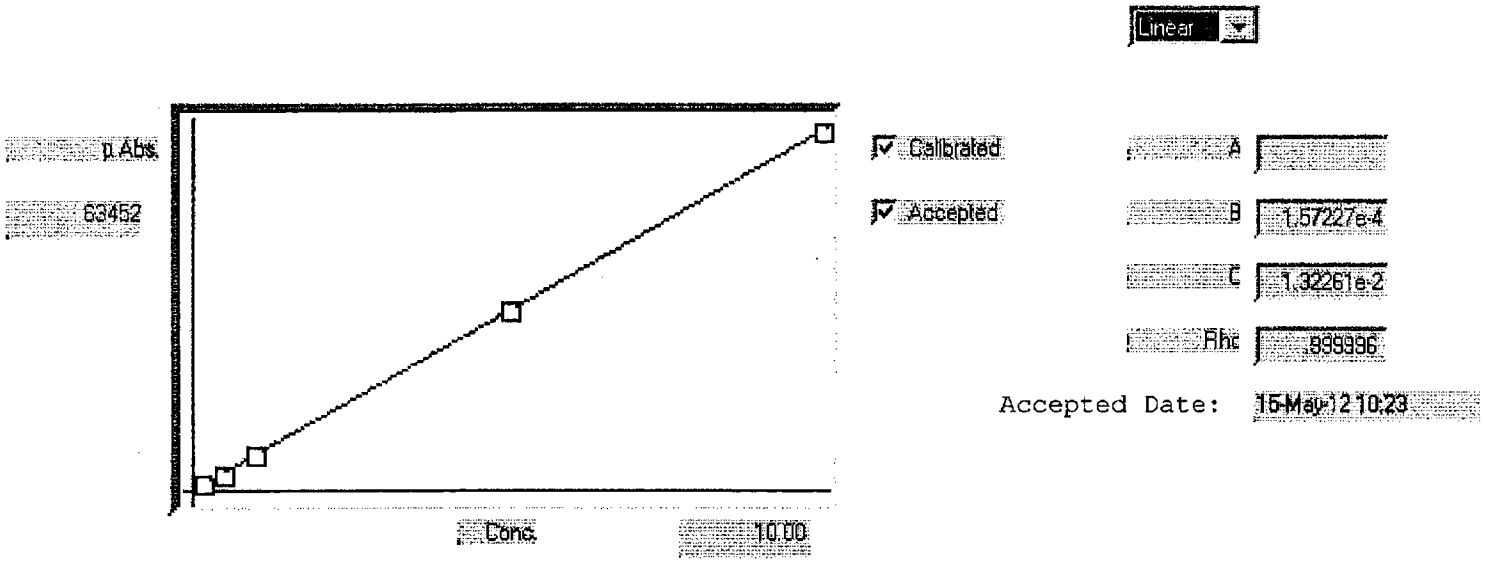
2nd Level Reviewer: _____ Date/Time: _____

Curve Date 5/14/2012 Curve Time 9:35-11:35 DILUTION H20 02

Revised

06/1/2011

Protocol: 0515CHG4



S	Conc.	Calc.	Dev.	Mean	SD or %RSD	Rep 1	Rep 2	Rep 3	Rep 4	Rep 5
01	.00000	-.0019	-.0019	-97	1	-96				
02	.20000	.2028	.0028	1207	0%	1206				
03	.50000	.4896	-.0104	3030	0%	3030				
04	1.0000	.9978	-.0022	6262	0%	6262				
05	5.0000	5.022	.0220	31857	0%	31857				
06	10.000	9.990	-.0104	63453	0%	63452				
07										
08										
09										
10										

Case Narrative

TestAmerica West Sacramento Project Number G2E050430

WATER, 6850, Perchlorate
Sample(s): 1, 2, 3, 4, 5, 6, 7, 8
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTGXH1AC
SMCS: MTGXH1AD

Sample(s): 1, 2, 3, 4, 5, 6, 7, 8
The opening Perchlorate continuing calibration verification (CCV) & minimum reporting limit (MRL) standards had ion abundance ratios outside of acceptance criteria for the native compound. The exceedence was caused by matrix interference from an over-range field sample analyzed immediately preceding the standards. This ratio is used for positive identification in field samples and all samples with positive results demonstrated ion ratios which were within method acceptance limits. The primary ion used for quantitation in samples and QC was within acceptance limits for percent drift in all CCV and MRL standards pertaining to this batch. All other standards and QC pertaining to this batch had acceptable ion ratios for the native compound. Data is reported with no further corrective action.

There were no other anomalies associated with this project.

Sample Summary

TestAmerica West Sacramento Project Number G2E050430

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MTEG0	1	MSA-DMW6S-050312	5/3/2012 09:40 AM	5/5/2012 10:15 AM
MTEG1	2	MSA-DMW6I-050312	5/3/2012 11:25 AM	5/5/2012 10:15 AM
MTEG2	3	MSA-DMW6D-050312	5/3/2012 01:00 PM	5/5/2012 10:15 AM
MTEG3	4	MSA-DMW7S-050312	5/3/2012 02:15 PM	5/5/2012 10:15 AM
MTEG4	5	MSA-DMW4I-050312	5/3/2012 09:34 AM	5/5/2012 10:15 AM
MTEG5	6	MSA-DMW4D-050312	5/3/2012 10:46 AM	5/5/2012 10:15 AM
MTEG6	7	MSA-DMW4S-050312	5/3/2012 12:02 PM	5/5/2012 10:15 AM
MTEG7	8	MSA-DMW2A-050312	5/3/2012 01:40 PM	5/5/2012 10:15 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

G2E050430

PARAMETER	ANALYTICAL METHOD
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name		Position	Level	Sample Type	Acq. Date & Time
18MAY12-perc-003.d	Blank No IS		P2-A5		Sample	5/18/2012 09:14
18MAY12-perc-004.d	LC6850L9_00001 Blank + IS		P2-B1		Sample	5/18/2012 09:30
18MAY12-perc-005.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL		P2-B2	1	Calibration	5/18/2012 09:47
18MAY12-perc-006.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL		P2-B3	2	Calibration	5/18/2012 10:03
18MAY12-perc-007.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL		P2-B4	3	Calibration	5/18/2012 10:19
18MAY12-perc-008.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL		P2-B5	4	Calibration	5/18/2012 10:35
18MAY12-perc-009.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL		P2-B6	5	Calibration	5/18/2012 10:52
18MAY12-perc-010.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL		P2-B7	6	Calibration	5/18/2012 11:08
18MAY12-perc-011.d	LC6850L7_00001 12LCMS0070, 10ng/mL		P2-B8	7	Calibration	5/18/2012 11:24
18MAY12-perc-012.d	LC6850L8_00001 12LCMS0071, 20ng/mL		P2-B9	8	Calibration	5/18/2012 11:40
18MAY12-perc-013.d	LC6850L9_00001 Blank + IS		P2-C1		Sample	5/18/2012 11:56
18MAY12-perc-014.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL		P2-C2	ICV	QC	5/18/2012 12:13
18MAY12-perc-015.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL		P2-C7	CCV6	QC	5/18/2012 12:29
18MAY12-perc-016.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL		P2-C4	CCV3	QC	5/18/2012 12:45
18MAY12-perc-017.d	G2E010442-2, 2128058, 2.00mL/2.00mL	6850	P1-A1		Sample	5/18/2012 13:01
18MAY12-perc-018.d	G2E030413-1, 2128058, 2.00mL/2.00mL		P1-A2		Sample	5/18/2012 13:17
18MAY12-perc-019.d	G2E030413-2, 2128058, 2.00mL/2.00mL	IS LOW	P1-A3		Sample	5/18/2012 13:34
18MAY12-perc-020.d	G2E030413-3, 2128058, 2.00mL/2.00mL	IS LOW	P1-A4		Sample	5/18/2012 13:50
18MAY12-perc-021.d	G2E030450-1, 2128058, 2.00mL/2.00mL		P1-A5		Sample	5/18/2012 14:06
18MAY12-perc-022.d	G2E030450-2, 2128058, 2.00mL/2.00mL		P1-A6		Sample	5/18/2012 14:22
18MAY12-perc-023.d	G2E030450-3, 2128058, 2.00mL/2.00mL	IS LOW	P1-A7		Sample	5/18/2012 14:39
18MAY12-perc-024.d	G2E030450-4, 2128058, 2.00mL/2.00mL	IS LOW	P1-A8		Sample	5/18/2012 14:55
18MAY12-perc-025.d	G2E030450-4MS, 2128058, 2.00mL/2.00mL	IS LOW	P1-A9		Sample	5/18/2012 15:11
18MAY12-perc-026.d	G2E030450-4SD, 2128058, 2.00mL/2.00mL	IS LOW	P1-B1		Sample	5/18/2012 15:27
18MAY12-perc-027.d	G2E030450-5, 2128058, 2.00mL/2.00mL	IS LOW	P1-B2		Sample	5/18/2012 15:43
18MAY12-perc-028.d	G2E030450-6, 2128058, 2.00mL/2.00mL		P1-B3		Sample	5/18/2012 16:00

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

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Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

18MAY12-perc-029.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/18/2012 16:16
18MAY12-perc-030.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/18/2012 16:32
18MAY12-perc-031.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/18/2012 16:48
18MAY12-perc-032.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/18/2012 17:05
18MAY12-perc-033.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/18/2012 17:21
18MAY12-perc-034.d	G2E090000-MB, 2130107, 2.00mL/2.00mL, 6850-DOD-L	P1-B4		Sample	5/18/2012 17:37
18MAY12-perc-035.d	G2E090000-LCS, 2130107, 2.00mL/2.00mL	P1-B5	LCS_0.5	QC	5/18/2012 17:53
18MAY12-perc-036.d	G2E090000-SMCS, 2130107, 2.00mL/2.00mL	P1-B6	LCS_0.5	QC	5/18/2012 18:09
18MAY12-perc-037.d	G2E080459-1, 2130107, 2.00mL/2.00mL	P1-B7		Sample	5/18/2012 18:26
18MAY12-perc-038.d	G2E080459-1MS, 2130107, 2.00mL/2.00mL	P1-B8	MS_0.5	QC	5/18/2012 18:42
18MAY12-perc-039.d	G2E080459-1SD, 2130107, 2.00mL/2.00mL	P1-B9	MS_0.5	QC	5/18/2012 18:58
18MAY12-perc-040.d	G2E080459-2, 2130107, 2.00mL/2.00mL — interference	P1-C1		Sample	5/18/2012 19:14
18MAY12-perc-041.d	G2E080459-3, 2130107, 2.00mL/2.00mL	P1-C2		Sample	5/18/2012 19:31
18MAY12-perc-042.d	G2E080459-4, 2130107, 2.00mL/2.00mL	P1-C3		Sample	5/18/2012 19:47
18MAY12-perc-043.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/18/2012 20:03
18MAY12-perc-044.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/18/2012 20:19
18MAY12-perc-045.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/18/2012 20:35
18MAY12-perc-046.d	G2E080000-MB, 2129078, 2.00mL/2.00mL, 6850-DOD-L	P1-C4		Sample	5/18/2012 20:52
18MAY12-perc-047.d	G2E080000-LCS, 2129078, 2.00mL/2.00mL	P1-C5	LCS_0.5	QC	5/18/2012 21:08
18MAY12-perc-048.d	G2E080000-SMCS, 2129078, 2.00mL/2.00mL	P1-C6	LCS_0.5	QC	5/18/2012 21:24
18MAY12-perc-049.d	G2E020423-2, 2129078, 2.00mL/2.00mL IS LOW	P1-C7		Sample	5/18/2012 21:40
18MAY12-perc-050.d	G2E020423-2MS, 2129078, 2.00mL/2.00mL IS LOW	P1-C8	MS_0.5	QC	5/18/2012 21:57
18MAY12-perc-051.d	G2E020423-2SD, 2129078, 2.00mL/2.00mL IS LOW	P1-C9	MS_0.5	QC	5/18/2012 22:13
18MAY12-perc-052.d	G2E020423-3, 2129078, 2.00mL/2.00mL IS LOW	P1-D1		Sample	5/18/2012 22:29
18MAY12-perc-053.d	G2E030474-2, 2129078, 2.00mL/2.00mL OSR & IS LOW	P1-D2		Sample	5/18/2012 22:45
18MAY12-perc-054.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL Ratio High	P2-C6	CCV5	QC	5/18/2012 23:01
18MAY12-perc-055.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL Ratio High	P2-C4	CCV3	QC	5/18/2012 23:18
18MAY12-perc-056.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL (NA) Ratio Low	P2-C3	LODV	QC	5/18/2012 23:34
18MAY12-perc-057.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/18/2012 23:50
18MAY12-perc-058.d	G2E100000-MB, 2131072, 2.00mL/2.00mL, 6850-L	P1-D3		Sample	5/19/2012 00:06

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

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Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

18MAY12-perc-059.d	G2E100000-LCS, 2131072, 2.00mL/2.00mL	P1-D4	LCS_5	QC	5/19/2012 00:23
18MAY12-perc-060.d	G2E100000-SMCS, 2131072, 2.00mL/2.00mL	P1-D5	LCS_5	QC	5/19/2012 00:39
18MAY12-perc-061.d	G2E040502-1, 2131072, 2.00mL/2.00mL,	P1-D6		Sample	5/19/2012 00:55
18MAY12-perc-062.d	G2E040502-1MS, 2131072, 2.00mL/2.00mL,	P1-D7	MS_5	QC	5/19/2012 01:11
18MAY12-perc-063.d	G2E040502-1SD, 2131072, 2.00mL/2.00mL,	P1-D8	MS_5	QC	5/19/2012 01:27
18MAY12-perc-064.d	G2E040502-2, 2131072, 2.00mL/2.00mL,	P1-D9		Sample	5/19/2012 01:44
18MAY12-perc-065.d	G2E040502-3, 2131072, 2.00mL/2.00mL,	P1-E1		Sample	5/19/2012 02:00
18MAY12-perc-066.d	G2E040502-4, 2131072, 2.00mL/2.00mL,	P1-E2		Sample	5/19/2012 02:16
18MAY12-perc-067.d	G2E040502-5, 2131072, 2.00mL/2.00mL,	P1-E3		Sample	5/19/2012 02:32
18MAY12-perc-068.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/19/2012 02:48
18MAY12-perc-069.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/19/2012 03:05
18MAY12-perc-070.d	G2E040502-6, 2131072, 2.00mL/2.00mL,	P1-E4		Sample	5/19/2012 03:21
18MAY12-perc-071.d	G2E050430-1, 2131072, 2.00mL/2.00mL,	P1-E5		Sample	5/19/2012 03:37
18MAY12-perc-072.d	G2E050430-2, 2131072, 2.00mL/2.00mL,	P1-E6		Sample	5/19/2012 03:53
18MAY12-perc-073.d	G2E050430-3, 2131072, 2.00mL/2.00mL,	P1-E7		Sample	5/19/2012 04:10
18MAY12-perc-074.d	G2E050430-4, 2131072, 2.00mL/2.00mL,	P1-E8		Sample	5/19/2012 04:26
18MAY12-perc-075.d	G2E050430-5, 2131072, 2.00mL/2.00mL,	P1-E9		Sample	5/19/2012 04:42
18MAY12-perc-076.d	G2E050430-6, 2131072, 2.00mL/2.00mL,	P1-F1		Sample	5/19/2012 04:58
18MAY12-perc-077.d	G2E050430-7, 2131072, 2.00mL/2.00mL,	P1-F2		Sample	5/19/2012 05:14
18MAY12-perc-078.d	G2E050430-8, 2131072, 2.00mL/2.00mL,	P1-F3		Sample	5/19/2012 05:31
18MAY12-perc-079.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/19/2012 05:47
18MAY12-perc-080.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/19/2012 06:03
18MAY12-perc-081.d	G2E080483-1, 2131072, 2.00mL/2.00mL,	P1-F4		Sample	5/19/2012 06:19
18MAY12-perc-082.d	G2E080483-2, 2131072, 2.00mL/2.00mL,	P1-F5		Sample	5/19/2012 06:36
18MAY12-perc-083.d	G2E080483-3, 2131072, 2.00mL/2.00mL,	P1-F6		Sample	5/19/2012 06:52
18MAY12-perc-084.d	G2E080483-4, 2131072, 2.00mL/2.00mL,	P1-F7		Sample	5/19/2012 07:08
18MAY12-perc-085.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/19/2012 07:24
18MAY12-perc-086.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/19/2012 07:40
18MAY12-perc-087.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/19/2012 07:57

TestAmerica West Sacramento (916) 373-5600 Page 1369 of 1827
06/08/2012 36 of 126

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Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

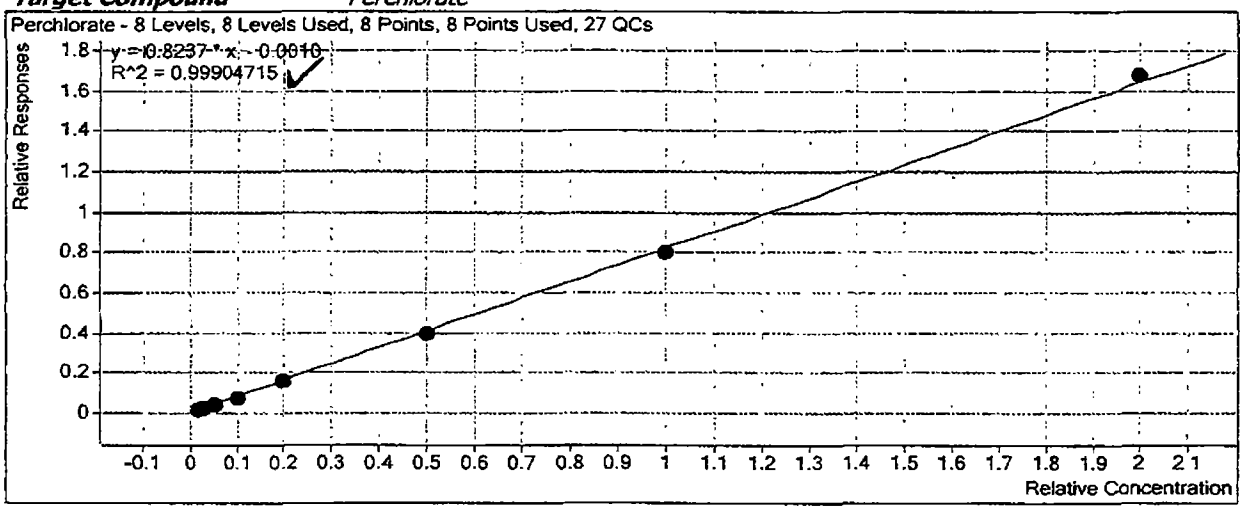
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml		
Analysis Time	5/21/2012 8:47 AM	**Analyst Name**	lores
Report Time	5/21/2012 8:52 AM	**Reporter Name**	lores
Last Calib Update	5/21/2012 8:45 AM	**Batch State**	processed

Calibration Info Linear Fit, 1/x weighting, and origin ignored.

mr 5/23/12

Target Compound *Perchlorate*



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Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
18MAY12-perc-005.d	1	☑	3969	0.8513	0.1500
18MAY12-perc-006.d	2	☑	6053	0.8368	0.3000
18MAY12-perc-007.d	3	☑	9177	0.7700	0.5000
18MAY12-perc-008.d	4	☑	17610	0.7457	1.0000
18MAY12-perc-009.d	5	☑	37167	0.8020	2.0000
18MAY12-perc-010.d	6	☑	88075	0.7932	5.0000
18MAY12-perc-011.d	7	☑	170558	0.8063	10.0000
18MAY12-perc-012.d	8	☑	316326	0.8429	20.0000
18MAY12-perc-016.d	CCV3	☑	10056	0.8085	0.5000
18MAY12-perc-031.d	CCV3	☑	8693	0.7663	0.5000
18MAY12-perc-055.d	CCV3	☑	7816	0.7912	0.5000
18MAY12-perc-086.d	CCV3	☑	8158	0.7883	0.5000
18MAY12-perc-030.d	CCV5	☑	34512	0.7684	2.0000
18MAY12-perc-054.d	CCV5	☑	22242	0.7998	2.0000
18MAY12-perc-079.d	CCV5	☑	27020	0.7886	2.0000
18MAY12-perc-015.d	CCV6	☑	86568	0.7831	5.0000
18MAY12-perc-043.d	CCV6	☑	77174	0.7977	5.0000
18MAY12-perc-068.d	CCV6	☑	71153	0.7956	5.0000
18MAY12-perc-085.d	CCV6	☑	65750	0.7871	5.0000
18MAY12-perc-014.d	ICV	☑	96145	0.8125	5.0000
18MAY12-perc-035.d	LCS_0.5	☑	6648	0.6891	0.5000
18MAY12-perc-036.d	LCS_0.5	☑	6940	0.7513	0.5000
18MAY12-perc-047.d	LCS_0.5	☑	5210	0.7880	0.5000
18MAY12-perc-048.d	LCS_0.5	☑	5803	0.8101	0.5000
18MAY12-perc-059.d	LCS_5	☑	55828	0.7622	5.0000
18MAY12-perc-060.d	LCS_5	☑	63429	0.8007	5.0000
18MAY12-perc-032.d	LODV	☑	2461	0.7245	0.1500
18MAY12-perc-044.d	LODV	☑	2601	0.7890	0.1500
18MAY12-perc-056.d	LODV	☑	1992	0.7088	0.1500
18MAY12-perc-038.d	MS_0.5	☑	6338	0.7206	0.5000
18MAY12-perc-039.d	MS_0.5	☑	6249	0.7113	0.5000
18MAY12-perc-050.d	MS_0.5	☑	3393	0.8015	0.5000
18MAY12-perc-051.d	MS_0.5	☑	2826	0.7462	0.5000
18MAY12-perc-062.d	MS_5	☑	57289	0.8140	5.0000
18MAY12-perc-063.d	MS_5	☑	57079	0.7808	5.0000

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound *Perchlorate-(35Cl1804)*

Calibration STD	Level	Enabled	Response	RF	Exp Conc
18MAY12-perc-005.d	1	☑	310779	31077.8537	10.0000
18MAY12-perc-006.d	2	☑	241108	24110.8208	10.0000
18MAY12-perc-007.d	3	☑	238377	23837.7147	10.0000
18MAY12-perc-008.d	4	☑	236171	23617.0812	10.0000
18MAY12-perc-009.d	5	☑	231709	23170.8571	10.0000
18MAY12-perc-010.d	6	☑	222077	22207.6968	10.0000
18MAY12-perc-011.d	7	☑	211520	21151.9955	10.0000
18MAY12-perc-012.d	8	☑	187648	18764.7626	10.0000
18MAY12-perc-016.d	CCV3	☑	248758	24875.7829	10.0000
18MAY12-perc-031.d	CCV3	☑	226897	22689.7387	10.0000
18MAY12-perc-055.d	CCV3	☑	197583	19758.3447	10.0000
18MAY12-perc-086.d	CCV3	☑	206969	20696.9163	10.0000
18MAY12-perc-030.d	CCV5	☑	224562	22456.2132	10.0000
18MAY12-perc-054.d	CCV5	☑	139050	13904.9827	10.0000
18MAY12-perc-079.d	CCV5	☑	171313	17131.2738	10.0000
18MAY12-perc-015.d	CCV6	☑	221095	22109.5088	10.0000
18MAY12-perc-043.d	CCV6	☑	193483	19348.2621	10.0000
18MAY12-perc-068.d	CCV6	☑	178874	17887.3622	10.0000
18MAY12-perc-085.d	CCV6	☑	167072	16707.1851	10.0000
18MAY12-perc-014.d	ICV	☑	236660	23665.9711	10.0000
18MAY12-perc-035.d	LCS_0.5	☑	192957	19295.6819	10.0000
18MAY12-perc-036.d	LCS_0.5	☑	184730	18473.0337	10.0000
18MAY12-perc-047.d	LCS_0.5	☑	132232	13223.1902	10.0000
18MAY12-perc-048.d	LCS_0.5	☑	143271	14327.1474	10.0000
18MAY12-perc-059.d	LCS_5	☑	146497	14649.7461	10.0000
18MAY12-perc-060.d	LCS_5	☑	158439	15843.8782	10.0000
18MAY12-perc-032.d	LODV	☑	226476	22647.6013	10.0000
18MAY12-perc-044.d	LODV	☑	219790	21978.9653	10.0000
18MAY12-perc-056.d	LODV	☑	187343	18734.2797	10.0000
18MAY12-perc-038.d	MS_0.5	☑	175886	17588.6090	10.0000
18MAY12-perc-039.d	MS_0.5	☑	175691	17569.0519	10.0000
18MAY12-perc-050.d	MS_0.5	☑	84661	8466.1451	10.0000
18MAY12-perc-051.d	MS_0.5	☑	75749	7574.8817	10.0000
18MAY12-perc-062.d	MS_5	☑	140755	14075.4547	10.0000
18MAY12-perc-063.d	MS_5	☑	146213	14621.2872	10.0000

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

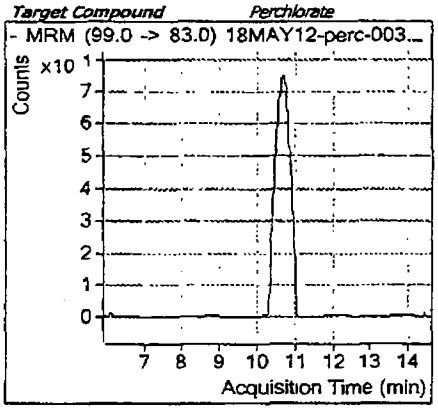
Acquisition Date - Time	5/18/2012 09:14
Analyst	lores
Data File	18MAY12-perc-003.d
Acquisition Method	PercMRM_2.m
Sample Name	Blank No IS
Sample Identification	BLANK
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C Iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-A5
Exp. Concentration	
Injection Volume	50

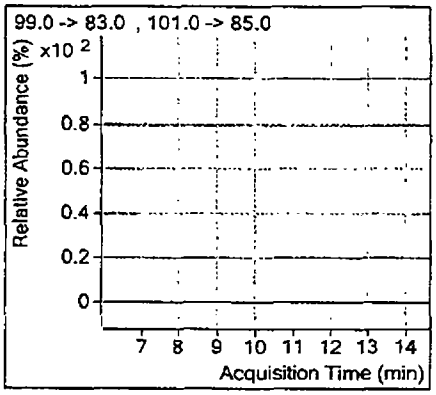
Perchlorate ND

m 5/23/12

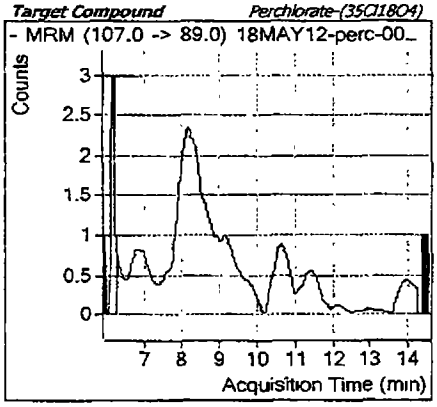
Compound Graphics

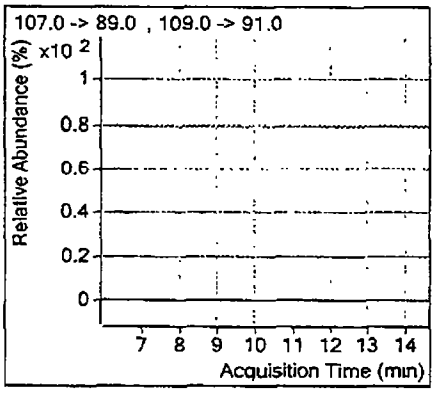
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 09:30
Analyst	lores
Data File	18MAY12-perc-004.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

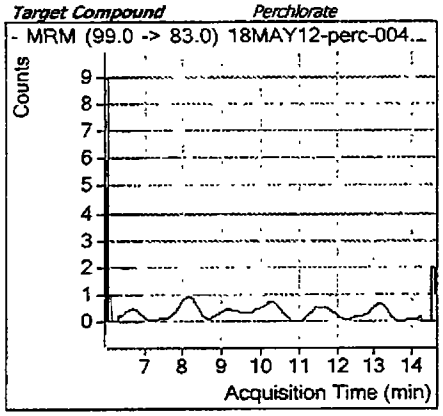
Quantitation Results

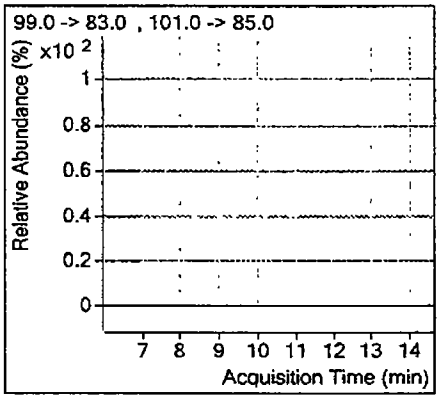
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.308	256637	107	89			1
						Perchlorate ND		

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	80774	109	91	3.18	2.30	3.80	In Control

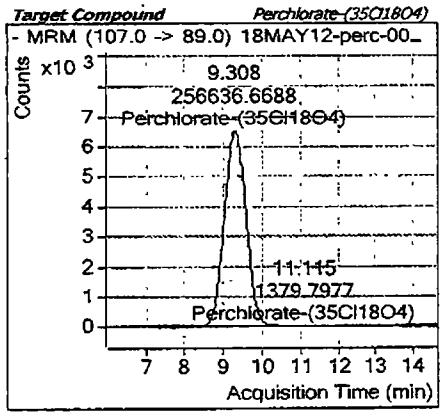
Compound Graphics

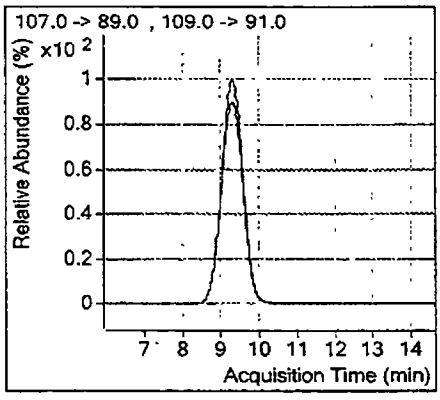
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 09:47
Analyst	lores
Data File	18MAY12-perc-005.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L1_00001 12LCMS0064, 0.15ng/mL
Sample Identification	Std001
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B2
Exp. Concentration	0.15
Injection Volume	50

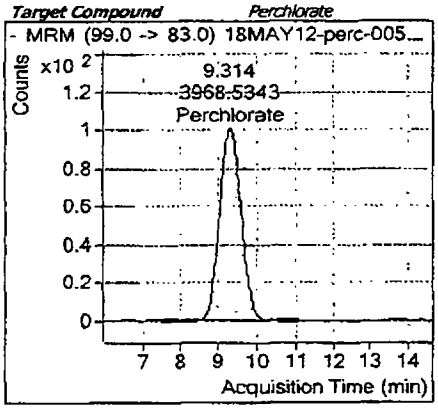
Quantitation Results

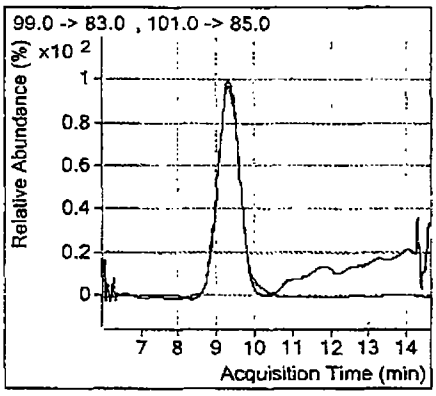
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.314	3969	99	83	**0.16741**	**0.16741**	1
Perchlorate-(35Cl18O4)	ISTD	9.307	310779	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1408	101	85	2.82	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	97668	109	91	3.18	2.30	3.80	In Control

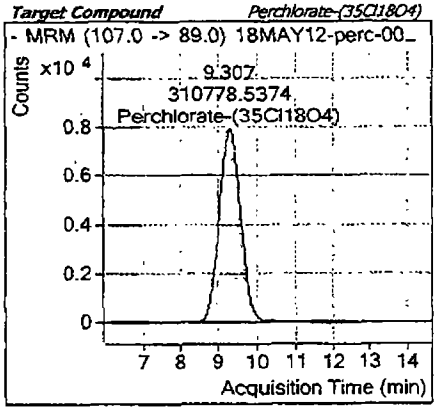
Compound Graphics

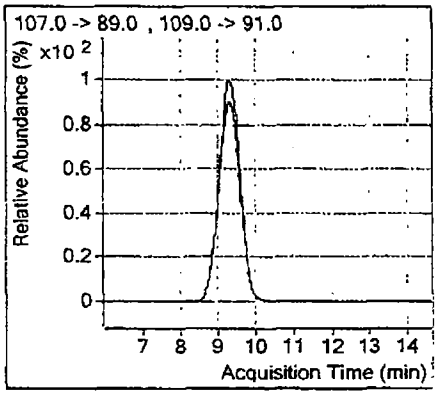
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 10:03
Analyst	lores
Data File	18MAY12-perc-006.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L2_00001 12LCMS0065, 0.30ng/mL
Sample Identification	Std002
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B3
Exp. Concentration	0 30
Injection Volume	50

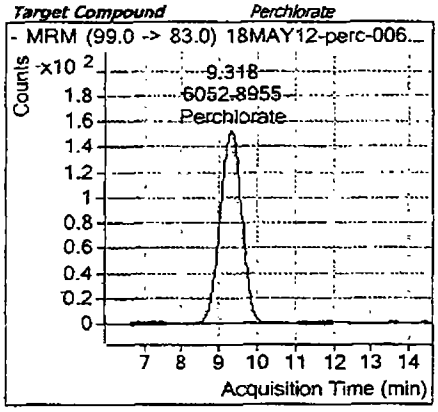
Quantitation Results

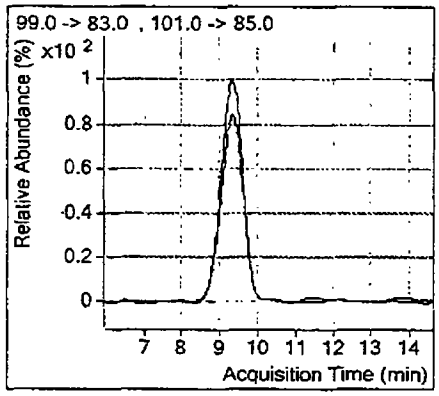
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.318	6053	99	83	0.31716	0.31716	1
Perchlorate-(35Cl18O4)	ISTD	9 308	241108	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1803	101	85	3.36	2.30	3 80	In Control
Perchlorate-(35Cl18O4)	74510	109	91	3.24	2.30	3.80	In Control

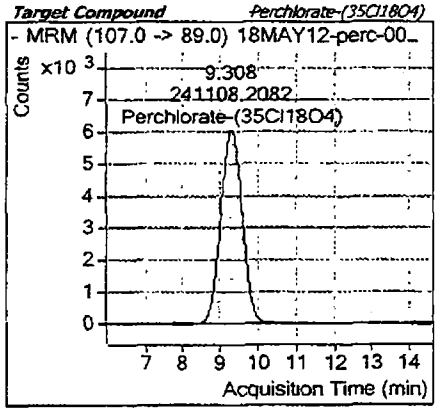
Compound Graphics

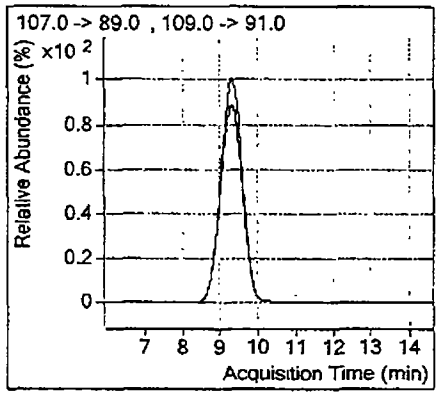
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 10:19
Analyst	lores
Data File	18MAY12-perc-007.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	Std003
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B4
Exp. Concentration	0.50
Injection Volume	50

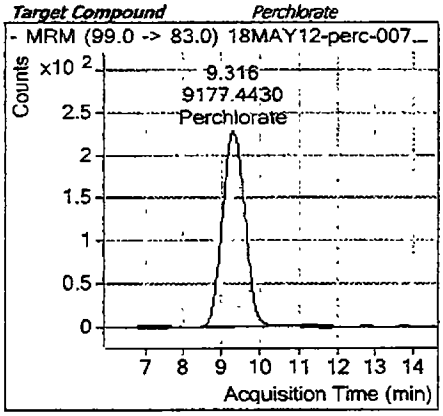
Quantitation Results

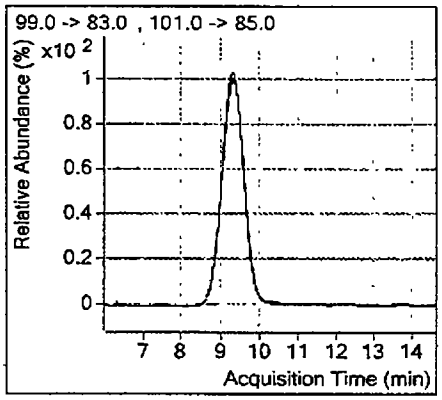
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 316	9177	99	83	0.47979	0.47979	1
Perchlorate-(35Cl18O4)	ISTD	9 311	238377	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	3273	101	85	2.80	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	75002	109	91	3.18	2 30	3.80	In Control

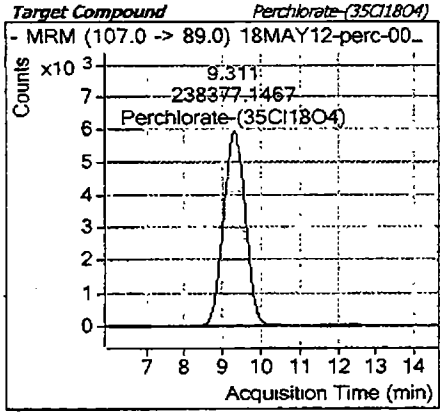
Compound Graphics

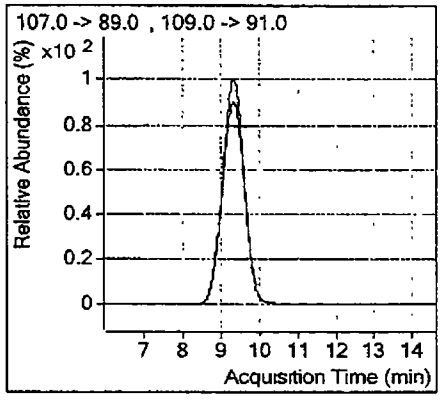
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch xml

Analysis Information

Acquisition Date - Time	5/18/2012 10:35
Analyst	lores
Data File	18MAY12-perc-008.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L4_00001 12LCMS0067, 1.0ng/mL
Sample Identification	Std004
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B5
Exp. Concentration	1.00
Injection Volume	50

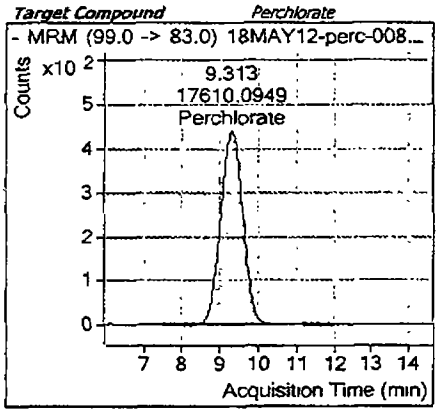
Quantitation Results

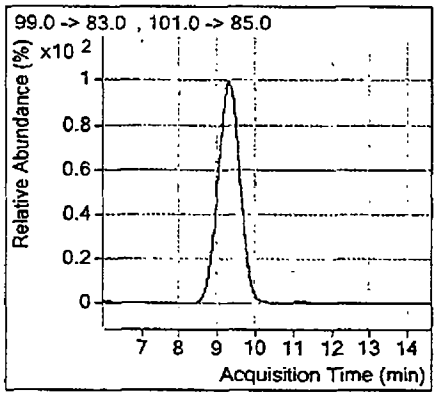
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.313	17610	99	83	0.91765	0.91765	1
Perchlorate-(35Cl18O4)	ISTD	9.313	236171	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	6180	101	85	2.85	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	71913	109	91	3.28	2.30	3.80	In Control

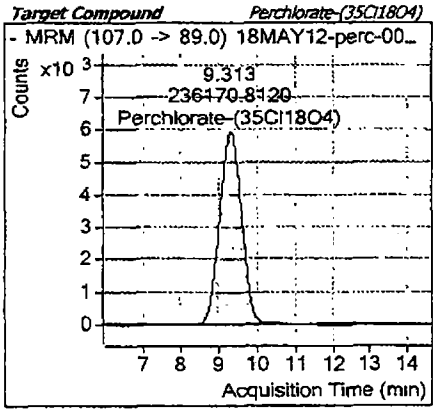
Compound Graphics

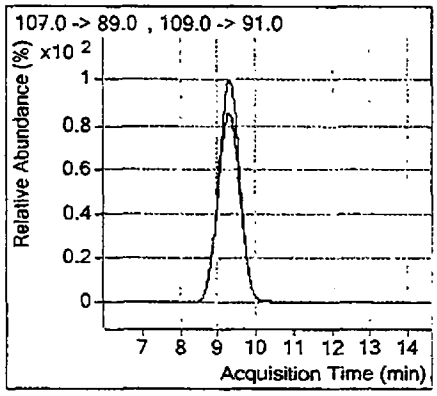
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 10:52
Analyst	lores
Data File	18MAY12-perc-009.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2.0ng/mL
Sample Identification	Std005
Sample Information	IC-Pak Anion HR 75x4.6mm T=40*C iso-45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B6
Exp. Concentration	2.00
Injection Volume	50

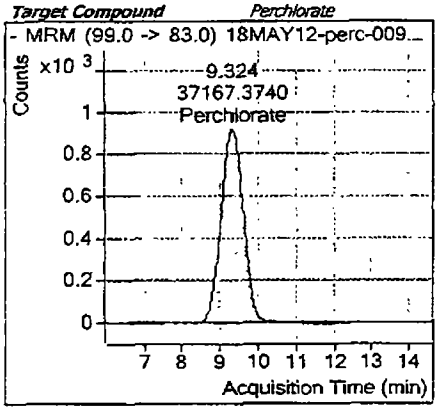
Quantitation Results

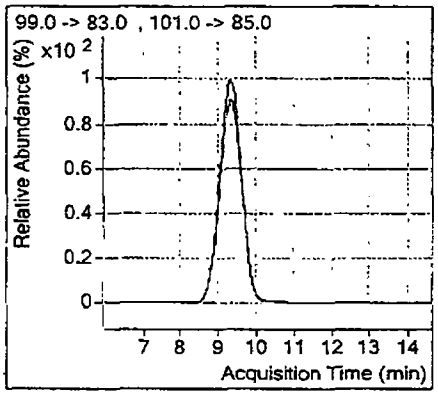
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.324	37167	99	83	1.95983	1.95983	1
Perchlorate-(35Cl18O4)	ISTD	9.317	231709	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	11870	101	85	3.13	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	71173	109	91	3.26	2.30	3.80	In Control

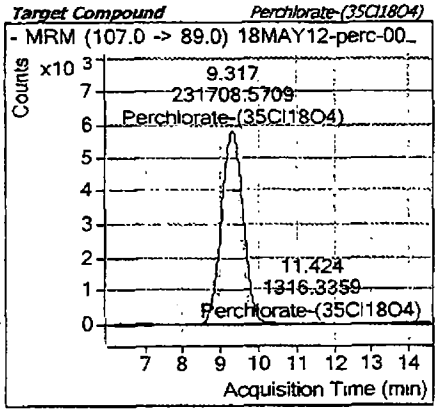
Compound Graphics

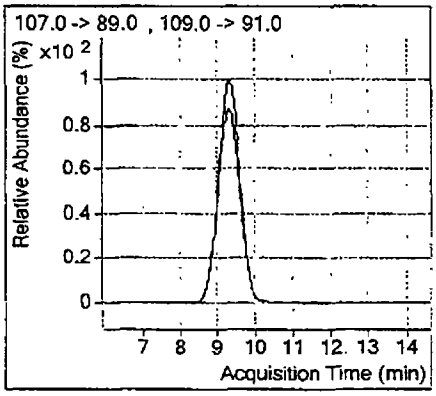
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/23/12

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 11:08
Analyst	lores
Data File	18MAY12-perc-010.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	Std006
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B7
Exp. Concentration	5.00
Injection Volume	50

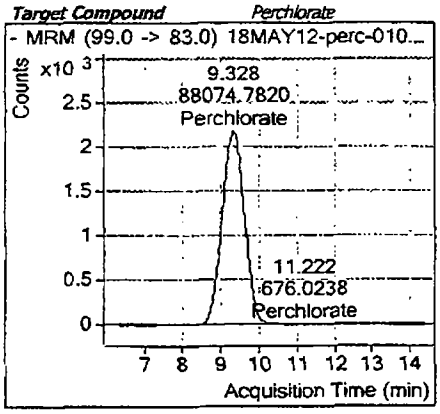
Quantitation Results

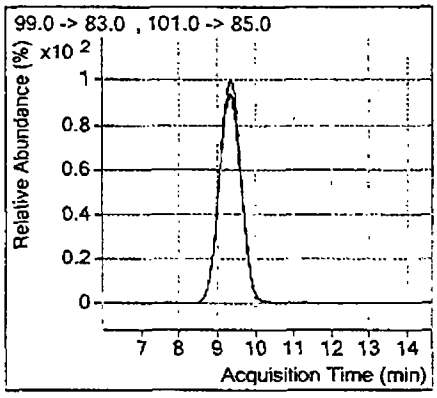
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.328	88075	99	83	4.82737	4.82737	1
Perchlorate-(35Cl18O4)	ISTD	9 320	222077	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	28644	101	85	3.07	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	69560	109	91	3.19	2.30	3.80	In Control

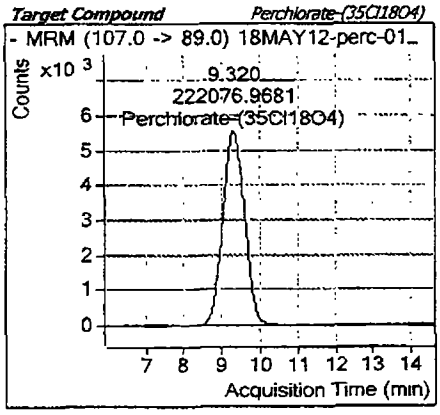
Compound Graphics

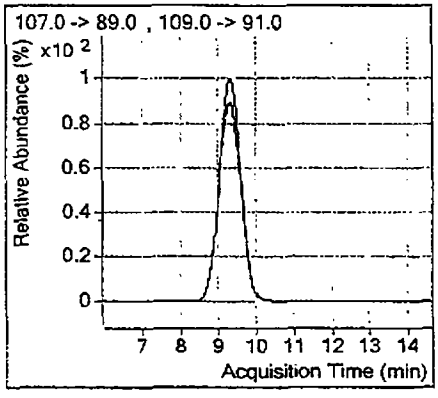
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MS 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 11:24
Analyst	lores
Data File	18MAY12-perc-011.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L7_00001 12LCMS0070, 10ng/mL
Sample Identification	Std007
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B8
Exp. Concentration	10.00
Injection Volume	50

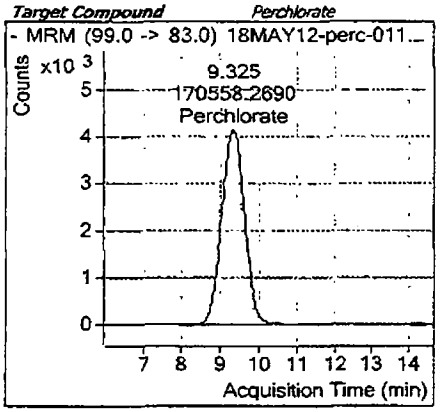
Quantitation Results

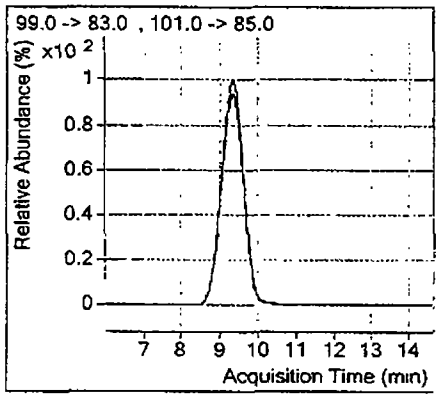
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.325	170558	99	83	**9.80208**	**9.80208**	1
Perchlorate-(35Cl18O4)	ISTD	9.319	211520	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	55679	101	85	3.06	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	66480	109	91	3.18	2.30	3.80	In Control

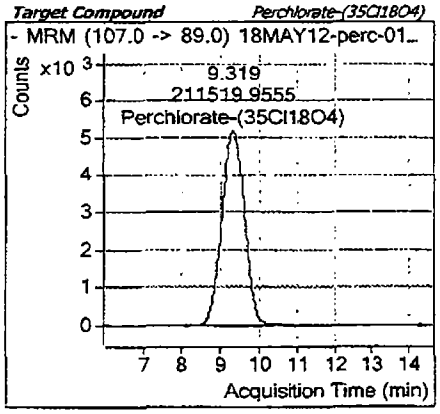
Compound Graphics

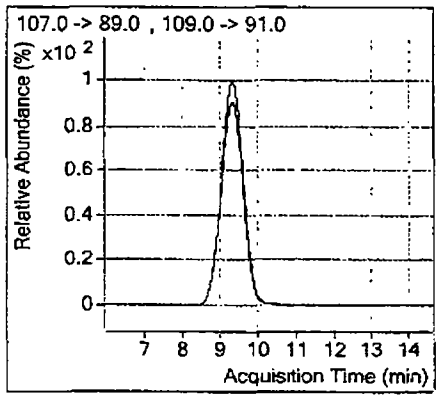
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





ms 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 11:40
Analyst	lores
Data File	18MAY12-perc-012.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L8_00001 12LCMS0071, 20ng/mL
Sample Identification	Std008
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B9
Exp. Concentration	20.00
Injection Volume	50

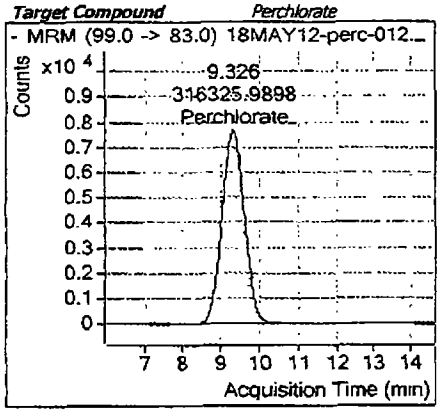
Quantitation Results

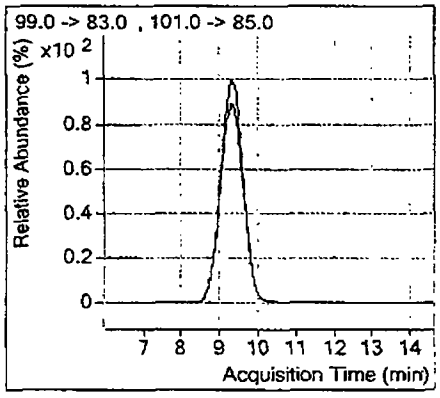
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.326	316326	99	83	20.47871	20.47871	1
Perchlorate-(35Cl18O4)	ISTD	9.317	187648	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	99305	101	85	3.19	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	60609	109	91	3.10	2.30	3.80	In Control

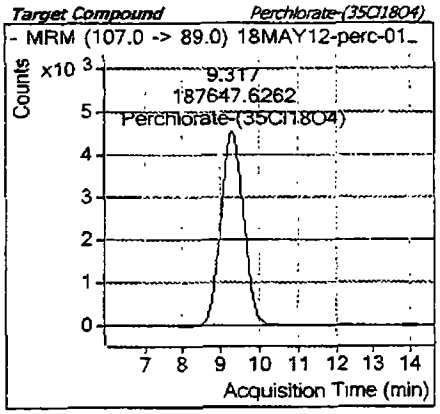
Compound Graphics

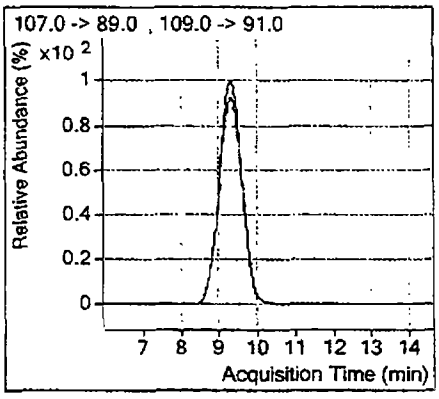
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 11:56
Analyst	lores
Data File	18MAY12-perc-013 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

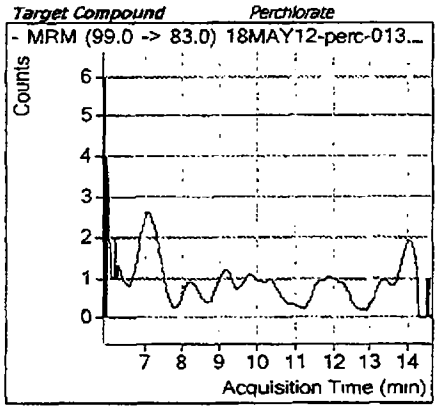
Quantitation Results

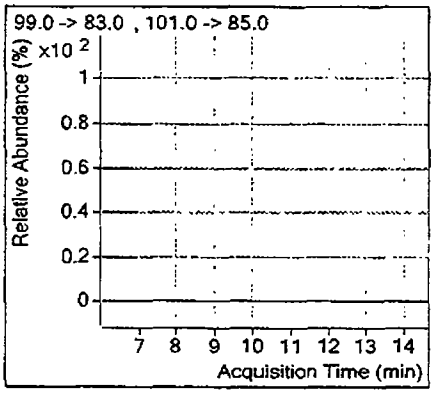
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.322	234419	107	89			1
						Perchlorate ND		

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	71619	109	91	3.27	2.30	3.80	In Control

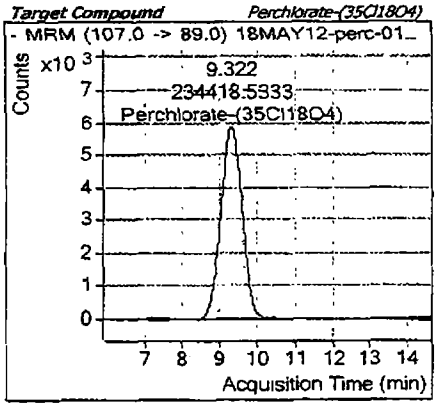
Compound Graphics

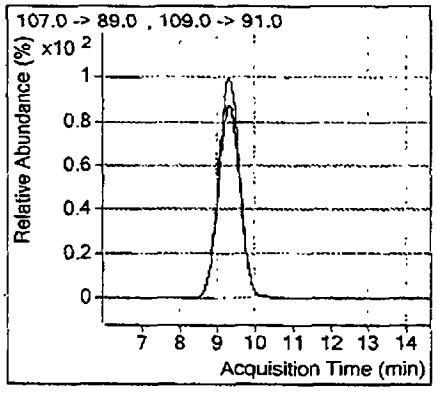
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MS 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 12:13
Analyst	lores
Data File	18MAY12-perc-014.d
Acqusition Method	PercMRM_2.m
Sample Name	LC6850IC_00001 12LCMS0073, 5.0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5.00
Injection Volume	50

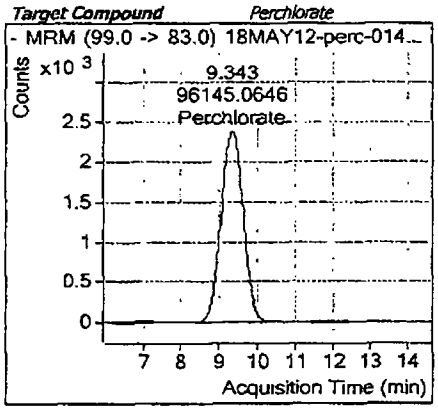
Quantitation Results

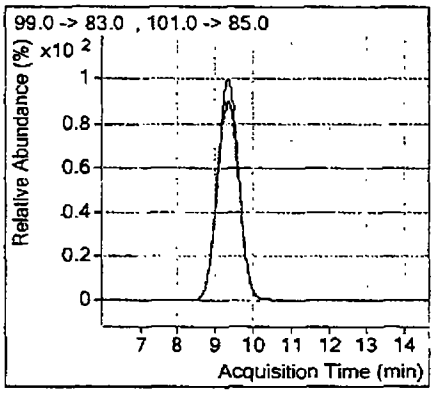
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.343	96145	99	83	4.94469	4.94469	1
Perchlorate-(35Cl18O4)	ISTD	9.334	236660	107	89			1
							-1.1 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	30302	101	85	3.17	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	73853	109	91	3.20	2.30	3.80	In Control

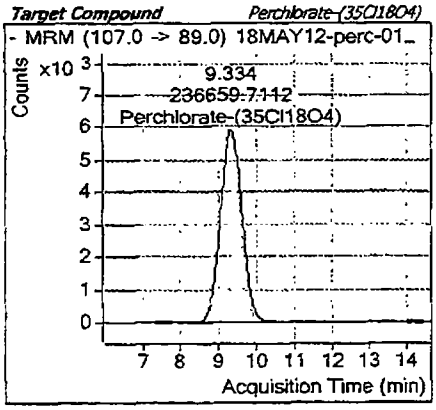
Compound Graphics

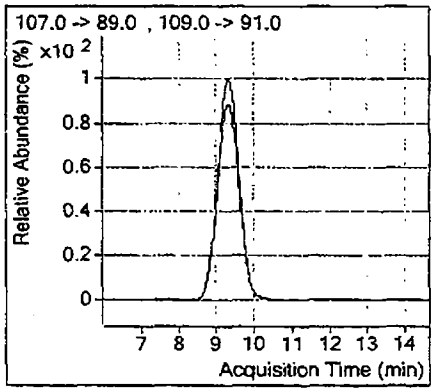
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MS 5/23/12

CCAL Data

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 23:01
Analyst	lores
Data File	18MAY12-perc-054 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2 00
Injection Volume	50

Quantitation Results

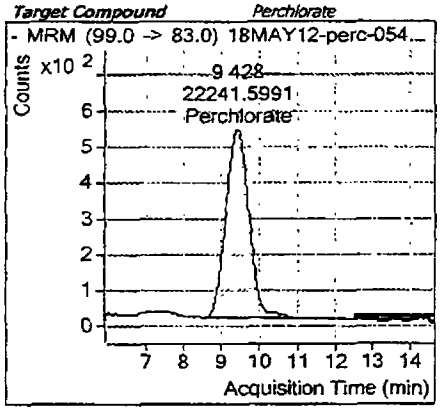
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 428	22242	99	83	1.95435	1.95435	1
Perchlorate-(35Cl18O4)	ISTD	9 423	139050	107	89			1
							-2.3 % Deviation	

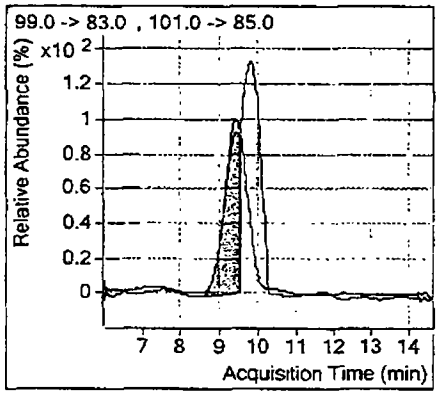
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max		
Perchlorate	4714	101	85	4.72	2 30	3.8[illegible]	MI	High
Perchlorate-(35Cl18O4)	43943	109	91	3 16	2.30	3 8[illegible]		In Control

m 5/23/12

Compound Graphics

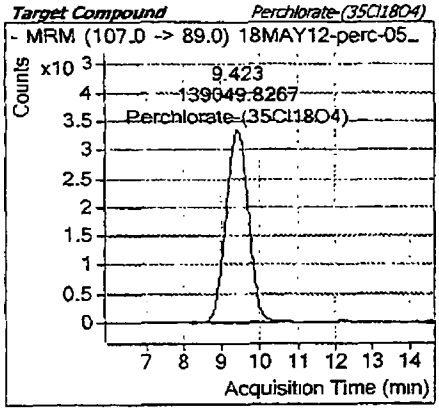
Target Compound *Perchlorate*

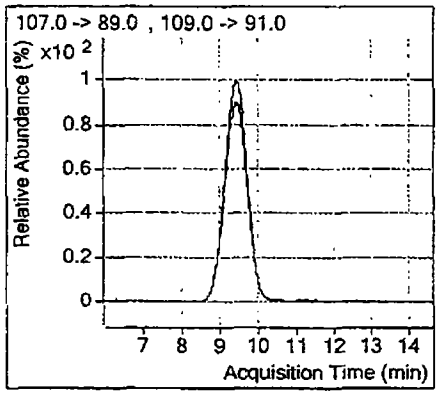




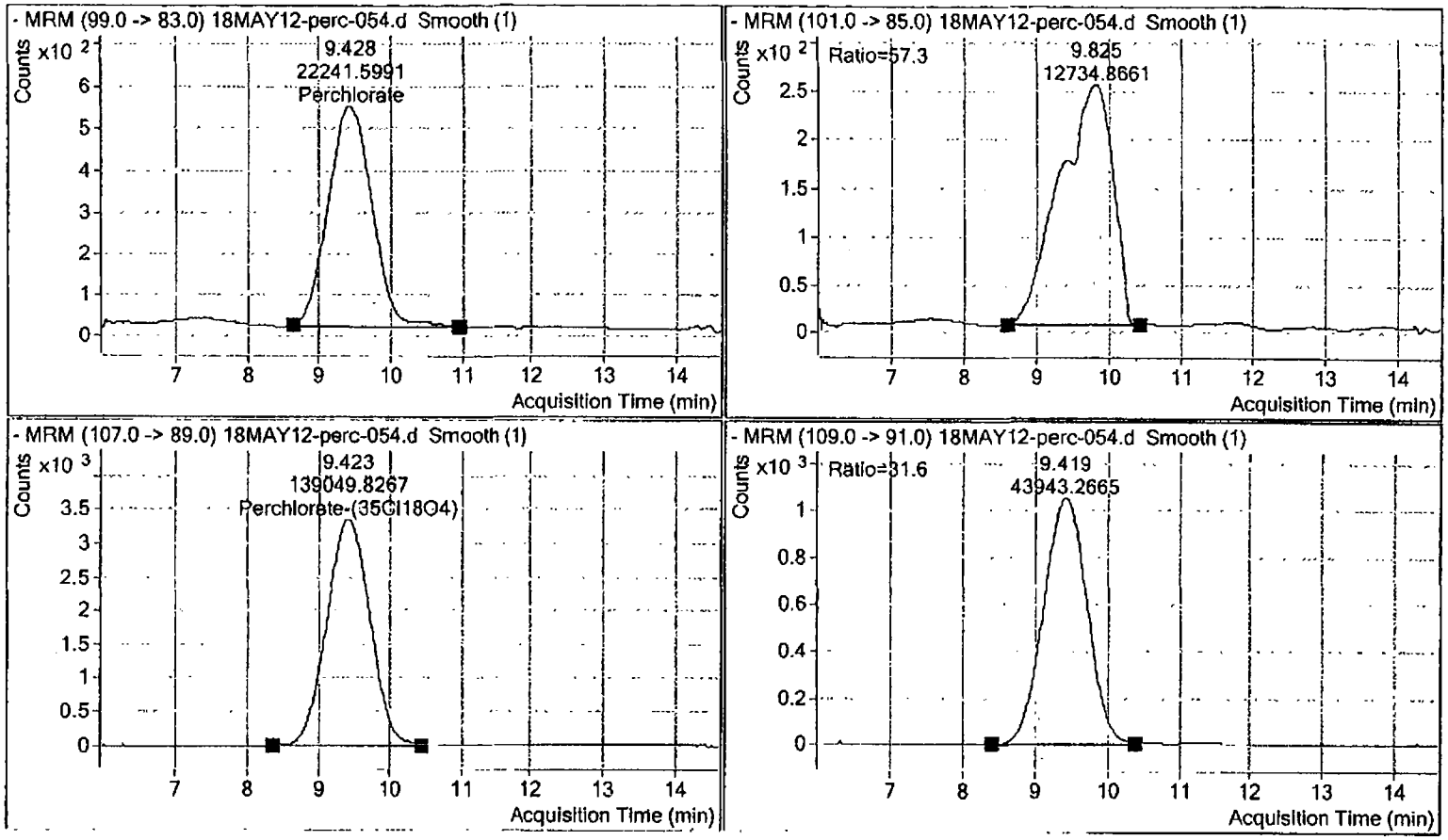
Ratio high

Target Compound *Perchlorate-(35Cl18O4)*

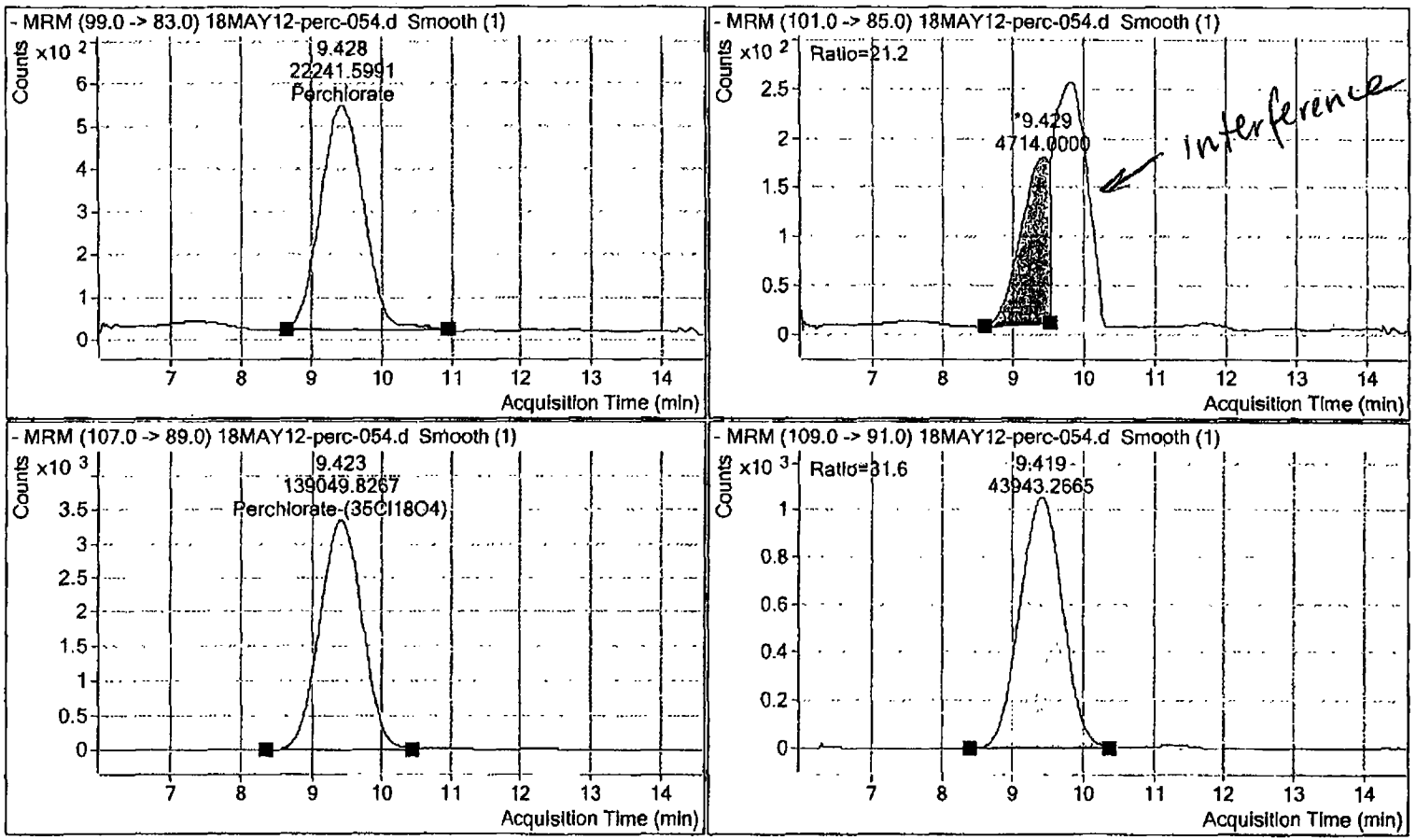




Before MI - MS 5/23/12



After MI
BLC. 5/23/12



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/18/2012 23:18
Analyst	lores
Data File	18MAY12-perc-055.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

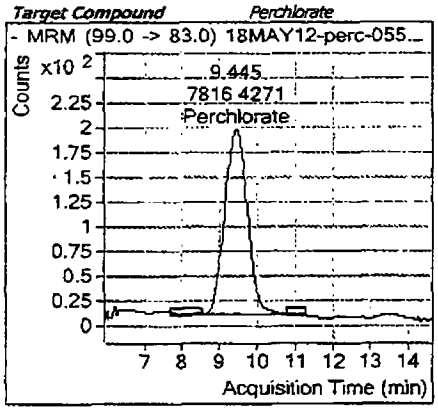
Quantitation Results

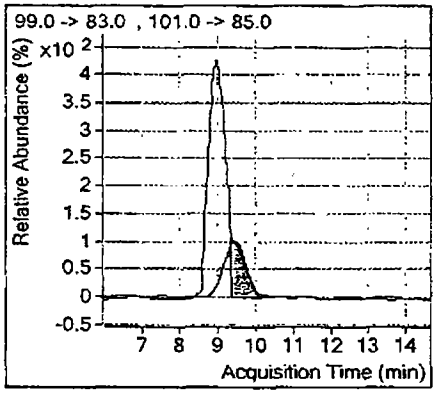
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.445	7816	99	83	0.49266	0.49266	1
Perchlorate-(35Cl18O4)	ISTD	9.426	197583	107	89			1
							-1.5 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1632	101	85	4.79	2.30	3.80	High
Perchlorate-(35Cl18O4)	61753	109	91	3.20	2.30	3.80	In Control

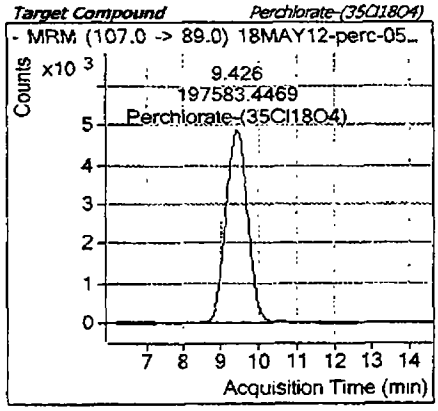
Compound Graphics

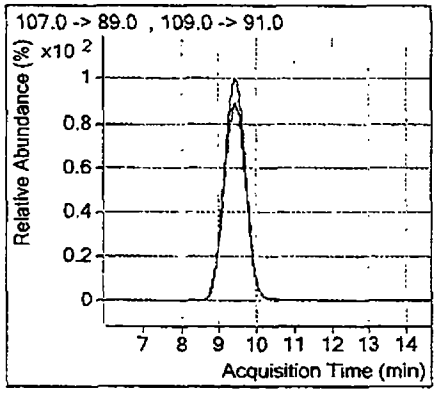
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*

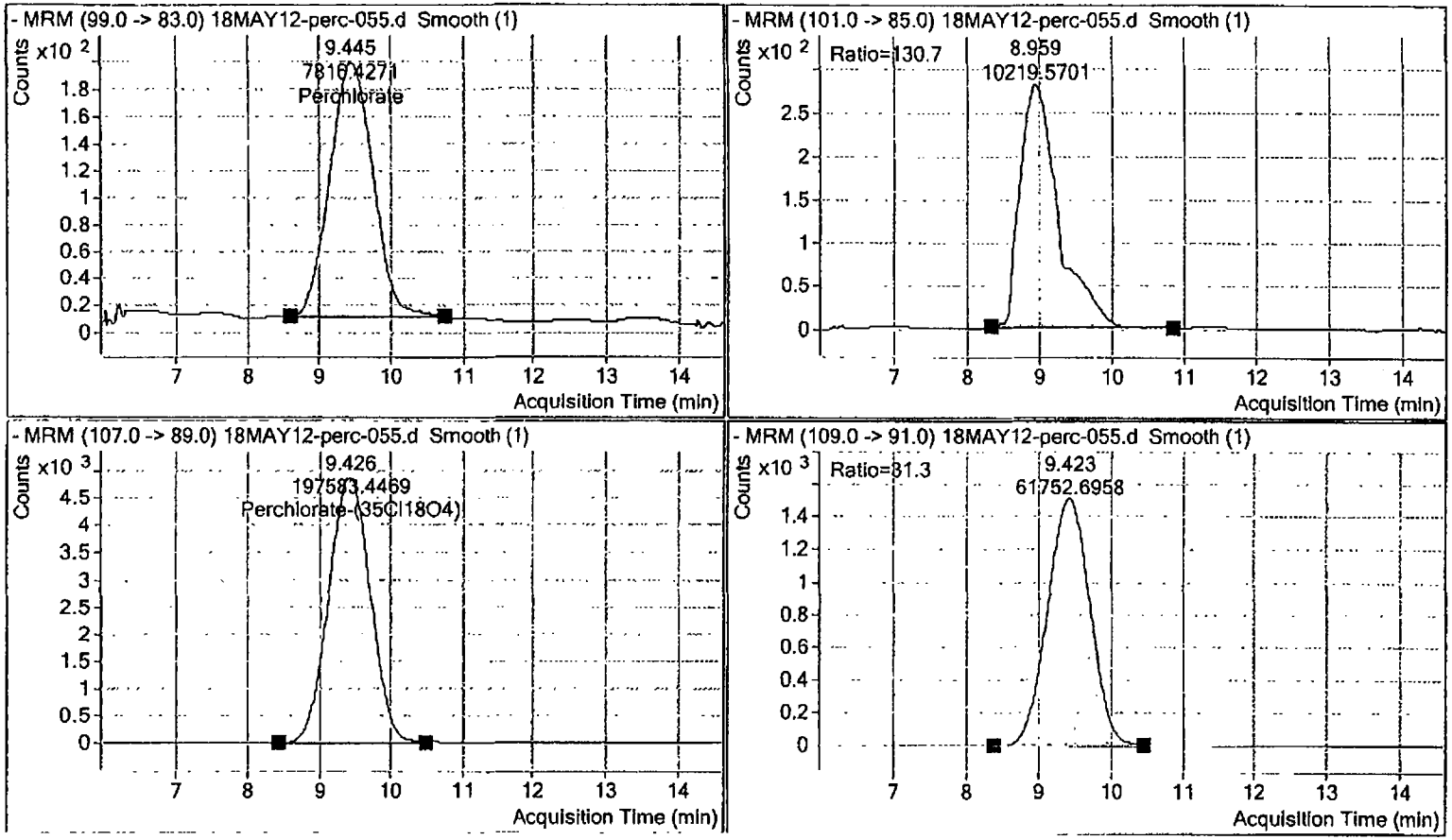




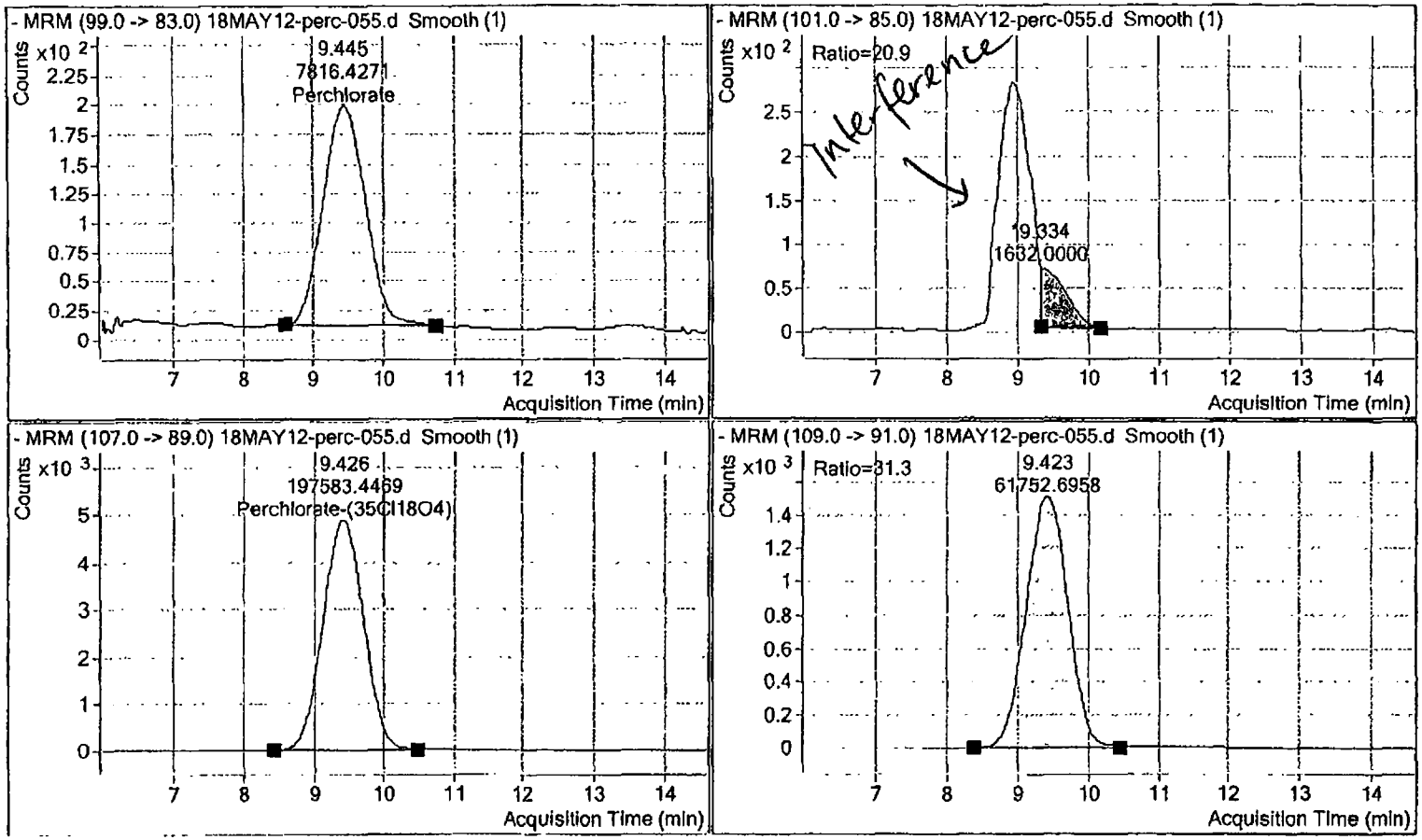
m 5/23/12

Ratio High.

Before MI. ms 5/23/12



After WLI. BLC. 5/23/12



Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

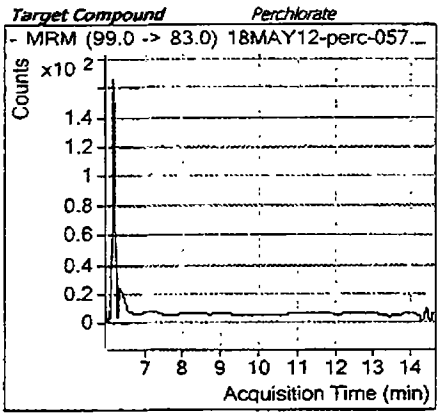
Acquisition Date - Time	5/18/2012 23:50
Analyst	lores
Data File	18MAY12-perc-057 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

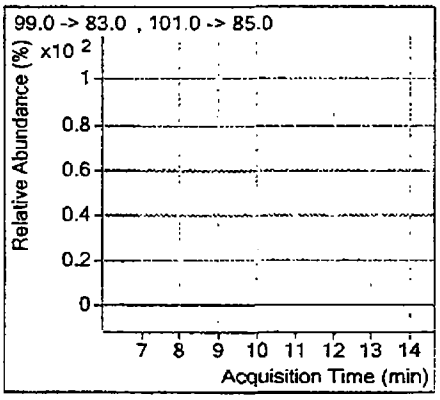
Quantitation Results

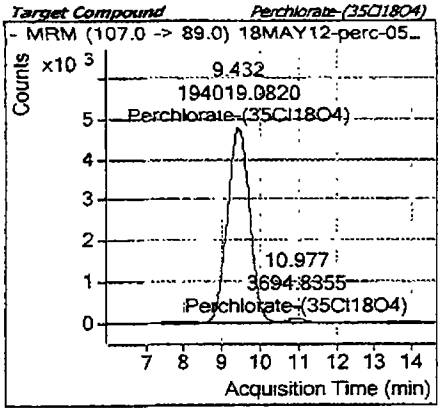
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.432	194019	107	89			1
						Perchlorate ND		

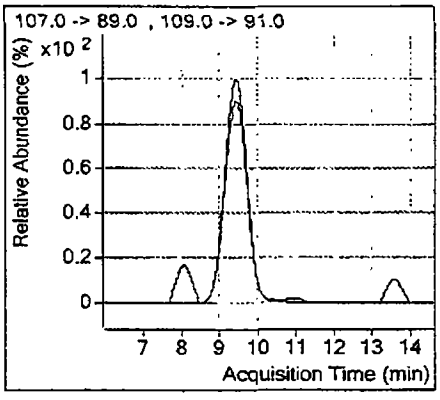
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	61831	109	91	3.14	2.30	3.80	In Control

Compound Graphics









m 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 02:48
Analyst	lores
Data File	18MAY12-perc-068.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5.0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5.00
Injection Volume	50

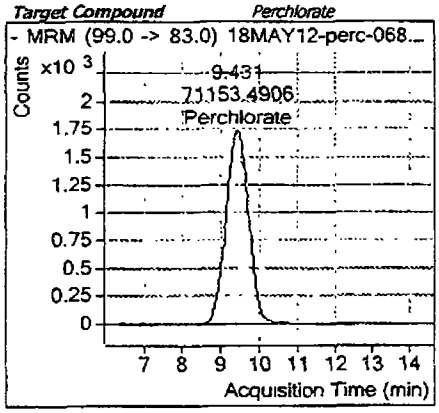
Quantitation Results

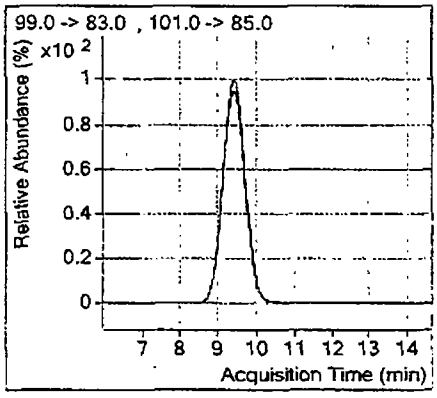
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.431	71153	99	83	4.84183	4.84183	1
Perchlorate-(35Cl18O4)	ISTD	9.420	178874	107	89			1
							-3.2 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	23444	101	85	3.04	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	56050	109	91	3.19	2.30	3.80	In Control

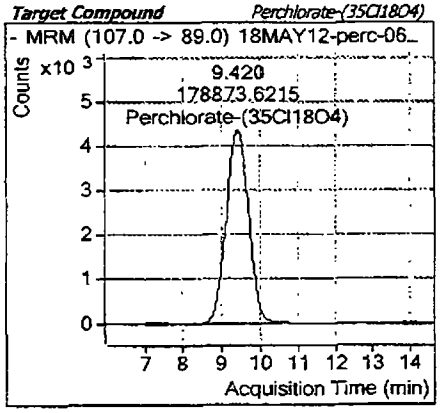
Compound Graphics

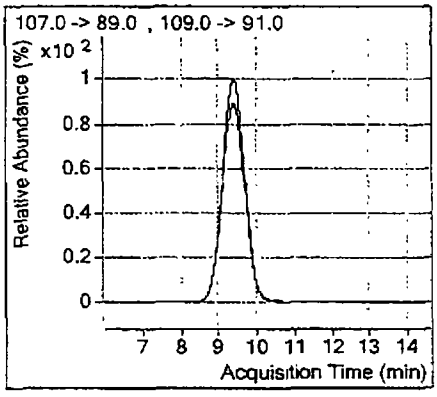
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MT 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 03:05
Analyst	lores
Data File	18MAY12-perc-069.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

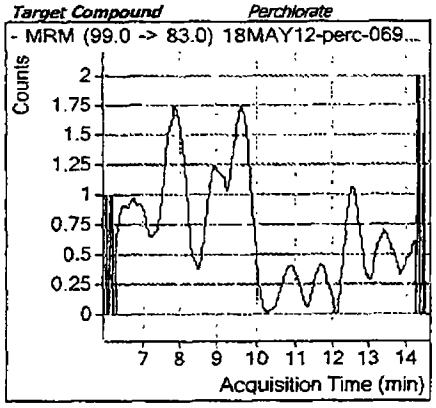
Quantitation Results

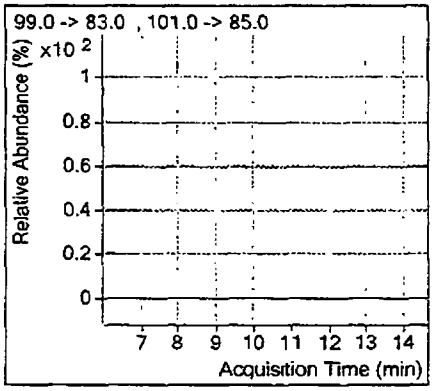
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.450	200070	107	89			1
						Perchlorate ND		

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	62951	109	91	3.18	2.30	3.80	In Control

Compound Graphics

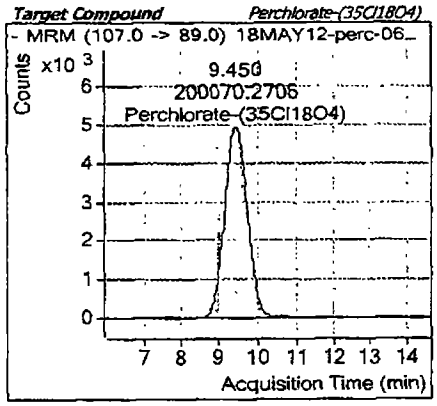
Target Compound *Perchlorate*

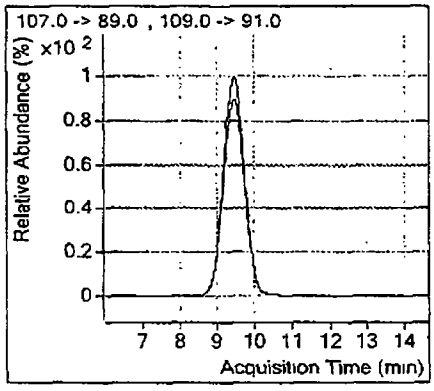




m 5/23/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 05:47
Analyst	lores
Data File	18MAY12-perc-079.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2 00
Injection Volume	50

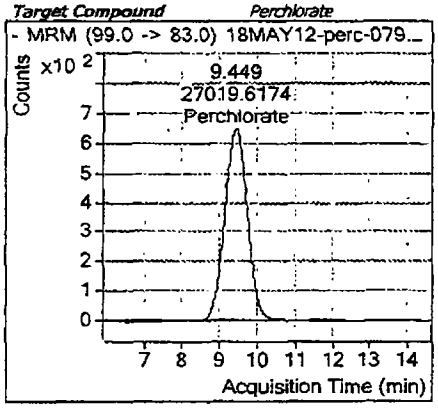
Quantitation Results

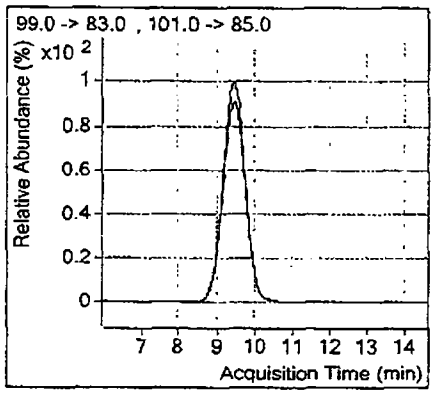
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.449	27020	99	83	1.92723	1.92723	1
Perchlorate-(35Cl18O4)	ISTD	9.439	171313	107	89			1
							-3.6 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8572	101	85	3 15	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	54012	109	91	3 17	2.30	3.80	In Control

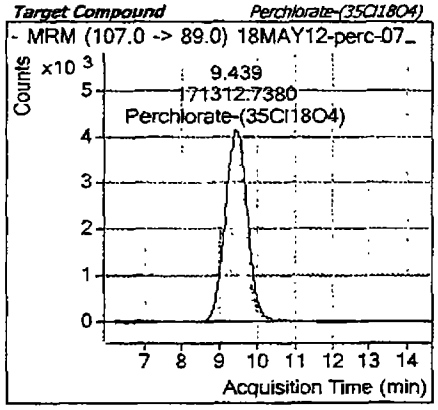
Compound Graphics

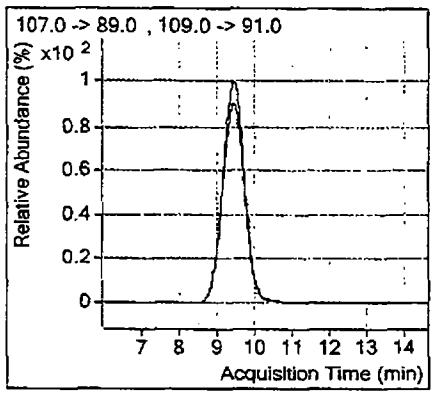
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MS 5/23/12

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 06:03
Analyst	lores
Data File	18MAY12-perc-080 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

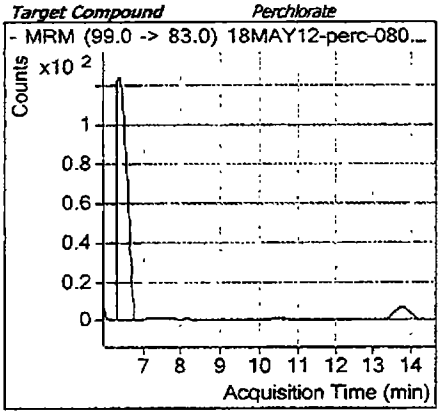
Quantitation Results

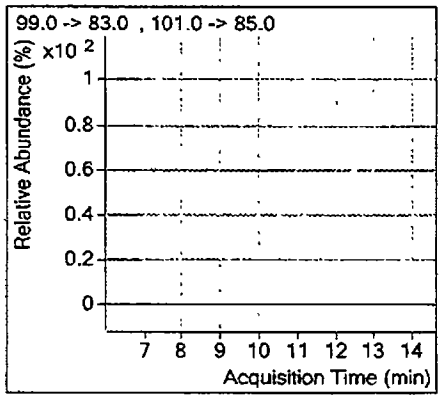
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.471	190189	107	89			1
						Perchlorate ND		

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	60330	109	91	3.15	2.30	3.80	In Control

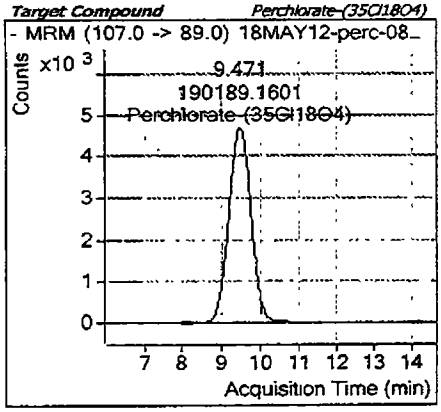
Compound Graphics

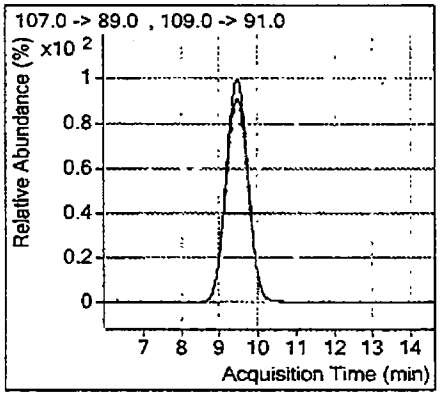
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





ms 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 07:24
Analyst	lores
Data File	18MAY12-perc-085.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5.0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5 00
Injection Volume	50

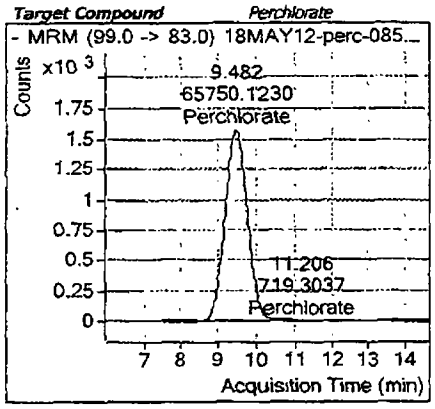
Quantitation Results

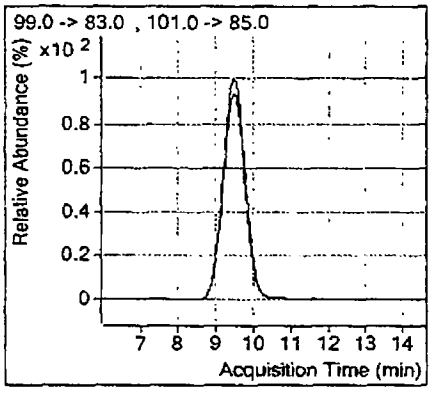
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9.482	65750	99	83	4.79032	4.79032	1
Perchlorate-(35Cl18O4)	ISTD	9.476	167072	107	89			1
							-4.2 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	21131	101	85	3.11	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	51346	109	91	3.25	2.30	3 80	In Control

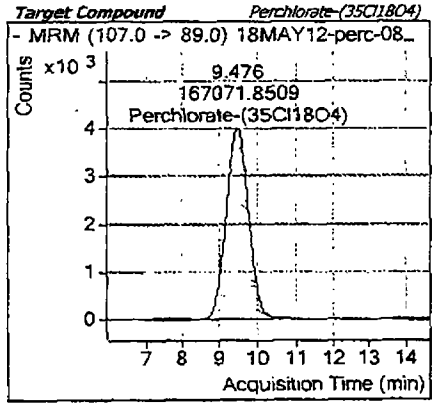
Compound Graphics

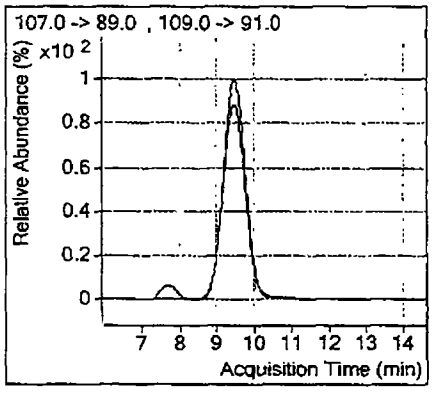
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/23/12

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 07:40
Analyst	lores
Data File	18MAY12-perc-086.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

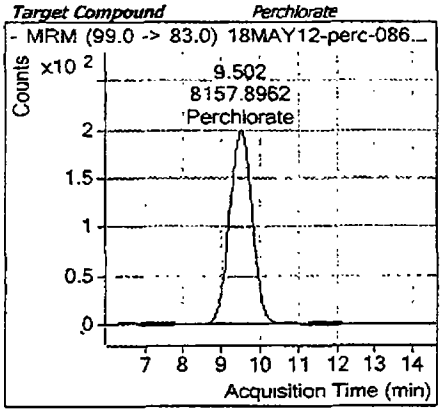
Quantitation Results

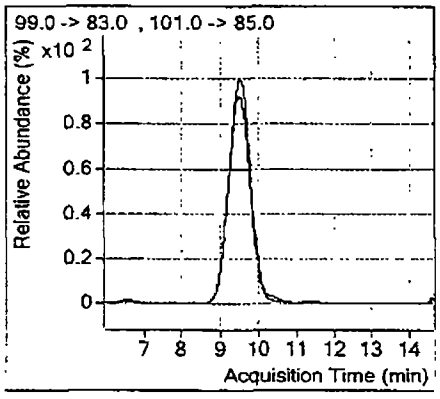
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	9 502	8158	99	83	0.49091	0.49091	1
Perchlorate-(35Cl18O4)	ISTD	9.486	206969	107	89			1
							-1.8 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2635	101	85	3.10	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	64947	109	91	3.19	2.30	3.80	In Control

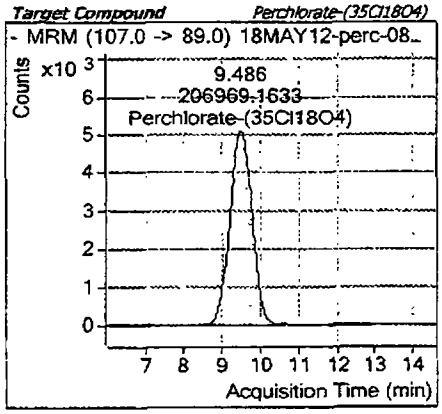
Compound Graphics

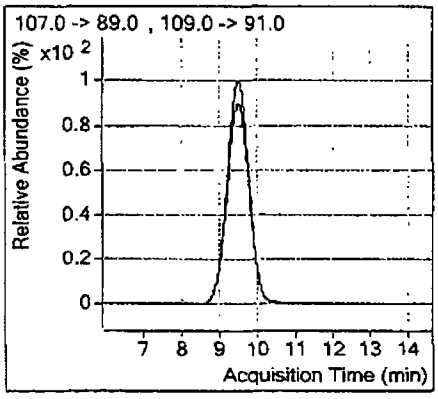
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/23/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM102911VE 09\18MAY2012\QuantResults\18May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/19/2012 07:57
Analyst	lores
Data File	18MAY12-perc-087.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

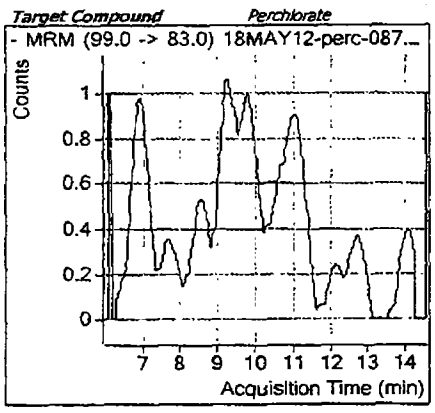
Quantitation Results

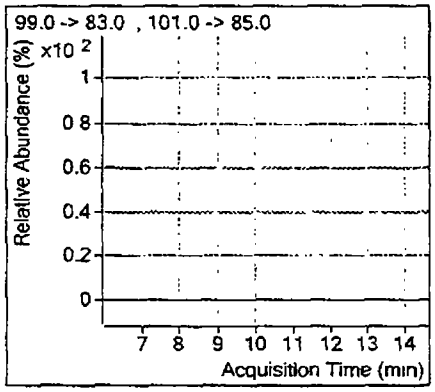
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	9.484	208060	107	89			1
						Perchlorate ND		

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	64297	109	91	3.24	2.30	3.80	In Control

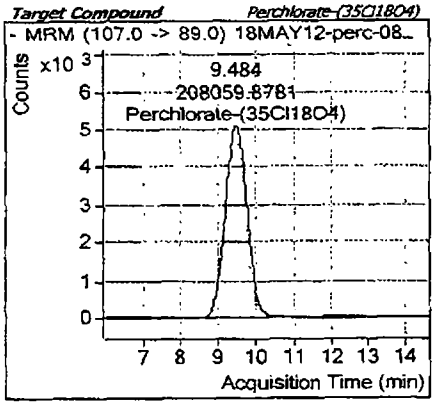
Compound Graphics

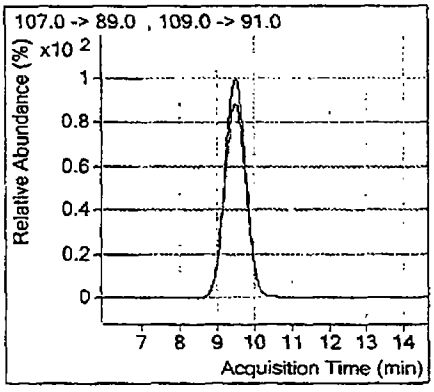
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/23/12

Tune Data

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-18 08:36		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.10	-0.01	Pass	0.69	0.70	0.10	-0.01	Pass	90294	0	Pass
301.97	302.00	0.10	-0.03	Pass	0.70	0.70	0.10	0.00	Pass	395043	0	Pass
601.93	601.98	0.10	-0.05	Pass	0.68	0.70	0.10	-0.02	Pass	1102140	0	Pass
1033.92	1033.99	0.10	-0.07	Pass	0.71	0.70	0.10	0.01	Pass	555768	0	Pass
1333.91	1333.97	0.10	-0.06	Pass	0.69	0.70	0.10	-0.01	Pass	928246	0	Pass
1633.89	1633.95	0.10	-0.06	Pass	0.72	0.70	0.10	0.02	Pass	755641	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.00	112.99	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	281916	0	Pass
302.00	302.00	0.10	0.00	Pass	0.69	0.70	0.10	-0.01	Pass	313159	0	Pass
601.99	601.98	0.10	0.01	Pass	0.68	0.70	0.10	-0.02	Pass	516853	0	Pass
1034.00	1033.99	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	246299	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	700966	0	Pass
1633.92	1633.95	0.10	-0.03	Pass	0.68	0.70	0.10	-0.02	Pass	514044	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.30	-0.01	Pass	1.18	1.20	0.60	-0.02	Pass	106745	0	Pass
301.92	302.00	0.30	-0.08	Pass	1.29	1.20	0.60	0.09	Pass	543203	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.32	1.20	0.60	0.12	Pass	1627812	0	Pass
1033.86	1033.99	0.30	-0.13	Pass	1.33	1.20	0.60	0.13	Pass	1048345	0	Pass
1333.86	1333.97	0.30	-0.11	Pass	1.29	1.20	0.60	0.09	Pass	2051063	0	Pass
1633.86	1633.95	0.30	-0.09	Pass	1.23	1.20	0.60	0.03	Pass	1897464	0	Pass

TestAmerica West Sacramento (916) 373-5600

Page 1421 of 1827

06/08/2012 88 of 126

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.03	112.99	0.30	0.04	Pass	1.17	1.20	0.60	-0.03	Pass	361479	0	Pass
301.98	302.00	0.30	-0.02	Pass	1.24	1.20	0.60	0.04	Pass	448549	0	Pass
601.95	601.98	0.30	-0.03	Pass	1.21	1.20	0.60	0.01	Pass	818535	0	Pass
1033.93	1033.99	0.30	-0.06	Pass	1.26	1.20	0.60	0.06	Pass	509361	0	Pass
1333.90	1333.97	0.30	-0.07	Pass	1.29	1.20	0.60	0.09	Pass	1243501	0	Pass
1633.91	1633.95	0.30	-0.04	Pass	1.24	1.20	0.60	0.04	Pass	1023503	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.76	2.50	1.25	0.26	Pass	127426	0	Pass
301.85	302.00	0.50	-0.15	Pass	2.84	2.50	1.25	0.34	Pass	758693	0	Pass
601.86	601.98	0.50	-0.12	Pass	2.88	2.50	1.25	0.38	Pass	2036963	0	Pass
1033.88	1033.99	0.50	-0.11	Pass	2.81	2.50	1.25	0.31	Pass	1535373	0	Pass
1333.92	1333.97	0.50	-0.05	Pass	2.74	2.50	1.25	0.24	Pass	3085514	0	Pass
1633.95	1633.95	0.50	0.00	Pass	2.60	2.50	1.25	0.10	Pass	3218866	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.88	112.99	0.50	-0.11	Pass	2.53	2.50	1.25	0.03	Pass	469127	0	Pass
301.92	302.00	0.50	-0.08	Pass	2.58	2.50	1.25	0.08	Pass	662737	0	Pass
601.90	601.98	0.50	-0.08	Pass	2.55	2.50	1.25	0.05	Pass	1337975	0	Pass
1033.99	1033.99	0.50	0.00	Pass	2.43	2.50	1.25	-0.07	Pass	1053802	0	Pass
1333.93	1333.97	0.50	-0.04	Pass	2.51	2.50	1.25	0.01	Pass	2595054	0	Pass
1634.01	1633.95	0.50	0.06	Pass	2.42	2.50	1.25	-0.08	Pass	2387726	0	Pass

[1] *NOTE: 1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

TestAmerica West Sacramento (916) 373-5600
Page 1422 of 1827
06/08/2012
89 of 126

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E050430 Work Order #...: MTGXH1AA Matrix.....: WATER
MB Lot-Sample #: G2E100000-072

Prep Date.....: 05/10/12
Analysis Date..: 05/19/12 Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E050430 Work Order #...: MTGXH1AC Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	93	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E050430 Work Order #...: MTGXH1AC Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.64	ug/L	93	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E050430 Work Order #...: MTGXH1AD Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	97	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E050430 Work Order #...: MTGXH1AD Matrix.....: WATER
LCS Lot-Sample#: G2E100000-072
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.87	ug/L	97	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...:	G2E050430	**Work Order #...:**	MTEA11AC-MS	**Matrix.....:**	WATER
MS Lot-Sample #:	G2E040502-001		MTEA11AD-MSD		
Date Sampled...:	05/02/12	**Date Received..:**	05/04/12		
Prep Date.....:	05/10/12	**Analysis Date..:**	05/19/12		
Prep Batch #...:	2131072				
Dilution Factor:	1				

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	**99**	**(80 - 120)**			**SW846 6850**
	95	**(80 - 120)**	**4.2**	**(0-15)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E050430 Work Order #...: MTEA11AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E040502-001 MTEA11AD-MSD
Date Sampled...: 05/02/12 Date Received..: 05/04/12
Prep Date.....: 05/10/12 Analysis Date..: 05/19/12
Prep Batch #...: 2131072
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.95	ug/L	99		SW846 6850
	ND	5.00	4.75	ug/L	95	4.2	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TETRA TECH **CALCULATION WORKSHEET** PAGE 1 OF

CLIENT Lockheed-MSA		JOB NUMBER SDG 240-10949-1	
SUBJECT Sample Calculation			
BASED ON		DRAWING NUMBER	
BY Ann Cognetta	CHECKED BY	APPROVED BY	DATE June 22, 2012

I. VOC; Sample MSA-DMW7S-050312; (trichloroethene)

$$\frac{455883}{1485346} * 416.67 * \frac{10\ ug/L}{0.2745} = 4658.8\ ug/L$$

II. SVOC; Sample MSA-DMW7S-050312;

$$\frac{268505}{166421} * 4 * \frac{2\ mL}{1040\ mL} * \frac{4\ ng/uL}{0.5542} * 1000 = 89.5\ ug/L$$

III. GRO; Sample MSA-DMW7S-050312

$$\frac{224356534}{299875.299} * 10 = 7481.7\ ug/L$$

IV DRO; Sample MSA-DMW6S-050312

$$\frac{16226829}{83404.386} * \frac{5\ mL}{1040\ mL} * 100 = 425.4\ ug/L$$

Sample Calculation

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 | Lab Sample ID: 240-10949-4

Matrix: Water | Lab File ID: UXM5751.D

Analysis Method: 8260C | Date Collected: 05/03/2012 14:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/11/2012 13:40

Soil Aliquot Vol: | Dilution Factor: 416.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43737 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-66-3	Chloroform	420	U	420	67
74-87-3	Chloromethane	420	U	420	130
156-59-2	cis-1,2-Dichloroethene	15000		420	71
10061-01-5	cis-1,3-Dichloropropene	420	U	420	58
87-68-3	Hexachlorobutadiene	420	U	420	130
74-95-3	Dibromomethane	420	U	420	120
75-27-4	Bromodichloromethane	420	U	420	63
75-71-8	Dichlorodifluoromethane	420	U	420	130
100-41-4	Ethylbenzene	420	U	420	71
106-93-4	1,2-Dibromoethane	420	U	420	100
108-20-3	Diisopropyl ether	4200	U	4200	630
91-20-3	Naphthalene	420	U	420	100
179601-23-1	m-Xylene & p-Xylene	830	U	830	100
104-51-8	n-Butylbenzene	420	U	420	50
98-82-8	Isopropylbenzene	420	U	420	54
103-65-1	n-Propylbenzene	420	U	420	58
78-93-3	2-Butanone	4200	U	4200	240
108-10-1	4-Methyl-2-pentanone	4200	U	4200	130
135-98-8	sec-Butylbenzene	420	U	420	54
1634-04-4	Methyl tert-butyl ether	2100	U	2100	71
994-05-8	Tert-amyl-methyl ether (TAME)	2100	U	2100	28
75-09-2	Methylene Chloride	420	U	420	140
95-47-6	o-Xylene	420	U	420	58
100-42-5	Styrene	420	U	420	46
637-92-3	Ethyl-t-butyl ether (ETBE)	2100	U	2100	46
98-06-6	tert-Butylbenzene	420	U	420	54
127-18-4	Tetrachloroethene	420	U	420	120
108-88-3	Toluene	63	J	420	54
156-60-5	trans-1,2-Dichloroethene	120	J	420	79
10061-02-6	trans-1,3-Dichloropropene	420	U	420	79
79-01-6	Trichloroethene	4700		420	71
75-69-4	Trichlorofluoromethane	420	U	420	88
108-05-4	Vinyl acetate	830	U	830	79
75-01-4	Vinyl chloride	2200		420	92
75-65-0	tert-Butyl alcohol	21000	U	21000	1600
1330-20-7	Xylenes, Total	830	U	830	120

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120511-9878.b\UXM5751.D		
Lims ID:	240-10949-A-4	Client ID:	MSA-DMW7S-050312
Inject. Date:	11-May-2012 13:40:30	Dil. Factor:	416.6700
Sample Type:	Client		
Sample ID:	240-0009878-009		
Misc. Info.:	M20511A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	8
Lims Batch ID:	43737	Lims Sample ID:	9
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120511-9878.b\8260_16.m		
Last Update:	12-May-2012 12:21:45	Calib Date:	09-May-2012 18:43:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120509-9809.b\UXM5665.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-17		

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1485346	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.393	0.0	89	1082285	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	573985	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.109	5.109	0.0	58	367028	9.73	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	487624	10.3	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1514241	10.4	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	90	555064	9.91	
12 Dichlorodifluoromethane	85		1.681					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62	1.942	1.954	-0.012	83	359529	5.36	
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.405					
18 Trichlorofluoromethane	101		2.654					
21 1,1-Dichloroethene	96	3.152	3.152	0.0	70	13320	0.3282	
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
26 Carbon disulfide	76		3.354					
30 Methylene Chloride	84	3.579	3.579	0.0	89	44515	0.1352	
31 2-Methyl-2-propanol	59		3.674					
33 trans-1,2-Dichloroethene	96	3.840	3.840	0.0	72	14069	0.2863	
34 Methyl tert-butyl ether	73		3.840					
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.267					
40 Tert-butyl ethyl ether	59		4.587					
42 cis-1,2-Dichloroethene	96	4.705	4.705	0.0	74	1879657	36.3	
41 2-Butanone (MEK)	43		4.705					
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.919					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97	5.156	5.156	0.0	64	18555	0.3173	
52 1,1-Dichloropropene	75		5.286					

Sample Calculation

Report Date: 12-May-2012 12:21:53 Chrom Revision: 2.0 08-Feb-2012 11:07:54
Data File: \\Ncchrom\ChromData\A3UX16\20120511-9878.b\UXM5751.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
53 Carbon tetrachloride	117		5.310					
56 1,2-Dichloroethane	62		5.464					
55 Benzene	78		5.476					
57 Tert-amyl methyl ether	73		5.559					
60 Trichloroethene	130	6.022	6.022	0.0	95	455883	11.2	
62 1,2-Dichloropropane	63		6.211					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91	7.136	7.136	0.0	65	26557	0.1520	
73 trans-1,3-Dichloropropene	75		7.314					
76 1,3-Dichloropropane	76		7.634					
77 Tetrachloroethene	164		7.646					
78 2-Hexanone	43		7.694					
79 Chlorodibromomethane	129		7.848					
123 Ethylene Dibromide	107		7.966					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
86 Styrene	104		9.010					
85 o-Xylene	106		9.010					
87 Bromoform	173		9.200					
88 Isopropylbenzene	105		9.354					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.840					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.243					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.575					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.658					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
109 1,2,4-Trichlorobenzene	180		12.639					
110 Hexachlorobutadiene	225		12.817					
111 Naphthalene	128		12.888					
112 1,2,3-Trichlorobenzene	180		13.149					
S 114 Xylenes, Total	106		16.530					

Sample calculation

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 | Lab Sample ID: 240-10949-4

Matrix: Water | Lab File ID: 0511034.D

Analysis Method: 8270C | Date Collected: 05/03/2012 14:15

Extract. Method: 3520C | Date Extracted: 05/09/2012 08:35

Sample wt/vol: 1040(mL) | Date Analyzed: 05/11/2012 17:18

Con. Extract Vol.: 2(mL) | Dilution Factor: 4

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43638 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	89		3.8	1.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	50		28-110
367-12-4	2-Fluorophenol (Surr)	55		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	55		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	51		10-110
1718-51-0	Terphenyl-d14 (Surr)	57		37-119

Report Date: 12-May-2012 08:21:07 Chrom Revision: 2.0 08-Feb-2012 11:07:54

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File:	\\Ncchrom\ChromData\A4AG2\20120511-9859.b\0511034.D		
Lims ID:	240-10949-K-4-A	Client ID:	MSA-DMW7S-050312
Inject. Date:	11-May-2012 17:18:30	Dil. Factor:	4.0000
Sample Type:	Client		
Sample ID:	240-0009859-034		
Misc. Info.:	240-10949-K-4-A =240-10949-K-4-A		
Operator:		Instrument ID:	A4AG2
Vol. Injected:	1.0000	ALS Bottle#:	34
Lims Batch ID:	43638	Lims Sample ID:	34
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4AG2\20120511-9859.b\8270 ag2.m		
Last Update:	12-May-2012 08:20:53	Calib Date:	10-May-2012 14:39:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4AG2\20120510-9829.b\0510020.D		
Limit Group:	MSS 8270C ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-15		
First Level Reviewer: hulat		Date:	12-May-2012 07:54:48

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	3.630	3.625	0.005	96	166421	4.00	
* 2 Naphthalene-d8	136	4.529	4.523	0.006	100	734785	4.00	
* 3 Acenaphthene-d10	164	5.802	5.791	0.011	92	468565	4.00	
* 4 Phenanthrene-d10	188	6.893	6.882	0.011	99	771464	4.00	
* 5 Chrysene-d12	240	8.882	8.850	0.032	97	729409	4.00	
* 6 Perylene-d12	264	10.428	10.369	0.059	91	688355	4.00	
$ 7 2-Fluorophenol	112	2.753	2.748	0.005	87	112893	2.05	
$ 8 Phenol-d5	99	3.341	3.325	0.016	97	141363	1.93	
$ 9 Nitrobenzene-d5	82	4.015	4.010	0.005	87	88395	1.24	
$ 10 2-Fluorobiphenyl (Surr)	172	5.288	5.277	0.011	99	194178	1.24	
$ 11 2,4,6-Tribromophenol	330	6.379	6.363	0.016	85	35037	2.07	
$ 12 Terphenyl-d14	244	8.037	8.021	0.016	98	215050	1.42	
26 1,4-Dioxane	88	1.801	1.812	-0.011	94	268505	11.6	

Sample Calculation

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 43482

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/10/2012 09:21 Calibration End Date: 05/10/2012 11:42 Calibration ID: 8622

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-43482/10	0510010.D
Level 2	STD2 240-43482/9	0510009.D
Level 3	STD3 240-43482/8	0510008.D
Level 4	STD4 240-43482/7	0510007.D
Level 5	STD5 240-43482/6	0510006.D
Level 6	STD6 240-43482/5	0510005.D
Level 7	STD7 240-43482/4	0510004.D
Level 8	STD8 240-43482/3	0510003.D
Level 9	STD9 240-43482/2	0510002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5394	0.5843 0.5364	0.5815 0.5650	0.5556 0.5247	0.5466	Ave		0.5542				3.9		15.0			
N-Nitrosodimethylamine	0.8697	0.8409 0.8725	0.9252 0.9166	0.9064 0.8550	0.9010	Ave		0.8859				3.5		15.0			
Pyridine	1.4648	1.0841 1.4833	1.3951 1.5485	1.3999 1.4647	1.4294	Ave		1.4087				9.9		15.0			
Ethyl methacrylate	1.1770	1.2330 1.1863	1.2939 1.2226	1.2500 1.1367	1.2310	Ave		1.2163				4.0		15.0			
3-Chloropropionitrile	0.7800	0.8044 0.7740	0.8440 0.8162	0.8361 0.7598	0.8152	Ave		0.8037				3.7		15.0			
Malononitrile	1.5421	1.6157 1.2971	1.7921 1.1383	1.7815 0.9252	1.7394	Qua	-0.096	1.9332	-0.040						1.0000		0.9900
Benzoic acid	0.2364	+++++ 0.2488	+++++ 0.2608	0.1283 0.2773	0.2010	Qua	-0.394	0.2298	0.0011						1.0000		0.9900
Phenol	1.8327	1.7310 1.8415	1.9160 1.9281	1.8892 1.8161	1.8630	Ave		1.8522				3.4		15.0			
Benzaldehyde	1.3383 0.7698	1.3111	1.3080	1.2437	1.1726	Ave		1.1906				18.0	*	15.0			
Aniline	2.3929	1.9559 2.6427	2.3562 2.7008	2.2966 2.4211	2.5021	Ave		2.4085				9.5		15.0			
Bis(2-chloroethyl)ether	1.5035	1.7535 1.3749	1.7166 1.4856	1.6910 1.4499	1.4647	Ave		1.5550				9.2		15.0			
2-Chlorophenol	1.5290	1.3908 1.5415	1.5628 1.6021	1.5457 1.4942	1.5384	Ave		1.5256				4.1		15.0			
1,3-Dichlorobenzene	1.5515	1.5902 1.5713	1.6245 1.6422	1.6097 1.5147	1.5826	Ave		1.5859				2.6		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW7S-050312 | Lab Sample ID: 240-10949-4

Matrix: Water | Lab File ID: YF050912.D

Analysis Method: 8015B | Date Collected: 05/03/2012 14:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/09/2012 16:48

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 43312 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	7500	B	1000	250

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	57		10-150

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\YPID\20120509-9793.b\YF050912.D		
Lims ID:	240-10949-B-4	Client ID:	MSA-DMW7S-050312
Inject. Date:	09-May-2012 16:48:40	Dil. Factor:	10.0000
Sample Type:	Client		
Sample ID:	240-0009793-012		
Misc. Info.:			
Operator:	4275	Instrument ID:	YPID
Vol. Injected:	1.0000	ALS Bottle#:	1
Lims Batch ID:	43312	Lims Sample ID:	12
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\YPID\20120509-9793.b\Y80158021.m		
Last Update:	10-May-2012 07:42:19	Calib Date:	21-Feb-2012 16:37:39
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\YPID\20120221-7767.b\YF022110.D		
Limit Group:	GCV 8015B GRO ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-15		

Compound	Det	RT	ADJ RT	DLT RT	Response	On-Col Amt ug/l	Flags
* 15 Fluorobenzene	1	0.000	8.477	-8.477	0	0	
$ 16 Trifluorotoluene (Surr)	2	9.753	9.756	-0.003	2394633	5.69	
A 5 C6-C10	2	11.813	4.817 - 18.797		224356534	748.2	

Sample Calculation

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The ml coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-10949-1

SDG No.:

Client Sample ID: MSA-DMW6S-050312 | Lab Sample ID: 240-10949-1

Matrix: Water | Lab File ID: P6F05119.D

Analysis Method: 8015B | Date Collected: 05/03/2012 09:40

Extraction Method: 3520C | Date Extracted: 05/09/2012 08:43

Sample wt/vol: 1040(mL) | Date Analyzed: 05/11/2012 11:39

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 43655 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	430	J B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	19		10-110

Sample Calculation

Report Date: 15-May-2012 12:35:19 Chrom Revision: 2.0 08-Feb-2012 11:07:54

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A2HP6F\20120511-9864.b\P6F05119.D		
Lims ID:	240-10949-N-1-A	Client ID:	MSA-DMW6S-050312
Inject. Date:	11-May-2012 11:39:12	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0009864-009		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP6F
Vol. Injected:	1.0000	ALS Bottle#:	9
Lims Batch ID:	43655	Lims Sample ID:	9
Detector:	GC FID1A		
Method:	\\Ncchrom\ChromData\A2HP6F\20120511-9864.b\TPH6F.m		
Last Update:	15-May-2012 12:35:18	Calib Date:	26-Apr-2012 17:23:09
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP6F\20120426-9415.b\P6F04274.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
4.330	4.330	0.000	4139628	19.4	
A 15 Diesel					
9.509	5.302 - 13.715		14051761	76.6	
A 17 C10-C32					
10.099	5.302 - 14.897		16226829	88.5	

Sample Calculation

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-10949-1 Analy Batch No.: 41691

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/26/2012 12:11 Calibration End Date: 04/26/2012 14:16 Calibration ID: 8406

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-41691/4	P6F04264.D
Level 2	STD2 240-41691/5	P6F04265.D
Level 3	STD3 240-41691/6	P6F04266.D
Level 4	STD4 240-41691/7	P6F04267.D
Level 5	STD5 240-41691/8	P6F04268.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198430 174115	188482	182432	173562	Ave		183404.386				5.7		20.0			
n-Nonane	213382 212758	214563	217346	210050	Ave		213619.735				1.2		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW6S-050312
Lab Sample ID: 240-10949-1
Lab Name: TestAmerica Canton
Job No.: 240-10949-1
SDG ID.:
Matrix: Water
Date Sampled: 05/03/2012 09:40
Reporting Basis: WET
Date Received: 05/04/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.18	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	6.8	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	37	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	1.6	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	4.1	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.5	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.89	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.24	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	2.4	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.67	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	1.9	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	6.4	20	2.3	ug/L	J	B	1	6020

Sample Calculation

MSA-DMW65-050312

240-10949-g-1-a, 5/11/2012 10:28:19 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		72.795%	0.042	M 398.400
%RSD		16.583	27.050	M 6.960
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		T 32100.000	34470.000	657.800
%RSD		T 0.460	0.444	3.020
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		T 0.000	T 19870.000	96570.000
%RSD		T 0.000	T 1.885	0.522
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		77.366%	86.632%	15.880
%RSD		8.439	0.423	6.940
Run	Time	51V	52Cr	[illegible]
		ppb	ppb	[illegible]
x		1.884	1.555	-4.141
%RSD		7.819	2.323	14.050
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		TM 1216.000	TM 153900.000	4.096
%RSD		TM 1.817	TM 0.541	0.410
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		2.426	1.502	6.374
%RSD		2.618	4.460	4.633
Run	Time	72Ge	75As	[illegible]
		ppb	ppb	[illegible]
x		87.341%	6.847	0.242
%RSD		0.376	1.422	37.500
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		0.671	M 361.000	0.235
%RSD		10.600	M 0.711	10.810
Run	Time	105Pd	107Ag	[illegible]
		ppb	ppb	[illegible]
x		0.000	0.005	-0.316
%RSD		0.000	52.090	441.000
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.027	90.922%	0.044
%RSD		37.220	0.082	27.900
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		0.177	37.000	0.000
%RSD		1.967	0.966	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		95.050%	0.101	0.074
%RSD		2.280	1.592	3.626
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		0.890	0.000	
%RSD		4.829	0.000	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **JULY 5, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION-**
VOC / SVOC SIM / GRO / DRO / EXP / PERCHLORATE / METALS/ HALOACETIC ACIDS/ DISSOLVED GASES/ MISCELLANOUS
MARTIN STATE AIRPORT GROUNDWATER SAMPLING – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-11217-1

SAMPLES: 7/Aqueous/VOC

DMW10S-051012	DMW1S-051012	DMW2S-051012
MW18I-051012	MW18S-051012	MW31D-051012
TB-051012		

6/Aqueous/SVOC SIM/Metals/Perchlorate

DMW10S-051012	DMW1S-051012	DMW2S-051012
MW18I-051012*	MW18S-051012*	MW31D-051012

*Total metals were also included calcium, iron, magnesium, manganese, potassium, silicon dioxide and sodium.

2/Aqueous/OVG/ Miscellaneous

MW18I-051012 MW18S-051012

4/Aqueous/GRO/DRO

DMW10S-051012	DMW1S-051012	DMW2S-051012
MW18S-051012		

1/Aqueous/EXP

MW18S-051012

1/Aqueous/HAA

DMW2S-051012

Overview

The sample set for Martin State Airport Groundwater Sampling, SDG 240-11217-1 consists of six (6) aqueous environmental samples and one trip blank. All samples were analyzed for volatile organic compounds (VOCs). Six (6) aqueous environmental samples were analyzed for 1,4-dioxane in the semivolatile organic compound (SVOC) SIM fraction, perchlorate, total and dissolved metals. Two (2) aqueous environmental samples; MW18I-051012and MW18S-051012 were analyzed for gasoline range organics (GRO). Two (2) aqueous environmental samples were analyzed for organic volatile gases (OVG) and miscellaneous parameters which include, ammonia, total dissolved solids, dissolved organic carbon, alkalinity, chloride, nitrate, nitrite, orthophosphate and sulfate. Four (4) aqueous environmental samples were analyzed for diesel range organics (DRO) and gasoline range organics (GRO). GRO is listed on the

form 1s and EDD as total petroleum hydrocarbons (TPH) (C6-C10) and DRO as TPH (C10-C32). One (1) aqueous environmental sample, MW18S-051012, was analyzed for the explosive (EXP), RDX. One (1) aqueous environmental sample, DMW2S-051012, was analyzed for haloacetic acids (HAA). There are no field duplicate pairs included in this SDG.

The samples were collected on May 10, 2012 and analyzed by Test America Laboratories, Inc. Volatile organic compound analyses were conducted in accordance to SW-846 Method 8260C. The analyses for 1,4-dioxane followed SW-846 Method 8270C in Selective Ion Monitoring SIM mode. GRO and DRO analyses followed SW-846 Method 8015B. The analyses for RDX followed SW-846 Method 8330 and perchlorate Method 6850 reporting protocol. Metals analyses were conducted in accordance with SW-846 6020A, 6010C and mercury Method 7470A. The analysis of OVG followed RSK-175. The following analyses followed EPA Methods; total dissolved solids Method 160.1, anions Method 300.0, alkalinity Method 310.1, nitrogen and ammonia Method 350.3 and HAA Method 552.2. Dissolved organic carbon followed SW-846 Method 9060.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, matrix spike/matrix spike duplicate results, serial dilution, compound identification, chromatographic resolution, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- In the volatile initial calibration of instrument A3UX16 on May 9, 2012 and the continuing calibration on May 23, 2012 @ 13:08, tert-butyl alcohol and vinyl acetate had a relative response factor (RRF) less than the 0.05 quality control limit. The nondetected vinyl acetate and tert-butyl alcohol results were qualified as rejected (UR) in the affected samples.

- The matrix spike/ matrix spike duplicate (MS/MSD) percent recoveries (%Rs) of 2-chloroethyl vinyl ether were 0% in sample MW31D-051012. The nondetected 2-chloroethyl vinyl ether result was qualified as rejected (UR) in the affected samples.

Minor Problems

- The base surrogate recoveries of nitrobenzene-d5, 2-fluorobiphenyl and terphenyl-d14 were less than the lower quality control limit in sample MW31D-051012. The sample was re-extracted outside of hold time. The original sample results were used for validation and reporting purposes. The nondetected 1,4-dioxane result in sample MW31D-051012 was qualified as biased low (UL).

- DRO was detected in the laboratory method blank 240-44281/17-A affecting all samples.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
DRO	417	2085

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Positive results less than the action level were qualified (B) as a result

of blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data.

- TICs were qualified as presumptively present (NJ) in several samples.

- Contamination was detected in the laboratory method blank, preparation blanks, continuing calibration blanks and initial calibration blanks affecting both the total and dissolved metal results.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
Molybdenum [4]	0.376	1.88
Cobalt [1]	0.058	0.29
Mercury [2]	0.148	0.74
Antimony [5]	0.211	1.06
Molybdenum [3]	0.851	4.26
Barium [4]	0.843	4.22
Copper [4]	0.521	2.61
Zinc [4]	10.5	52.5
Arsenic [5]	0.711	3.56
Cadmium [5]	0.335	1.68
Cobalt [5]	0.392	1.96
Copper [5]	1.12	5.6
Lead [5]	0.436	2.18
Nickel [5]	0.632	3.16
Selenium [5]	0.586	2.93
Thallium [5]	0.522	2.61
Tungsten [5]	0.507	2.54
Zinc [5]	4.97	24.85

(1) Maximum concentration detected in continuing calibration blank (CCB) 240-44506/48 analyzed on May 17, 2012 @ 11:03.
(2) Maximum concentration detected in CCB 240-44403/11-A analyzed on May 17, 2012 @ 17:47.
(3) Maximum concentration detected in CCB 240-44964/14 analyzed on May 22, 2012 @ 7:51.
(4) Maximum concentration detected in method blank 240-44254/1-A.
(5) Maximum concentration detected in method blank 240-44713/1-A.

An action level of 5X the maximum concentration of contaminant was used to evaluate samples due to blank contamination. Positive results less than the action level were qualified (B) as a result of blank contamination. Sample aliquot and dilution factors were taken into account in validation of data.

- The CRDL %R of lead was greater than 110% in CRI 240-44506/7 analyzed on May 17, 2012 and CRI-240-44805/7 analyzed on May 21, 2012. The positive lead results less than 2X the reporting limit were qualified as estimated (J) due to conflicting directional bias.

- The internal standard recovery for holium (molecular weight 165) was greater than the 125% quality control limit in samples MW18I-051012 and DMW2S-051012. The target metals affected by this noncompliance are antimony (MW 123), barium (MW 137), lead (MW 207), thallium (MW 204) and tungsten (MW 184). The positive and nondetected antimony, barium, lead, thallium and tungsten total and dissolved metal results in samples MW18I-051012 and DMW2S-051012 were qualified as estimated (J) and (UJ), respectively.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

Sample DMW2S-051012 was not marked on the chain of custody to be analyzed for perchlorate.

The continuing calibration %Ds for bromomethane and chloroethane were greater than the 20% quality control limit and less than 50% on May 23, 2012 @ 13:08 on instrument A3UX16. No action was taken on the nondetected bromomethane and chloroethane results in the affected samples.

The spectra were reviewed by the data validator for the positive hexachlorobutadiene result in sample MW18I-051012. This sample was analyzed after the MS/MSD, which were spiked with hexachlorobutadiene, on May 23, 2012 @16:12 and 16:35. Hexachlorobutadiene is a heavier VOC and elutes at a later retention time. The positive result was verified in sample MW 18I-051012. It is a possibility that carryover contamination from the MS/MSD affected the positive hexachlorobutadiene result in sample MW18I-051012. No action was taken. A copy of the spectra is included in Appendix C.

The MS/MSD %Rs of 1,2-dibromoethane were greater than the upper quality control limit in sample MW31D-051012. No action was taken on the nondetected 1,2-dibromoethane result in sample MW31D-051012.

The CRDL %R of thallium was greater than 110% in CRI-44964/8 analyzed on May 22, 2012 affecting the dissolved thallium result in sample MW31D-051012. No action was taken on the positive dissolved thallium result because it was qualified due to blank contamination.

The relative percent differences (RPDs) for arsenic, chromium, cobalt, copper, thallium, vanadium and tungsten were greater than 20% in the dissolved metals fraction duplicate analysis. No action was taken on the arsenic, chromium, cobalt, copper, thallium, vanadium and tungsten because the sample concentration was less than 5X the reporting limit.

Chloride was detected in the CCB analyzed on May 11, 2012 @ 11:12.

Compound	Maximum Concentration (mg/L)	Action Level (mg/L)
Chloride	0.332	1.66

An action level of 5X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot and dilution factors were taken into account when applying the action level. No action was taken because the positive chloride results were greater than the action level.

Ammonia was detected in the CCB analyzed on May 22, 2012 @ 10:48.

Compound	Maximum Concentration (mg/L)	Action Level (mg/L)
Ammonia	0.06	0.30

An action level of 5X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot and dilution factors were taken into consideration when applying the action level. No action was taken because the positive ammonia results were greater than the action level.

Alkalinity was detected in the method blank analyzed on May 15, 2012 @ 17:33.

Compound	Maximum Concentration (mg/L)	Action Level (mg/L)
Alkalinity	2.9	14.5

An action level of 5X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot and dilution factors were taken into consideration when applying the action level. No action was taken because the positive alkalinity results were greater than the action level.

The MS/MSD %Rs of orthophosphate were greater than the upper quality control limit in sample 240-11142-1. No action was taken because this is not a sample included in this SDG.

Nondetected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Tert-butyl alcohol and vinyl acetate had RRFs less than quality control limits in the initial and continuing calibrations. Sample MW31D-051012 had surrogate recoveries outside quality control limits in the SVOC fraction. Blank contamination was detected in the DRO and metals fractions.The CRQL %Rs of lead exceeded 110% resulting in the qualification of positive results. The internal standard recovery of holium was greater than quality control limits in sample MW18I-051012 and DMW2S-051012.

Other Factors Affecting Data Quality: TICs were detected in several samples. Sample DMW2S-051012 was not marked on the chain of custody to be analyzed for perchlorate. MS/MSD %Rs of 2-chloroethyl vinyl ether were 0% in sample MW31D-051012.

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (9/94) and Region III EPA Functional Guidelines for Inorganic Data Validation (April 1993). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18I-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-5		
FRACTION: OV	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	2.3	U		0.23	U		21	U		77	U	
1,1,1-TRICHLOROETHANE	2.2	U		0.22	U		20	U		73	U	
1,1,2,2-TETRACHLOROETHANE	1.8	U		0.18	U		16	U		60	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	2.8	U		0.28	U		25	U		93	U	
1,1-DICHLOROETHANE	1.5	U		0.15	U		14	U		50	U	
1,1-DICHLOROETHENE	1.9	U		0.19	U		17	U		63	U	
1,1-DICHLOROPROPENE	1.3	U		0.13	U		12	U		43	U	
1,2,3-TRICHLOROBENZENE	1.7	U		0.17	U		15	U		130	J	P
1,2,3-TRICHLOROPROPANE	4.3	U		0.43	U		39	U		140	U	
1,2,3-TRIMETHYLBENZENE	0.059	U		0.0059	U		0.54	U		2	U	
1,2,4-TRICHLOROBENZENE	1.5	U		0.15	U		14	U		160	J	P
1,2,4-TRIMETHYLBENZENE	1.2	U		0.12	U		11	U		40	U	
1,2-DIBROMO-3-CHLOROPROPANE	6.7	U		0.67	U		61	U		220	U	
1,2-DIBROMOETHANE	2.4	U		0.24	U		22	U		80	U	
1,2-DICHLOROBENZENE	1.3	U		0.13	U		12	U		43	U	
1,2-DICHLOROETHANE	2.2	U		0.22	U		23	J	P	73	U	
1,2-DICHLOROPROPANE	1.8	U		0.18	U		16	U		60	U	
1,3-DICHLOROBENZENE	1.4	U		0.14	U		13	U		47	U	
1,3-DICHLOROPROPANE	1.6	U		0.16	U		15	U		53	U	
1,4-DICHLOROBENZENE	1.3	U		0.13	U		12	U		43	U	
2,2-DICHLOROPROPANE	1.3	U		0.13	U		12	U		43	U	
2-BUTANONE	5.7	U		0.57	U		52	U		190	U	
2-CHLOROETHYL VINYL ETHER	9.9	U		0.99	U		90	U		330	U	
2-CHLOROTOLUENE	1.1	U		0.11	U		10	U		37	U	
2-HEXANONE	4.1	U		0.41	U		37	U		140	U	
4-CHLOROTOLUENE	1.8	U		0.18	U		16	U		60	U	
4-ISOPROPYLTOLUENE	1.2	U		0.12	U		11	U		40	U	
4-METHYL-2-PENTANONE	3.2	U		0.32	U		29	U		110	U	
ACETONE	11	U		1.1	U		100	U		370	U	
ACETONITRILE												
BENZENE	2.3	J	P	0.13	U		12	U		43	U	
BROMOBENZENE	1.3	U		0.13	U		12	U		43	U	
BROMOCHLOROMETHANE	2.9	U		0.29	U		26	U		97	U	
BROMODICHLOROMETHANE	1.5	U		0.15	U		14	U		50	U	
BROMOFORM	6.4	U		0.64	U		58	U		210	U	

PROJ_NO: 04021	NSAMPLE	MW18S-051012			MW31D-051012			TB-051012		
SDG: 240-11217-1	LAB_ID	240-11217-2			240-11217-4			240-11217-1		
FRACTION: OV	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		13	U		0.46	U		0.23	U	
1,1,1-TRICHLOROETHANE		12	U		0.44	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		10	U		0.36	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		16	U		0.56	U		0.28	U	
1,1-DICHLOROETHANE		8.3	U		0.3	U		0.15	U	
1,1-DICHLOROETHENE		11	U		0.38	U		0.19	U	
1,1-DICHLOROPROPENE		7.2	U		0.26	U		0.13	U	
1,2,3-TRICHLOROBENZENE		9.4	U		0.34	U		0.17	U	
1,2,3-TRICHLOROPROPANE		24	U		0.86	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.33	U		0.012	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		8.8	J	P	0.3	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		6.7	U		0.24	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		37	U		1.3	U		0.67	U	
1,2-DIBROMOETHANE		13	U		0.48	U		0.24	U	
1,2-DICHLOROBENZENE		7.2	U		0.26	U		0.13	U	
1,2-DICHLOROETHANE		12	U		0.44	U		0.22	U	
1,2-DICHLOROPROPANE		10	U		0.36	U		0.18	U	
1,3-DICHLOROBENZENE		7.8	U		0.28	U		0.14	U	
1,3-DICHLOROPROPANE		8.9	U		0.32	U		0.16	U	
1,4-DICHLOROBENZENE		7.2	U		0.26	U		0.13	U	
2,2-DICHLOROPROPANE		7.2	U		0.26	U		0.13	U	
2-BUTANONE		32	U		1.1	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		55	U		2	UR	D	0.99	U	
2-CHLOROTOLUENE		6.1	U		0.22	U		0.11	U	
2-HEXANONE		23	U		0.82	U		0.41	U	
4-CHLOROTOLUENE		10	U		0.36	U		0.18	U	
4-ISOPROPYLTOLUENE		6.7	U		0.24	U		0.12	U	
4-METHYL-2-PENTANONE		18	U		0.64	U		0.32	U	
ACETONE		61	U		2.7	J	P	1.1	U	
ACETONITRILE								3.6	NJ	Z1
BENZENE		7.2	U		0.26	U		0.13	U	
BROMOBENZENE		7.2	U		0.26	U		0.13	U	
BROMOCHLOROMETHANE		16	U		0.58	U		0.29	U	
BROMODICHLOROMETHANE		8.3	U		0.3	U		0.15	U	
BROMOFORM		36	U		1.3	U		0.64	U	

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18I-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-5		
FRACTION: OV	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMOMETHANE	4.1	U		0.41	U		37	U		140	U	
CARBON DISULFIDE	1.3	U		0.13	U		12	U		43	U	
CARBON TETRACHLORIDE	1.3	U		0.13	U		12	U		43	U	
CHLOROBENZENE	1.5	U		0.66	J	P	14	U		50	U	
CHLORODIBROMOMETHANE	1.8	U		0.18	U		16	U		60	U	
CHLOROETHANE	2.9	U		0.29	U		26	U		97	U	
CHLOROFORM	1.6	U		0.16	U		15	U		53	U	
CHLOROMETHANE	3	U		0.3	U		27	U		100	U	
CIS-1,2-DICHLOROETHENE	1.7	U		0.84	J	P	1900			1200		
CIS-1,3-DICHLOROPROPENE	1.4	U		0.14	U		13	U		47	U	
CYCLOHEXANE	1.6	NJ	Z1									
DIBROMOMETHANE	2.8	U		0.28	U		25	U		93	U	
DICHLORODIFLUOROMETHANE	3.1	U		0.31	U		28	U		100	U	
DIISOPROPYL ETHER	15	U		1.5	U		140	U		500	U	
ETHYL TERT-BUTYL ETHER	1.1	U		0.11	U		10	U		37	U	
ETHYLBENZENE	1.7	U		0.17	U		15	U		57	U	
HEXACHLOROBUTADIENE	3	U		0.3	U		27	U		210	J	P
ISOPROPYLBENZENE	1.3	U		0.13	U		12	U		43	U	
M+P-XYLENES	2.4	U		0.24	U		22	U		80	U	
METHYL TERT-BUTYL ETHER	1.7	U		0.17	U		15	U		57	U	
METHYLCYCLOHEXANE	1.9	NJ	Z1									
METHYLENE CHLORIDE	3.3	U		0.33	U		30	U		110	U	
NAPHTHALENE	2.4	U		0.24	U		22	U		80	U	
N-BUTYLBENZENE	1.2	U		0.12	U		11	U		40	U	
N-PROPYLBENZENE	1.4	U		0.14	U		13	U		47	U	
O-XYLENE	1.4	U		0.14	U		13	U		47	U	
SEC-BUTYLBENZENE	1.3	U		0.13	U		12	U		43	U	
STYRENE	1.1	U		0.11	U		10	U		37	U	
TERT-AMYL METHYL ETHER	0.67	U		0.067	U		6.1	U		22	U	
TERT-BUTYLBENZENE	1.3	U		0.13	U		12	U		43	U	
TERTIARY-BUTYL ALCOHOL	39	UR	C	3.9	UR	C	350	UR	C	1300	UR	C
TETRACHLOROETHENE	2.9	U		0.29	U		26	U		97	U	
TOLUENE	1.3	U		0.13	U		12	U		43	U	
TOTAL XYLENES	2.8	U		0.28	U		25	U		93	U	
TRANS-1,2-DICHLOROETHENE	1.9	U		0.19	U		17	U		63	U	

PROJ_NO: 04021	NSAMPLE	MW18S-051012			MW31D-051012			TB-051012		
SDG: 240-11217-1	LAB_ID	240-11217-2			240-11217-4			240-11217-1		
FRACTION: OV	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
BROMOMETHANE		23	U		0.82	U		0.41	U	
CARBON DISULFIDE		7.2	U		0.57	J	P	0.13	U	
CARBON TETRACHLORIDE		7.2	U		0.26	U		0.13	U	
CHLOROBENZENE		8.3	U		0.3	U		0.15	U	
CHLORODIBROMOMETHANE		10	U		0.36	U		0.18	U	
CHLOROETHANE		16	U		0.58	U		0.29	U	
CHLOROFORM		8.9	U		0.32	U		0.16	U	
CHLOROMETHANE		17	U		0.6	U		0.3	U	
CIS-1,2-DICHLOROETHENE		180			0.34	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		7.8	U		0.28	U		0.14	U	
CYCLOHEXANE										
DIBROMOMETHANE		16	U		0.56	U		0.28	U	
DICHLORODIFLUOROMETHANE		17	U		0.62	U		0.31	U	
DIISOPROPYL ETHER		83	U		3	U		1.5	U	
ETHYL TERT-BUTYL ETHER		6.1	U		0.22	U		0.11	U	
ETHYLBENZENE		9.4	U		0.34	U		0.17	U	
HEXACHLOROBUTADIENE		17	U		0.6	U		0.3	U	
ISOPROPYLBENZENE		7.2	U		0.26	U		0.13	U	
M+P-XYLENES		13	U		0.48	U		0.24	U	
METHYL TERT-BUTYL ETHER		9.4	U		0.34	U		0.17	U	
METHYLCYCLOHEXANE										
METHYLENE CHLORIDE		18	U		0.66	U		0.33	U	
NAPHTHALENE		13	U		0.48	U		0.24	U	
N-BUTYLBENZENE		6.7	U		0.24	U		0.12	U	
N-PROPYLBENZENE		7.8	U		0.28	U		0.14	U	
O-XYLENE		7.8	U		0.28	U		0.14	U	
SEC-BUTYLBENZENE		7.2	U		0.26	U		0.13	U	
STYRENE		6.1	U		0.22	U		0.11	U	
TERT-AMYL METHYL ETHER		3.7	U		0.13	U		0.067	U	
TERT-BUTYLBENZENE		7.2	U		0.26	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		220	UR	C	7.8	UR	C	3.9	UR	C
TETRACHLOROETHENE		16	U		0.58	U		0.29	U	
TOLUENE		7.2	U		0.98	J	P	0.13	U	
TOTAL XYLENES		16	U		0.56	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		11	U		0.38	U		0.19	U	

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18I-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-5		
FRACTION: OV	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRANS-1,3-DICHLOROPROPENE		1.9	U		0.19	U		17	U		63	U	
TRICHLOROETHENE		1.7	U		0.17	U		2800			11000		
TRICHLOROFLUOROMETHANE		2.1	U		0.21	U		19	U		70	U	
VINYL ACETATE		1.9	UR	C	0.19	UR	C	17	UR	C	63	UR	C
VINYL CHLORIDE		280			0.33	J	P	640			540		

PROJ_NO: 04021	NSAMPLE	MW18S-051012			MW31D-051012			TB-051012		
SDG: 240-11217-1	LAB_ID	240-11217-2			240-11217-4			240-11217-1		
FRACTION: OV	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRANS-1,3-DICHLOROPROPENE		11	U		0.38	U		0.19	U	
TRICHLOROETHENE		1800			0.34	U		0.17	U	
TRICHLOROFLUOROMETHANE		12	U		0.42	U		0.21	U	
VINYL ACETATE		11	UR	C	0.38	UR	C	0.19	UR	C
VINYL CHLORIDE		73			0.44	U		0.22	U	

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18I-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-5		
FRACTION: OS	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		10			1.9			81			140		

PROJ_NO: 04021	NSAMPLE	MW18S-051012			MW31D-051012		
SDG: 240-11217-1	LAB_ID	240-11217-2			240-11217-4		
FRACTION: OS	SAMP_DATE	5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		45			0.47	UL	R

PROJ_NO: 04021	NSAMPLE	MW18I-051012			MW18S-051012		
SDG: 240-11217-1	LAB_ID	240-11217-5			240-11217-2		
FRACTION: OVG	SAMP_DATE	5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ETHANE		1.5			0.74		
ETHENE		21			4.9		
METHANE		230			180		

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18S-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-2		
FRACTION: PET	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)		97	J	P	34	J	P	2200			910		
TPH (C10-C32)		620	B	A	380	B	A	490	B	A	380	B	A

PROJ_NO: 04021	NSAMPLE	MW18S-051012		
SDG: 240-11217-1	LAB_ID	240-11217-2		
FRACTION: EXP	SAMP_DATE	5/10/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
RDX		0.036	U	

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18I-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-5		
FRACTION: M	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		1.8	J	P	0.65	UJ	N	1.3	UJ	N
ARSENIC		17			1.5	J	P	8.6			21		
BARIUM		20	B	A	81			13	B	A	55	B	A
BERYLLIUM		0.2	U		0.2	U		4.9			16		
CADMIUM		0.13	U		1.1			230			130		
CALCIUM											61000		
CHROMIUM		3.8			0.79	J	P	3.7			9.8		
COBALT		4.2			0.4	J	P	240			290		
COPPER		1.3	B	A	8.5			52			350		
IRON											52000		
LEAD		0.33	J	CP	2.4			0.9	UJ	N	4.1	J	NP
MAGNESIUM											59000		
MANGANESE											3700		
MERCURY		0.12	U		0.13	J	P	0.12	U		0.26	B	A
MOLYBDENUM		0.19	B	A	1.1	B	A	0.093	U		0.24	B	A
NICKEL		1.5	J	P	1.7	J	P	110			220		
POTASSIUM											11000	J	P
SELENIUM		0.57	U		0.57	U		12			24		
SILICON DIOXIDE											36000		
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
SODIUM											210000		
THALLIUM		0.14	U		0.14	U		0.7	UJ	N	1.4	UJ	N
TUNGSTEN		0.37	U		0.37	U		1.9	UJ	N	3.7	UJ	N
VANADIUM		2.3	J	P	1.5	J	P	0.44	U		13	J	P
ZINC		21	B	A	9.5	B	A	310			490		

PROJ_NO: 04021	NSAMPLE	MW18S-051012			MW31D-051012		
SDG: 240-11217-1	LAB_ID	240-11217-2			240-11217-4		
FRACTION: M	SAMP_DATE	5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.19	J	P	0.77	J	P
ARSENIC		2.2	J	P	4.6	J	P
BARIUM		49			43		
BERYLLIUM		0.2	U		0.44	J	P
CADMIUM		0.13	U		2.2		
CALCIUM		200000					
CHROMIUM		2.7			11		
COBALT		48			10		
COPPER		2.3	B	A	23		
IRON		170000					
LEAD		0.5	J	CP	14		
MAGNESIUM		210000					
MANGANESE		3400					
MERCURY		0.12	U		0.39		
MOLYBDENUM		0.35	B	A	2.6	J	P
NICKEL		35			7		
POTASSIUM		43000					
SELENIUM		0.78	J	P	0.57	U	
SILICON DIOXIDE		33000					
SILVER		0.08	U		0.47	J	P
SODIUM		590000					
THALLIUM		0.14	U		0.14	U	
TUNGSTEN		0.37	U		0.44	B	A
VANADIUM		2.3	J	P	10	J	P
ZINC		56			3600		

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18I-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-5		
FRACTION: MF	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		1.8	J	P	0.65	UJ	N	0.65	UJ	N
ARSENIC		17			1.5	J	P	8.1			6.3		
BARIUM		19	B	A	82			13	B	A	53	J	N
BERYLLIUM		0.2	U		0.2	U		4.7			3.7		
CADMIUM		0.13	U		0.41	J	P	220			100		
CHROMIUM		0.81	J	P	0.71	U		3.4			1.2	J	P
COBALT		4.3			0.4	J	P	240			310		
COPPER		0.29	U		7.2			49			30		
LEAD		0.18	U		0.82	J	CP	0.9	UJ	N	0.9	UJ	N
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.23	B	A	1.1	B	A	0.093	U		0.093	U	
NICKEL		1.4	J	P	1.9	J	P	100			230		
SELENIUM		0.57	U		0.57	U		11			7.7		
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.14	U		0.7	UJ	N	0.7	UJ	N
TUNGSTEN		0.37	U		0.37	U		1.9	UJ	N	1.9	UJ	N
VANADIUM		0.44	U		1.5	J	P	0.44	U		0.53	J	P
ZINC		11	J B		10	J B		300	B		500	B	

PROJ_NO: 04021	NSAMPLE	MW18S-051012			MW31D-051012		
SDG: 240-11217-1	LAB_ID	240-11217-2			240-11217-4		
FRACTION: MF	SAMP_DATE	5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.14	J	P	0.32	B	A
ARSENIC		1.9	J	P	2.4	B	A
BARIUM		46			17		
BERYLLIUM		0.2	U		0.25	J	P
CADMIUM		0.13	U		0.54	B	A
CHROMIUM		1.9	J	P	2.2		
COBALT		61			1.2	B	A
COPPER		0.45	B	A	1	B	A
LEAD		0.18	U		0.61	B	A
MERCURY		0.12	U		0.12	U	
MOLYBDENUM		0.22	B	A	2.3	B	A
NICKEL		45			1.2	B	A
SELENIUM		0.69	J	P	0.73	B	A
SILVER		0.08	U		0.08	U	
THALLIUM		0.14	U		0.69	B	A
TUNGSTEN		0.37	U		0.98	B	A
VANADIUM		1.1	J	P	2.2	J	P
ZINC		57	B		6.6	B	A

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MW18I-051012		
SDG: 240-11217-1	LAB_ID	240-11217-3			240-11217-7			240-11217-6			240-11217-5		
FRACTION: MISC	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			MG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY											32		
AMMONIA-N											3.3		
CHLORIDE											380		
DISSOLVED ORGANIC CARBON											43		
NITRATE-N											0.032	J	P
NITRITE-N											0.012	U	
ORTHOPHOSPHATE											0.044	U	
PERCHLORATE		0.082	U		0.082	U		0.11	J	P			
SULFATE											510		
TOTAL DISSOLVED SOLIDS											1400		

PROJ_NO: 04021	NSAMPLE	MW18I-051012			MW18S-051012						MW31D-051012		
SDG: 240-11217-1	LAB_ID	240-11217-5			240-11217-2						240-11217-4		
FRACTION: MISC	SAMP_DATE	5/10/2012			5/10/2012						5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM						NM		
	UNITS	UG/L			MG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ALKALINITY					310								
AMMONIA-N					17								
CHLORIDE					760								
DISSOLVED ORGANIC CARBON					28								
NITRATE-N					0.18								
NITRITE-N					0.12	U							
ORTHOPHOSPHATE					0.056	J	P						
PERCHLORATE		0.16	J	P				0.082	U		0.082	U	
SULFATE					1700								
TOTAL DISSOLVED SOLIDS					3300								

PROJ_NO: 04021	NSAMPLE	DMW2S-051012		
SDG: 240-11217-1	LAB_ID	240-11217-6		
FRACTION: MISCO	SAMP_DATE	5/10/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BROMOACETIC ACID		0.75	U	
CHLOROACETIC ACID		0.4	U	
DIBROMOACETIC ACID		0.38	U	
DICHLOROACETIC ACID		0.98	U	
TRICHLOROACETIC ACID		0.38	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 | Lab Sample ID: 240-11217-3

Matrix: Water | Lab File ID: UXM6194.D

Analysis Method: 8260C | Date Collected: 05/10/2012 11:04

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:26

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	10	U	10	2.3
71-55-6	1,1,1-Trichloroethane	10	U	10	2.2
79-34-5	1,1,2,2-Tetrachloroethane	10	U	10	1.8
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	10	U	10	2.8
75-34-3	1,1-Dichloroethane	10	U	10	1.5
75-35-4	1,1-Dichloroethene	10	U	10	1.9
563-58-6	1,1-Dichloropropene	10	U	10	1.3
87-61-6	1,2,3-Trichlorobenzene	10	U	10	1.7
96-18-4	1,2,3-Trichloropropane	10	U	10	4.3
526-73-8	1,2,3-Trimethylbenzene	50	U	50	0.059
120-82-1	1,2,4-Trichlorobenzene	10	U	10	1.5
95-63-6	1,2,4-Trimethylbenzene	10	U	10	1.2
96-12-8	1,2-Dibromo-3-Chloropropane	20	U	20	6.7
106-93-4	1,2-Dibromoethane	10	U	10	2.4
95-50-1	1,2-Dichlorobenzene	10	U	10	1.3
107-06-2	1,2-Dichloroethane	10	U	10	2.2
78-87-5	1,2-Dichloropropane	10	U	10	1.8
541-73-1	1,3-Dichlorobenzene	10	U	10	1.4
142-28-9	1,3-Dichloropropane	10	U	10	1.6
106-46-7	1,4-Dichlorobenzene	10	U	10	1.3
594-20-7	2,2-Dichloropropane	10	U	10	1.3
78-93-3	2-Butanone	100	U	100	5.7
110-75-8	2-Chloroethyl vinyl ether	100	U	100	9.9
95-49-8	2-Chlorotoluene	10	U	10	1.1
591-78-6	2-Hexanone	100	U	100	4.1
106-43-4	4-Chlorotoluene	10	U	10	1.8
108-10-1	4-Methyl-2-pentanone	100	U	100	3.2
67-64-1	Acetone	100	U	100	11
71-43-2	Benzene	2.3	J	10	1.3
108-86-1	Bromobenzene	10	U	10	1.3
74-97-5	Bromochloromethane	10	U	10	2.9
75-27-4	Bromodichloromethane	10	U	10	1.5
75-25-2	Bromoform	10	U	10	6.4
74-83-9	Bromomethane	10	U	10	4.1
75-15-0	Carbon disulfide	10	U	10	1.3

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 | Lab Sample ID: 240-11217-3

Matrix: Water | Lab File ID: UXM6194.D

Analysis Method: 8260C | Date Collected: 05/10/2012 11:04

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:26

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	10	U	10	1.3
108-90-7	Chlorobenzene	10	U	10	1.5
75-00-3	Chloroethane	10	U	10	2.9
67-66-3	Chloroform	10	U	10	1.6
74-87-3	Chloromethane	10	U	10	3.0
156-59-2	cis-1,2-Dichloroethene	10	U	10	1.7
10061-01-5	cis-1,3-Dichloropropene	10	U	10	1.4
124-48-1	Dibromochloromethane	10	U	10	1.8
74-95-3	Dibromomethane	10	U	10	2.8
75-71-8	Dichlorodifluoromethane	10	U	10	3.1
108-20-3	Diisopropyl ether	100	U	100	15
100-41-4	Ethylbenzene	10	U	10	1.7
637-92-3	Ethyl-t-butyl ether (ETBE)	50	U	50	1.1
87-68-3	Hexachlorobutadiene	10	U	10	3.0
98-82-8	Isopropylbenzene	10	U	10	1.3
1634-04-4	Methyl tert-butyl ether	50	U	50	1.7
75-09-2	Methylene Chloride	10	U	10	3.3
179601-23-1	m-Xylene & p-Xylene	20	U	20	2.4
91-20-3	Naphthalene	10	U	10	2.4
104-51-8	n-Butylbenzene	10	U	10	1.2
103-65-1	n-Propylbenzene	10	U	10	1.4
95-47-6	o-Xylene	10	U	10	1.4
99-87-6	p-Isopropyltoluene	10	U	10	1.2
135-98-8	sec-Butylbenzene	10	U	10	1.3
100-42-5	Styrene	10	U	10	1.1
994-05-8	Tert-amyl-methyl ether (TAME)	50	U	50	0.67
75-65-0	tert-Butyl alcohol	500	U	500	39
98-06-6	tert-Butylbenzene	10	U	10	1.3
127-18-4	Tetrachloroethene	10	U	10	2.9
108-88-3	Toluene	10	U	10	1.3
156-60-5	trans-1,2-Dichloroethene	10	U	10	1.9
10061-02-6	trans-1,3-Dichloropropene	10	U	10	1.9
79-01-6	Trichloroethene	10	U	10	1.7
75-69-4	Trichlorofluoromethane	10	U	10	2.1
108-05-4	Vinyl acetate	20	U	20	1.9
75-01-4	Vinyl chloride	280		10	2.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 | Lab Sample ID: 240-11217-3

Matrix: Water | Lab File ID: UXM6194.D

Analysis Method: 8260C | Date Collected: 05/10/2012 11:04

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:26

Soil Aliquot Vol: | Dilution Factor: 10

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	20	U	20	2.8

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119		63-129
460-00-4	4-Bromofluorobenzene (Surr)	101		66-117
1868-53-7	Dibromofluoromethane (Surr)	103		75-121
2037-26-5	Toluene-d8 (Surr)	105		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 Lab Sample ID: 240-11217-3

Matrix: Water Lab File ID: UXM6194.D

Analysis Method: 8260C Date Collected: 05/10/2012 11:04

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 15:26

Soil Aliquot Vol: Dilution Factor: 10

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

Number TICs Found: 2 TIC Result Total: 3.5

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
110-82-7	Cyclohexane	5.23	1.6	J
108-87-2	Methylcyclohexane	6.21	1.9	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW1S-051012 Lab Sample ID: 240-11217-7

Matrix: Water Lab File ID: UXM6200.D

Analysis Method: 8260C Date Collected: 05/10/2012 15:15

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 17:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
78-93-3	2-Butanone	10	U	10	0.57
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW1S-051012 Lab Sample ID: 240-11217-7

Matrix: Water Lab File ID: UXM6200.D

Analysis Method: 8260C Date Collected: 05/10/2012 15:15

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 17:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	0.66	J	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	0.84	J	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
108-20-3	Diisopropyl ether	10	U	10	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	50	U	50	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	0.33	J	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW1S-051012 | Lab Sample ID: 240-11217-7

Matrix: Water | Lab File ID: UXM6200.D

Analysis Method: 8260C | Date Collected: 05/10/2012 15:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 17:43

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	101		63-129
460-00-4	4-Bromofluorobenzene (Surr)	83		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW1S-051012 Lab Sample ID: 240-11217-7

Matrix: Water Lab File ID: UXM6200.D

Analysis Method: 8260C Date Collected: 05/10/2012 15:15

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 17:43

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 Lab Sample ID: 240-11217-6

Matrix: Water Lab File ID: UXM6199.D

Analysis Method: 8260C Date Collected: 05/10/2012 14:25

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 17:21

Soil Aliquot Vol: Dilution Factor: 90.9

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	91	U	91	21
71-55-6	1,1,1-Trichloroethane	91	U	91	20
79-34-5	1,1,2,2-Tetrachloroethane	91	U	91	16
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	91	U	91	25
75-34-3	1,1-Dichloroethane	91	U	91	14
75-35-4	1,1-Dichloroethene	91	U	91	17
563-58-6	1,1-Dichloropropene	91	U	91	12
87-61-6	1,2,3-Trichlorobenzene	91	U	91	15
96-18-4	1,2,3-Trichloropropane	91	U	91	39
526-73-8	1,2,3-Trimethylbenzene	450	U	450	0.54
120-82-1	1,2,4-Trichlorobenzene	91	U	91	14
95-63-6	1,2,4-Trimethylbenzene	91	U	91	11
96-12-8	1,2-Dibromo-3-Chloropropane	180	U	180	61
106-93-4	1,2-Dibromoethane	91	U	91	22
95-50-1	1,2-Dichlorobenzene	91	U	91	12
107-06-2	1,2-Dichloroethane	23	J	91	20
78-87-5	1,2-Dichloropropane	91	U	91	16
541-73-1	1,3-Dichlorobenzene	91	U	91	13
142-28-9	1,3-Dichloropropane	91	U	91	15
106-46-7	1,4-Dichlorobenzene	91	U	91	12
594-20-7	2,2-Dichloropropane	91	U	91	12
78-93-3	2-Butanone	910	U	910	52
110-75-8	2-Chloroethyl vinyl ether	910	U	910	90
95-49-8	2-Chlorotoluene	91	U	91	10
591-78-6	2-Hexanone	910	U	910	37
106-43-4	4-Chlorotoluene	91	U	91	16
108-10-1	4-Methyl-2-pentanone	910	U	910	29
67-64-1	Acetone	910	U	910	100
71-43-2	Benzene	91	U	91	12
108-86-1	Bromobenzene	91	U	91	12
74-97-5	Bromochloromethane	91	U	91	26
75-27-4	Bromodichloromethane	91	U	91	14
75-25-2	Bromoform	91	U	91	58
74-83-9	Bromomethane	91	U	91	37
75-15-0	Carbon disulfide	91	U	91	12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 Lab Sample ID: 240-11217-6

Matrix: Water Lab File ID: UXM6199.D

Analysis Method: 8260C Date Collected: 05/10/2012 14:25

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 17:21

Soil Aliquot Vol: Dilution Factor: 90.9

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	91	U	91	12
108-90-7	Chlorobenzene	91	U	91	14
75-00-3	Chloroethane	91	U	91	26
67-66-3	Chloroform	91	U	91	15
74-87-3	Chloromethane	91	U	91	27
156-59-2	cis-1,2-Dichloroethene	1900		91	15
10061-01-5	cis-1,3-Dichloropropene	91	U	91	13
124-48-1	Dibromochloromethane	91	U	91	16
74-95-3	Dibromomethane	91	U	91	25
75-71-8	Dichlorodifluoromethane	91	U	91	28
108-20-3	Diisopropyl ether	910	U	910	140
100-41-4	Ethylbenzene	91	U	91	15
637-92-3	Ethyl-t-butyl ether (ETBE)	450	U	450	10
87-68-3	Hexachlorobutadiene	91	U	91	27
98-82-8	Isopropylbenzene	91	U	91	12
1634-04-4	Methyl tert-butyl ether	450	U	450	15
75-09-2	Methylene Chloride	91	U	91	30
179601-23-1	m-Xylene & p-Xylene	180	U	180	22
91-20-3	Naphthalene	91	U	91	22
104-51-8	n-Butylbenzene	91	U	91	11
103-65-1	n-Propylbenzene	91	U	91	13
95-47-6	o-Xylene	91	U	91	13
99-87-6	p-Isopropyltoluene	91	U	91	11
135-98-8	sec-Butylbenzene	91	U	91	12
100-42-5	Styrene	91	U	91	10
994-05-8	Tert-amyl-methyl ether (TAME)	450	U	450	6.1
75-65-0	tert-Butyl alcohol	4500	U	4500	350
98-06-6	tert-Butylbenzene	91	U	91	12
127-18-4	Tetrachloroethene	91	U	91	26
108-88-3	Toluene	91	U	91	12
156-60-5	trans-1,2-Dichloroethene	91	U	91	17
10061-02-6	trans-1,3-Dichloropropene	91	U	91	17
79-01-6	Trichloroethene	2800		91	15
75-69-4	Trichlorofluoromethane	91	U	91	19
108-05-4	Vinyl acetate	180	U	180	17
75-01-4	Vinyl chloride	640		91	20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 | Lab Sample ID: 240-11217-6

Matrix: Water | Lab File ID: UXM6199.D

Analysis Method: 8260C | Date Collected: 05/10/2012 14:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 17:21

Soil Aliquot Vol: | Dilution Factor: 90.9

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	180	U	180	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	99		63-129
460-00-4	4-Bromofluorobenzene (Surr)	86		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 Lab Sample ID: 240-11217-6

Matrix: Water Lab File ID: UXM6199.D

Analysis Method: 8260C Date Collected: 05/10/2012 14:25

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 17:21

Soil Aliquot Vol: Dilution Factor: 90.9

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Matrix: Water Lab File ID: UXM6198.D

Analysis Method: 8260C Date Collected: 05/10/2012 13:00

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 16:58

Soil Aliquot Vol: Dilution Factor: 333.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	330	U	330	77
71-55-6	1,1,1-Trichloroethane	330	U	330	73
79-34-5	1,1,2,2-Tetrachloroethane	330	U	330	60
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	330	U	330	93
75-34-3	1,1-Dichloroethane	330	U	330	50
75-35-4	1,1-Dichloroethene	330	U	330	63
563-58-6	1,1-Dichloropropene	330	U	330	43
87-61-6	1,2,3-Trichlorobenzene	130	J	330	57
96-18-4	1,2,3-Trichloropropane	330	U	330	140
526-73-8	1,2,3-Trimethylbenzene	1700	U	1700	2.0
120-82-1	1,2,4-Trichlorobenzene	160	J	330	50
95-63-6	1,2,4-Trimethylbenzene	330	U	330	40
96-12-8	1,2-Dibromo-3-Chloropropane	670	U	670	220
106-93-4	1,2-Dibromoethane	330	U	330	80
95-50-1	1,2-Dichlorobenzene	330	U	330	43
107-06-2	1,2-Dichloroethane	330	U	330	73
78-87-5	1,2-Dichloropropane	330	U	330	60
541-73-1	1,3-Dichlorobenzene	330	U	330	47
142-28-9	1,3-Dichloropropane	330	U	330	53
106-46-7	1,4-Dichlorobenzene	330	U	330	43
594-20-7	2,2-Dichloropropane	330	U	330	43
78-93-3	2-Butanone	3300	U	3300	190
110-75-8	2-Chloroethyl vinyl ether	3300	U	3300	330
95-49-8	2-Chlorotoluene	330	U	330	37
591-78-6	2-Hexanone	3300	U	3300	140
106-43-4	4-Chlorotoluene	330	U	330	60
108-10-1	4-Methyl-2-pentanone	3300	U	3300	110
67-64-1	Acetone	3300	U	3300	370
71-43-2	Benzene	330	U	330	43
108-86-1	Bromobenzene	330	U	330	43
74-97-5	Bromochloromethane	330	U	330	97
75-27-4	Bromodichloromethane	330	U	330	50
75-25-2	Bromoform	330	U	330	210
74-83-9	Bromomethane	330	U	330	140
75-15-0	Carbon disulfide	330	U	330	43

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18I-051012 | Lab Sample ID: 240-11217-5

Matrix: Water | Lab File ID: UXM6198.D

Analysis Method: 8260C | Date Collected: 05/10/2012 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 16:58

Soil Aliquot Vol: | Dilution Factor: 333.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	330	U	330	43
108-90-7	Chlorobenzene	330	U	330	50
75-00-3	Chloroethane	330	U	330	97
67-66-3	Chloroform	330	U	330	53
74-87-3	Chloromethane	330	U	330	100
156-59-2	cis-1,2-Dichloroethene	1200		330	57
10061-01-5	cis-1,3-Dichloropropene	330	U	330	47
124-48-1	Dibromochloromethane	330	U	330	60
74-95-3	Dibromomethane	330	U	330	93
75-71-8	Dichlorodifluoromethane	330	U	330	100
108-20-3	Diisopropyl ether	3300	U	3300	500
100-41-4	Ethylbenzene	330	U	330	57
637-92-3	Ethyl-t-butyl ether (ETBE)	1700	U	1700	37
87-68-3	Hexachlorobutadiene	210	J	330	100
98-82-8	Isopropylbenzene	330	U	330	43
1634-04-4	Methyl tert-butyl ether	1700	U	1700	57
75-09-2	Methylene Chloride	330	U	330	110
179601-23-1	m-Xylene & p-Xylene	670	U	670	80
91-20-3	Naphthalene	330	U	330	80
104-51-8	n-Butylbenzene	330	U	330	40
103-65-1	n-Propylbenzene	330	U	330	47
95-47-6	o-Xylene	330	U	330	47
99-87-6	p-Isopropyltoluene	330	U	330	40
135-98-8	sec-Butylbenzene	330	U	330	43
100-42-5	Styrene	330	U	330	37
994-05-8	Tert-amyl-methyl ether (TAME)	1700	U	1700	22
75-65-0	tert-Butyl alcohol	17000	U	17000	1300
98-06-6	tert-Butylbenzene	330	U	330	43
127-18-4	Tetrachloroethene	330	U	330	97
108-88-3	Toluene	330	U	330	43
156-60-5	trans-1,2-Dichloroethene	330	U	330	63
10061-02-6	trans-1,3-Dichloropropene	330	U	330	63
79-01-6	Trichloroethene	11000		330	57
75-69-4	Trichlorofluoromethane	330	U	330	70
108-05-4	Vinyl acetate	670	U	670	63
75-01-4	Vinyl chloride	540		330	73

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18I-051012 | Lab Sample ID: 240-11217-5

Matrix: Water | Lab File ID: UXM6198.D

Analysis Method: 8260C | Date Collected: 05/10/2012 13:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 16:58

Soil Aliquot Vol: | Dilution Factor: 333.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	670	U	670	93

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	112		63-129
460-00-4	4-Bromofluorobenzene (Surr)	95		66-117
1868-53-7	Dibromofluoromethane (Surr)	98		75-121
2037-26-5	Toluene-d8 (Surr)	102		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Matrix: Water Lab File ID: UXM6198.D

Analysis Method: 8260C Date Collected: 05/10/2012 13:00

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 16:58

Soil Aliquot Vol: Dilution Factor: 333.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 | Lab Sample ID: 240-11217-2

Matrix: Water | Lab File ID: UXM6193.D

Analysis Method: 8260C | Date Collected: 05/10/2012 10:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:04

Soil Aliquot Vol: | Dilution Factor: 55.56

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	56	U	56	13
71-55-6	1,1,1-Trichloroethane	56	U	56	12
79-34-5	1,1,2,2-Tetrachloroethane	56	U	56	10
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	56	U	56	16
75-34-3	1,1-Dichloroethane	56	U	56	8.3
75-35-4	1,1-Dichloroethene	56	U	56	11
563-58-6	1,1-Dichloropropene	56	U	56	7.2
87-61-6	1,2,3-Trichlorobenzene	56	U	56	9.4
96-18-4	1,2,3-Trichloropropane	56	U	56	24
526-73-8	1,2,3-Trimethylbenzene	280	U	280	0.33
120-82-1	1,2,4-Trichlorobenzene	8.8	J	56	8.3
95-63-6	1,2,4-Trimethylbenzene	56	U	56	6.7
96-12-8	1,2-Dibromo-3-Chloropropane	110	U	110	37
106-93-4	1,2-Dibromoethane	56	U	56	13
95-50-1	1,2-Dichlorobenzene	56	U	56	7.2
107-06-2	1,2-Dichloroethane	56	U	56	12
78-87-5	1,2-Dichloropropane	56	U	56	10
541-73-1	1,3-Dichlorobenzene	56	U	56	7.8
142-28-9	1,3-Dichloropropane	56	U	56	8.9
106-46-7	1,4-Dichlorobenzene	56	U	56	7.2
594-20-7	2,2-Dichloropropane	56	U	56	7.2
78-93-3	2-Butanone	560	U	560	32
110-75-8	2-Chloroethyl vinyl ether	560	U	560	55
95-49-8	2-Chlorotoluene	56	U	56	6.1
591-78-6	2-Hexanone	560	U	560	23
106-43-4	4-Chlorotoluene	56	U	56	10
108-10-1	4-Methyl-2-pentanone	560	U	560	18
67-64-1	Acetone	560	U	560	61
71-43-2	Benzene	56	U	56	7.2
108-86-1	Bromobenzene	56	U	56	7.2
74-97-5	Bromochloromethane	56	U	56	16
75-27-4	Bromodichloromethane	56	U	56	8.3
75-25-2	Bromoform	56	U	56	36
74-83-9	Bromomethane	56	U	56	23
75-15-0	Carbon disulfide	56	U	56	7.2

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Matrix: Water Lab File ID: UXM6193.D

Analysis Method: 8260C Date Collected: 05/10/2012 10:45

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 15:04

Soil Aliquot Vol: Dilution Factor: 55.56

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	56	U	56	7.2
108-90-7	Chlorobenzene	56	U	56	8.3
75-00-3	Chloroethane	56	U	56	16
67-66-3	Chloroform	56	U	56	8.9
74-87-3	Chloromethane	56	U	56	17
156-59-2	cis-1,2-Dichloroethene	180		56	9.4
10061-01-5	cis-1,3-Dichloropropene	56	U	56	7.8
124-48-1	Dibromochloromethane	56	U	56	10
74-95-3	Dibromomethane	56	U	56	16
75-71-8	Dichlorodifluoromethane	56	U	56	17
108-20-3	Diisopropyl ether	560	U	560	83
100-41-4	Ethylbenzene	56	U	56	9.4
637-92-3	Ethyl-t-butyl ether (ETBE)	280	U	280	6.1
87-68-3	Hexachlorobutadiene	56	U	56	17
98-82-8	Isopropylbenzene	56	U	56	7.2
1634-04-4	Methyl tert-butyl ether	280	U	280	9.4
75-09-2	Methylene Chloride	56	U	56	18
179601-23-1	m-Xylene & p-Xylene	110	U	110	13
91-20-3	Naphthalene	56	U	56	13
104-51-8	n-Butylbenzene	56	U	56	6.7
103-65-1	n-Propylbenzene	56	U	56	7.8
95-47-6	o-Xylene	56	U	56	7.8
99-87-6	p-Isopropyltoluene	56	U	56	6.7
135-98-8	sec-Butylbenzene	56	U	56	7.2
100-42-5	Styrene	56	U	56	6.1
994-05-8	Tert-amyl-methyl ether (TAME)	280	U	280	3.7
75-65-0	tert-Butyl alcohol	2800	U	2800	220
98-06-6	tert-Butylbenzene	56	U	56	7.2
127-18-4	Tetrachloroethene	56	U	56	16
108-88-3	Toluene	56	U	56	7.2
156-60-5	trans-1,2-Dichloroethene	56	U	56	11
10061-02-6	trans-1,3-Dichloropropene	56	U	56	11
79-01-6	Trichloroethene	1800		56	9.4
75-69-4	Trichlorofluoromethane	56	U	56	12
108-05-4	Vinyl acetate	110	U	110	11
75-01-4	Vinyl chloride	73		56	12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 | Lab Sample ID: 240-11217-2

Matrix: Water | Lab File ID: UXM6193.D

Analysis Method: 8260C | Date Collected: 05/10/2012 10:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:04

Soil Aliquot Vol: | Dilution Factor: 55.56

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	110	U	110	16

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		63-129
460-00-4	4-Bromofluorobenzene (Surr)	95		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
2037-26-5	Toluene-d8 (Surr)	103		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 | Lab Sample ID: 240-11217-2

Matrix: Water | Lab File ID: UXM6193.D

Analysis Method: 8260C | Date Collected: 05/10/2012 10:45

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:04

Soil Aliquot Vol: | Dilution Factor: 55.56

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

Number TICs Found: 0 | TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW31D-051012 Lab Sample ID: 240-11217-4

Matrix: Water Lab File ID: UXM6195.D

Analysis Method: 8260C Date Collected: 05/10/2012 12:42

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 15:49

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	2.0	U	2.0	0.46
71-55-6	1,1,1-Trichloroethane	2.0	U	2.0	0.44
79-34-5	1,1,2,2-Tetrachloroethane	2.0	U	2.0	0.36
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	2.0	U	2.0	0.56
75-34-3	1,1-Dichloroethane	2.0	U	2.0	0.30
75-35-4	1,1-Dichloroethene	2.0	U	2.0	0.38
563-58-6	1,1-Dichloropropene	2.0	U	2.0	0.26
87-61-6	1,2,3-Trichlorobenzene	2.0	U	2.0	0.34
96-18-4	1,2,3-Trichloropropane	2.0	U	2.0	0.86
526-73-8	1,2,3-Trimethylbenzene	10	U	10	0.012
120-82-1	1,2,4-Trichlorobenzene	2.0	U	2.0	0.30
95-63-6	1,2,4-Trimethylbenzene	2.0	U	2.0	0.24
96-12-8	1,2-Dibromo-3-Chloropropane	4.0	U	4.0	1.3
106-93-4	1,2-Dibromoethane	2.0	U	2.0	0.48
95-50-1	1,2-Dichlorobenzene	2.0	U	2.0	0.26
107-06-2	1,2-Dichloroethane	2.0	U	2.0	0.44
78-87-5	1,2-Dichloropropane	2.0	U	2.0	0.36
541-73-1	1,3-Dichlorobenzene	2.0	U	2.0	0.28
142-28-9	1,3-Dichloropropane	2.0	U	2.0	0.32
106-46-7	1,4-Dichlorobenzene	2.0	U	2.0	0.26
594-20-7	2,2-Dichloropropane	2.0	U	2.0	0.26
78-93-3	2-Butanone	20	U	20	1.1
110-75-8	2-Chloroethyl vinyl ether	20	U	20	2.0
95-49-8	2-Chlorotoluene	2.0	U	2.0	0.22
591-78-6	2-Hexanone	20	U	20	0.82
106-43-4	4-Chlorotoluene	2.0	U	2.0	0.36
108-10-1	4-Methyl-2-pentanone	20	U	20	0.64
67-64-1	Acetone	2.7	J	20	2.2
71-43-2	Benzene	2.0	U	2.0	0.26
108-86-1	Bromobenzene	2.0	U	2.0	0.26
74-97-5	Bromochloromethane	2.0	U	2.0	0.58
75-27-4	Bromodichloromethane	2.0	U	2.0	0.30
75-25-2	Bromoform	2.0	U	2.0	1.3
74-83-9	Bromomethane	2.0	U	2.0	0.82
75-15-0	Carbon disulfide	0.57	J	2.0	0.26

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW31D-051012 | Lab Sample ID: 240-11217-4

Matrix: Water | Lab File ID: UXM6195.D

Analysis Method: 8260C | Date Collected: 05/10/2012 12:42

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	2.0	U	2.0	0.26
108-90-7	Chlorobenzene	2.0	U	2.0	0.30
75-00-3	Chloroethane	2.0	U	2.0	0.58
67-66-3	Chloroform	2.0	U	2.0	0.32
74-87-3	Chloromethane	2.0	U	2.0	0.60
156-59-2	cis-1,2-Dichloroethene	2.0	U	2.0	0.34
10061-01-5	cis-1,3-Dichloropropene	2.0	U	2.0	0.28
124-48-1	Dibromochloromethane	2.0	U	2.0	0.36
74-95-3	Dibromomethane	2.0	U	2.0	0.56
75-71-8	Dichlorodifluoromethane	2.0	U	2.0	0.62
108-20-3	Diisopropyl ether	20	U	20	3.0
100-41-4	Ethylbenzene	2.0	U	2.0	0.34
637-92-3	Ethyl-t-butyl ether (ETBE)	10	U	10	0.22
87-68-3	Hexachlorobutadiene	2.0	U	2.0	0.60
98-82-8	Isopropylbenzene	2.0	U	2.0	0.26
1634-04-4	Methyl tert-butyl ether	10	U	10	0.34
75-09-2	Methylene Chloride	2.0	U	2.0	0.66
179601-23-1	m-Xylene & p-Xylene	4.0	U	4.0	0.48
91-20-3	Naphthalene	2.0	U	2.0	0.48
104-51-8	n-Butylbenzene	2.0	U	2.0	0.24
103-65-1	n-Propylbenzene	2.0	U	2.0	0.28
95-47-6	o-Xylene	2.0	U	2.0	0.28
99-87-6	p-Isopropyltoluene	2.0	U	2.0	0.24
135-98-8	sec-Butylbenzene	2.0	U	2.0	0.26
100-42-5	Styrene	2.0	U	2.0	0.22
994-05-8	Tert-amyl-methyl ether (TAME)	10	U	10	0.13
75-65-0	tert-Butyl alcohol	100	U	100	7.8
98-06-6	tert-Butylbenzene	2.0	U	2.0	0.26
127-18-4	Tetrachloroethene	2.0	U	2.0	0.58
108-88-3	Toluene	0.98	J	2.0	0.26
156-60-5	trans-1,2-Dichloroethene	2.0	U	2.0	0.38
10061-02-6	trans-1,3-Dichloropropene	2.0	U	2.0	0.38
79-01-6	Trichloroethene	2.0	U	2.0	0.34
75-69-4	Trichlorofluoromethane	2.0	U	2.0	0.42
108-05-4	Vinyl acetate	4.0	U	4.0	0.38
75-01-4	Vinyl chloride	2.0	U	2.0	0.44

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW31D-051012 | Lab Sample ID: 240-11217-4

Matrix: Water | Lab File ID: UXM6195.D

Analysis Method: 8260C | Date Collected: 05/10/2012 12:42

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 15:49

Soil Aliquot Vol: | Dilution Factor: 2

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	4.0	U	4.0	0.56

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		63-129
460-00-4	4-Bromofluorobenzene (Surr)	91		66-117
1868-53-7	Dibromofluoromethane (Surr)	100		75-121
2037-26-5	Toluene-d8 (Surr)	98		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW31D-051012 Lab Sample ID: 240-11217-4

Matrix: Water Lab File ID: UXM6195.D

Analysis Method: 8260C Date Collected: 05/10/2012 12:42

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 15:49

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: TB-051012 Lab Sample ID: 240-11217-1

Matrix: Water Lab File ID: UXM6192.D

Analysis Method: 8260C Date Collected: 05/10/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 14:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
78-93-3	2-Butanone	10	U	10	0.57
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: TB-051012 Lab Sample ID: 240-11217-1

Matrix: Water Lab File ID: UXM6192.D

Analysis Method: 8260C Date Collected: 05/10/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 14:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
108-20-3	Diisopropyl ether	10	U	10	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	50	U	50	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: TB-051012 Lab Sample ID: 240-11217-1

Matrix: Water Lab File ID: UXM6192.D

Analysis Method: 8260C Date Collected: 05/10/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 14:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	100		63-129
460-00-4	4-Bromofluorobenzene (Surr)	85		66-117
1868-53-7	Dibromofluoromethane (Surr)	89		75-121
2037-26-5	Toluene-d8 (Surr)	91		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: TB-051012 Lab Sample ID: 240-11217-1

Matrix: Water Lab File ID: UXM6192.D

Analysis Method: 8260C Date Collected: 05/10/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 14:41

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

Number TICs Found: 1 TIC Result Total: 3.6

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
75-05-8	Acetonitrile	3.44	3.6	J

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 | Lab Sample ID: 240-11217-3

Matrix: Water | Lab File ID: 20522029.D

Analysis Method: 8270C | Date Collected: 05/10/2012 11:04

Extract. Method: 3520C | Date Extracted: 05/16/2012 10:08

Sample wt/vol: 1030(mL) | Date Analyzed: 05/22/2012 17:13

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	10		0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		28-110
367-12-4	2-Fluorophenol (Surr)	61		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	71		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	59		27-111
4165-62-2	Phenol-d5 (Surr)	65		10-110
1718-51-0	Terphenyl-d14 (Surr)	75		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name:	TestAmerica Canton	Job No.:	240-11217-1
SDG No.:			
Client Sample ID:	DMW1S-051012	Lab Sample ID:	240-11217-7
Matrix:	Water	Lab File ID:	20522030.D
Analysis Method:	8270C	Date Collected:	05/10/2012 15:15
Extract. Method:	3520C	Date Extracted:	05/16/2012 10:08
Sample wt/vol:	1030(mL)	Date Analyzed:	05/22/2012 17:32
Con. Extract Vol.:	2(mL)	Dilution Factor:	1
Injection Volume:	1(uL)	Level: (low/med)	Low
% Moisture:		GPC Cleanup:(Y/N)	N
Analysis Batch No.:	44839	Units:	ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.9		0.97	0.48

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	51		28-110
367-12-4	2-Fluorophenol (Surr)	51		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	67		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	55		10-110
1718-51-0	Terphenyl-d14 (Surr)	59		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 | Lab Sample ID: 240-11217-6

Matrix: Water | Lab File ID: 20522033.D

Analysis Method: 8270C | Date Collected: 05/10/2012 14:25

Extract. Method: 3520C | Date Extracted: 05/16/2012 10:08

Sample wt/vol: 1050(mL) | Date Analyzed: 05/22/2012 18:28

Con. Extract Vol.: 2(mL) | Dilution Factor: 2.5

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	81		2.4	1.2

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	38		28-110
367-12-4	2-Fluorophenol (Surr)	36		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	56		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	38		27-111
4165-62-2	Phenol-d5 (Surr)	38		10-110
1718-51-0	Terphenyl-d14 (Surr)	62		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18I-051012 | Lab Sample ID: 240-11217-5

Matrix: Water | Lab File ID: 20522034.D

Analysis Method: 8270C | Date Collected: 05/10/2012 13:00

Extract. Method: 3520C | Date Extracted: 05/16/2012 10:08

Sample wt/vol: 1050(mL) | Date Analyzed: 05/22/2012 18:47

Con. Extract Vol.: 2(mL) | Dilution Factor: 5

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	140		4.8	2.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	50		28-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	64		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	48		27-111
4165-62-2	Phenol-d5 (Surr)	52		10-110
1718-51-0	Terphenyl-d14 (Surr)	68		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 | Lab Sample ID: 240-11217-2

Matrix: Water | Lab File ID: 20522031.D

Analysis Method: 8270C | Date Collected: 05/10/2012 10:45

Extract. Method: 3520C | Date Extracted: 05/16/2012 10:08

Sample wt/vol: 1030(mL) | Date Analyzed: 05/22/2012 17:51

Con. Extract Vol.: 2(mL) | Dilution Factor: 2

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	45		1.9	0.95

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	44		28-110
367-12-4	2-Fluorophenol (Surr)	42		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	55		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	43		27-111
4165-62-2	Phenol-d5 (Surr)	47		10-110
1718-51-0	Terphenyl-d14 (Surr)	52		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW31D-051012 Lab Sample ID: 240-11217-4

Matrix: Water Lab File ID: 20522026.D

Analysis Method: 8270C Date Collected: 05/10/2012 12:42

Extract. Method: 3520C Date Extracted: 05/16/2012 10:08

Sample wt/vol: 1050(mL) Date Analyzed: 05/22/2012 16:17

Con. Extract Vol.: 2(mL) Dilution Factor: 1

Injection Volume: 1(uL) Level: (low/med) Low

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 44839 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	0.95	U	0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	18	X	28-110
367-12-4	2-Fluorophenol (Surr)	20		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	24		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	19	X	27-111
4165-62-2	Phenol-d5 (Surr)	21		10-110
1718-51-0	Terphenyl-d14 (Surr)	16	X	37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW31D-051012 RE | Lab Sample ID: 240-11217-4 RE

Matrix: Water | Lab File ID: 0530036.D

Analysis Method: 8270C | Date Collected: 05/10/2012 12:42

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1050(mL) | Date Analyzed: 05/30/2012 19:55

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	*1,4-Dioxane*	*0.95*	*U H*	*0.95*	*0.47*

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	44		28-110
367-12-4	2-Fluorophenol (Surr)	52		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	72		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	46		27-111
4165-62-2	Phenol-d5 (Surr)	54		10-110
1718-51-0	Terphenyl-d14 (Surr)	42		37-119

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Matrix: Water Lab File ID: Z2051706.D

Analysis Method: RSK-175 Date Collected: 05/10/2012 13:00

Sample wt/vol: 17(mL) Date Analyzed: 05/17/2012 17:11

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44479 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	21		0.50	0.37
74-84-0	Ethane	1.5		0.50	0.10
74-82-8	Methane	230		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	95		40-122

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Matrix: Water Lab File ID: Z2051705.D

Analysis Method: RSK-175 Date Collected: 05/10/2012 10:45

Sample wt/vol: 17(mL) Date Analyzed: 05/17/2012 16:38

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44479 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	4.9		0.50	0.37
74-84-0	Ethane	0.74		0.50	0.10
74-82-8	Methane	180		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	94		40-122

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 Lab Sample ID: 240-11217-3

Matrix: Water Lab File ID: AF052134.D

Analysis Method: 8015B Date Collected: 05/10/2012 11:04

Sample wt/vol: 5(mL) Date Analyzed: 05/22/2012 06:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44701 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	97	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	82		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW1S-051012 | Lab Sample ID: 240-11217-7

Matrix: Water | Lab File ID: AF052136.D

Analysis Method: 8015B | Date Collected: 05/10/2012 15:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/22/2012 07:51

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44701 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	34	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	71		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 | Lab Sample ID: 240-11217-6

Matrix: Water | Lab File ID: AF052135.D

Analysis Method: 8015B | Date Collected: 05/10/2012 14:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/22/2012 07:15

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44701 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	2200		500	130

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	75		10-150

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Matrix: Water Lab File ID: AF052133.D

Analysis Method: 8015B Date Collected: 05/10/2012 10:45

Sample wt/vol: 5(mL) Date Analyzed: 05/22/2012 06:03

Soil Aliquot Vol: Dilution Factor: 2

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44701 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	910		200	50

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	84		10-150

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 | Lab Sample ID: 240-11217-3

Matrix: Water | Lab File ID: P6F51811.D

Analysis Method: 8015B | Date Collected: 05/10/2012 11:04

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 990(mL) | Date Analyzed: 05/18/2012 15:18

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	620	B	510	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	61		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW1S-051012 | Lab Sample ID: 240-11217-7

Matrix: Water | Lab File ID: P6F51813.D

Analysis Method: 8015B | Date Collected: 05/10/2012 15:15

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 1050(mL) | Date Analyzed: 05/18/2012 16:37

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	380	J B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	58		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 | Lab Sample ID: 240-11217-6

Matrix: Water | Lab File ID: P6F51812.D

Analysis Method: 8015B | Date Collected: 05/10/2012 14:25

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 920(mL) | Date Analyzed: 05/18/2012 15:58

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	490	J B	540	260

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	64		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Matrix: Water Lab File ID: P6F51810.D

Analysis Method: 8015B Date Collected: 05/10/2012 10:45

Extraction Method: 3510C Date Extracted: 05/16/2012 12:53

Sample wt/vol: 1050(mL) Date Analyzed: 05/18/2012 14:39

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: RTX-5 ID: 0.53(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	380	J B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	65		10-110

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 | Lab Sample ID: 240-11217-6

Matrix: Water | Lab File ID: ye16011.d

Analysis Method: 552.2 | Date Collected: 05/10/2012 14:25

Extraction Method: 552.2 | Date Extracted: 05/16/2012 09:48

Sample wt/vol: 40(mL) | Date Analyzed: 05/16/2012 19:02

Con. Extract Vol.: 4(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: DB-1701-p ID: 0.25(um)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid	92		70-130

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 Lab Sample ID: 240-11217-6

Matrix: Water Lab File ID: ye16011.d

Analysis Method: 552.2 Date Collected: 05/10/2012 14:25

Extraction Method: 552.2 Date Extracted: 05/16/2012 09:48

Sample wt/vol: 40(mL) Date Analyzed: 05/16/2012 19:02

Con. Extract Vol.: 4(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: CLP II ID: 0.32(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid	86		70-130

TestAmerica Canton

Client Sample ID: DMW10S-051012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E120412-002	**Work Order #...:**	MTH871AA	**Matrix.....:**	WATER
Date Sampled...:	05/10/12	**Date Received..:**	05/12/12		
Prep Date.....:	05/21/12	**Analysis Date..:**	05/26/12		
Prep Batch #...:	2138157				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: DMW1S-051012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E120412-005 Work Order #...: MTH9A1AA Matrix.....: WATER
Date Sampled...: 05/10/12 Date Received..: 05/12/12
Prep Date.....: 05/21/12 Analysis Date..: 05/26/12
Prep Batch #...: 2138157
Dilution Factor: 1 Method.....: SW846 6850

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: DMW2S-051012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E120412-006	Work Order #...:	MTLNM1AA	Matrix.....:	WATER
Date Sampled...:	05/10/12	Date Received..:	05/12/12		
Prep Date.....:	05/21/12	Analysis Date..:	05/29/12		
Prep Batch #...:	2138157				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.11 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

TestAmerica Canton

Client Sample ID: MW18I-051012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E120412-004	Work Order #...:	MTH891AA	Matrix.....:	WATER
Date Sampled...:	05/10/12	Date Received..:	05/12/12		
Prep Date.....:	05/21/12	Analysis Date..:	05/26/12		
Prep Batch #...:	2138157				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	0.16 J	1.0	ug/L	0.082

NOTE(S):

J Estimated result. Result is less than RL.

TestAmerica Canton

Client Sample ID: MW 18S-051012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E120412-001	**Work Order #...:**	MTH861AA	**Matrix.....:**	WATER
Date Sampled...:	05/10/12	**Date Received..:**	05/12/12		
Prep Date.....:	05/21/12	**Analysis Date..:**	05/26/12		
Prep Batch #...:	2138157				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MW31D-051012

Dissolved HPLC - Mass. Spec.

Lot-Sample #...: G2E120412-003	**Work Order #...:** MTH881AA		**Matrix.....:** WATER	
Date Sampled...: 05/10/12	**Date Received..:** 05/12/12			
Prep Date.....: 05/21/12	**Analysis Date..:** 05/26/12			
Prep Batch #...: 2138157				
Dilution Factor: 1	**Method.....:** SW846 6850			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MW 18S-051012

HPLC

Lot-Sample #...: G2E120412-001 **Work Order #...:** MTH861AC **Matrix.....:** WATER
Date Sampled...: 05/10/12 **Date Received..:** 05/12/12
Prep Date.....: 05/16/12 **Analysis Date..:** 05/20/12
Prep Batch #...: 2137042
Dilution Factor: 1.01 **Method.....:** SW846 8330/8330A

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
RDX	ND	0.10	ug/L	0.036

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	95	(79 - 111)

QC DATA ASSOCIATION SUMMARY

G2E120412

Sample Preparation and Analysis Control Numbers

SAMPLE#	MATRIX	ANALYTICAL METHOD	LEACH BATCH #	PREP BATCH #	MS RUN#
001	WATER	SW846 8330/8330A		2137042	
	WATER	SW846 6850		2138157	2138093
002	WATER	SW846 6850		2138157	2138093
003	WATER	SW846 6850		2138157	2138093
004	WATER	SW846 6850		2138157	2138093
005	WATER	SW846 6850		2138157	2138093
006	WATER	SW846 6850		2138157	2138093

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG No.:

Project: MSA Groundwater Sampling

Client Sample ID	Lab Sample ID
MW18S-051012	240-11217-2
DMW10S-051012	240-11217-3
MW31D-051012	240-11217-4
MW18I-051012	240-11217-5
DMW2S-051012	240-11217-6
DMW1S-051012	240-11217-7

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DMW10S-051012 Lab Sample ID: 240-11217-3

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 11:04

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: DMW10S-051012 Lab Sample ID: 240-11217-3

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 11:04

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	17	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	20	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	3.8	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	4.2	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	1.3	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.33	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.19	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.5	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	2.3	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	21	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: DMW10S-051012 Lab Sample ID: 240-11217-3

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 11:04

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	17	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	19	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	0.81	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	4.3	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	2.0	2.0	0.29	ug/L	U		1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.23	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.4	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	11	20	2.3	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DMW1S-051012 Lab Sample ID: 240-11217-7

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 15:15

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.13	0.20	0.12	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: DMW1S-051012 Lab Sample ID: 240-11217-7

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 15:15

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	1.8	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	1.5	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	81	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.1	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	0.79	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	0.40	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	8.5	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	2.4	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	1.1	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.7	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	1.5	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	9.5	20	2.3	ug/L	J	B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: DMW1S-051012 Lab Sample ID: 240-11217-7

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 15:15

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	1.8	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	1.5	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	82	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	0.41	1.0	0.13	ug/L	J		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	0.40	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	7.2	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.82	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	1.1	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.9	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	1.5	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	10	20	2.3	ug/L	J	B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: DMW2S-051012 Lab Sample ID: 240-11217-6

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 14:25

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: DMW2S-051012 Lab Sample ID: 240-11217-6

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 14:25

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	8.6	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	13	25	0.95	ug/L	J	B	5	6020
7440-41-7	Beryllium	4.9	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	230	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	3.7	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	240	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	52	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	5.0	5.0	0.90	ug/L	U		5	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	110	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	12	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	310	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: DMW2S-051012 Lab Sample ID: 240-11217-6

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 14:25

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	8.1	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	13	25	0.95	ug/L	J	B	5	6020
7440-41-7	Beryllium	4.7	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	220	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	3.4	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	240	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	49	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	5.0	5.0	0.90	ug/L	U		5	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	100	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	11	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	300	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 13:00

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.26	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 13:00

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	61000	25000	650	ug/L		B	5	6010C
7439-89-6	Iron	52000	1000	410	ug/L			5	6010C
7440-09-7	Potassium	11000	25000	360	ug/L	J	B	5	6010C
7439-95-4	Magnesium	59000	25000	170	ug/L		B	5	6010C
7439-96-5	Manganese	3700	75	2.1	ug/L		B	5	6010C
7440-23-5	Sodium	210000	25000	3000	ug/L			5	6010C
14808-60-7	SiO2, Silica	36000	5400	70	ug/L		B	5	6010C
7440-36-0	Antimony	20	20	1.3	ug/L	U		10	6020
7440-38-2	Arsenic	21	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	55	50	1.9	ug/L		B	10	6020
7440-41-7	Beryllium	16	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	130	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	9.8	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	290	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	350	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	4.1	10	1.8	ug/L	J		10	6020
7439-98-7	Molybdenum	0.24	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	220	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	24	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	20	20	1.4	ug/L	U		10	6020
7440-33-7	Tungsten	100	100	3.7	ug/L	U		10	6020
7440-62-2	Vanadium	13	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	490	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 13:00

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	10	10	0.65	ug/L	U		5	6020
7440-38-2	Arsenic	6.3	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	53	25	0.95	ug/L		B	5	6020
7440-41-7	Beryllium	3.7	1.0	0.20	ug/L			1	6020
7440-43-9	Cadmium	100	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	1.2	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	310	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	30	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	5.0	5.0	0.90	ug/L	U		5	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	230	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	7.7	5.0	0.57	ug/L			1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	10	10	0.70	ug/L	U		5	6020
7440-62-2	Vanadium	0.53	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	500	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	50	50	1.9	ug/L	U		5	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 10:45

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 10:45

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	200000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	170000	200	81	ug/L			1	6010C
7440-09-7	Potassium	43000	5000	72	ug/L		B	1	6010C
7439-95-4	Magnesium	210000	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	3400	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	590000	25000	3000	ug/L			5	6010C
14808-60-7	SiO2, Silica	33000	1100	14	ug/L		B	1	6010C
7440-36-0	Antimony	0.19	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	2.2	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	49	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.7	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	48	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	2.3	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.50	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.35	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	35	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.78	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	2.3	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	56	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 10:45

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.14	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	1.9	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	46	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	1.9	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	61	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	0.45	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	0.22	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	45	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.69	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	1.1	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	57	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MW31D-051012 Lab Sample ID: 240-11217-4

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 12:42

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.39	0.20	0.12	ug/L			1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MW31D-051012 Lab Sample ID: 240-11217-4

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 12:42

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.77	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	4.6	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	43	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.44	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	2.2	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	11	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	10	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	23	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	14	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	2.6	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	7.0	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	0.47	1.0	0.080	ug/L	J		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	0.44	10	0.37	ug/L	J		1	6020
7440-62-2	Vanadium	10	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	3600	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MW31D-051012 Lab Sample ID: 240-11217-4

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 12:42

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.32	2.0	0.13	ug/L	J	B	1	6020
7440-38-2	Arsenic	2.4	5.0	0.40	ug/L	J	B	1	6020
7440-39-3	Barium	17	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.25	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	0.54	1.0	0.13	ug/L	J	B	1	6020
7440-47-3	Chromium	2.2	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	1.2	1.0	0.058	ug/L		B	1	6020
7440-50-8	Copper	1.0	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	0.61	1.0	0.18	ug/L	J	B	1	6020
7439-98-7	Molybdenum	2.3	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.2	2.0	0.20	ug/L	J	B	1	6020
7782-49-2	Selenium	0.73	5.0	0.57	ug/L	J	B	1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.69	2.0	0.14	ug/L	J	B	1	6020
7440-62-2	Vanadium	2.2	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	6.6	20	2.3	ug/L	J	B	1	6020
7440-33-7	Tungsten	0.98	10	0.37	ug/L	J	B	1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

COVER PAGE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG No.:

Project: MSA Groundwater Sampling

Client Sample ID	Lab Sample ID
MW18S-051012	240-11217-2
MW18I-051012	240-11217-5

Comments:

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 13:00

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	32	5.0	2.7	mg/L		B	1	310.1
	Total Dissolved Solids	1400	20	15	mg/L			2	160.1
16887-00-6	Chloride	380	10	1.0	mg/L			10	300.0
14797-65-0	Nitrite as N	0.10	0.10	0.012	mg/L	U		1	300.0
14797-55-8	Nitrate as N	0.032	0.10	0.023	mg/L	J		1	300.0
14808-79-8	Sulfate	510	10	1.2	mg/L			10	300.0
14265-44-2	Orthophosphate	0.50	0.50	0.044	mg/L	U		1	300.0
7664-41-7	Ammonia (as N)	3.3	0.40	0.070	mg/L			2	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 13:00

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	43	1.0	0.24	mg/L			1	9060

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 10:45

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
	Alkalinity	310	5.0	2.7	mg/L		B	1	310.1
	Total Dissolved Solids	3300	40	30	mg/L			4	160.1
16887-00-6	Chloride	760	10	1.0	mg/L			10	300.0
14797-65-0	Nitrite as N	1.0	1.0	0.12	mg/L	U		10	300.0
14797-55-8	Nitrate as N	0.18	0.10	0.023	mg/L			1	300.0
14808-79-8	Sulfate	1700	20	2.4	mg/L			20	300.0
14265-44-2	Orthophosphate	0.056	0.50	0.044	mg/L	J		1	300.0
7664-41-7	Ammonia (as N)	17	2.0	0.35	mg/L			10	350.3

1B-IN
INORGANIC ANALYSIS DATA SHEET
GENERAL CHEMISTRY - DISSOLVED

Client Sample ID: MW18S-051012 Lab Sample ID: 240-11217-2

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG ID.:

Matrix: Water Date Sampled: 05/10/2012 10:45

Reporting Basis: WET Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-44-0	Dissolved Organic Carbon	28	1.0	0.24	mg/L			1	9060

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater Sampling

Report Number: 240-11217-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate and Explosives - RDX analyses were performed at the TestAmerica West Sacramento Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/11/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 2.9, 3.2, 3.9 and 4.6 C.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples TB-051012 (240-11217-1), MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), MW31D-051012 (240-11217-4), MW18I-051012 (240-11217-5), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/23/2012.

2-Chloroethyl vinyl ether failed the recovery criteria low for the MS/MSD of sample MW31D-051012 (240-11217-4) in batch 240-45083. 1,2-Dibromoethane failed the recovery criteria high.

Refer to the QC report for details.

Samples MW18S-051012 (240-11217-2)[55.56X], DMW10S-051012 (240-11217-3)[10X], MW31D-051012 (240-11217-4)[2X], MW18I-051012 (240-11217-5)[333.33X] and DMW2S-051012 (240-11217-6)[90.9X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The following sample(s) was diluted due to the abundance of non-target analytes: MW31D-051012 (240-11217-4 MS). Elevated reporting limits (RLs) are provided.

The continuing calibration verification (CCV) for analytical batch 45083 exceeded control criteria for Bromomethane and Chloroethane. The samples associated with this CCV were non-detects for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is okay to report per SOP.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), MW31D-051012 (240-11217-4), MW18I-051012 (240-11217-5), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for semivolatile organic compounds

(GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/16/2012 and 05/24/2012 and analyzed on 05/22/2012 and 05/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

2-Fluorobiphenyl (Surr), Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MW31D-051012 (240-11217-4). Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for MW31D-051012MS/MSD (240-11217-4MS/MSD).

Refer to the QC report for details.

Samples MW18S-051012 (240-11217-2)[2X], MW18I-051012 (240-11217-5)[5X] and DMW2S-051012 (240-11217-6)[2.5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

Surrogate recovery for the following sample(s) was outside control limits: MW31D-051012 (240-11217-4). Re-extraction and/or re-analysis was performed outside of holding time with acceptable results. Both sets of data are reported.

The following sample contained one acid and/or one base surrogate outside acceptance limits: MW31D-051012 (240-11217-4 MSD). The laboratory's SOP allows one acid surrogate and/or one base surrogate to be outside acceptance limits; therefore, re-extraction/re-analysis was not performed. These results have been reported and qualified.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)

Samples MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/22/2012.

Samples MW18S-051012 (240-11217-2)[2X] and DMW2S-051012 (240-11217-6)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the GRO analyses. All quality control parameters were within the acceptance limits.

DISSOLVED GASES

Samples MW18S-051012 (240-11217-2) and MW18I-051012 (240-11217-5) were analyzed for dissolved gases in accordance with RSK_175. The samples were analyzed on 05/17/2012.

The presence of the '4' qualifier in the data indicates analytes where the concentration in the unspiked sample exceeded four times the spiking amount.

No difficulties were encountered during the dissolved gases analyses. All quality control parameters were within the acceptance limits.

HALOACETIC ACIDS (HAAS)

Sample DMW2S-051012 (240-11217-6) was analyzed for Haloacetic Acids (HAAs) in accordance with EPA Method 552.2. The samples were prepared and analyzed on 05/16/2012.

2,3-Dibromopropionic acid failed the surrogate recovery criteria low for MB 680-237485/1-A. Refer to the QC report for details.

The surrogate recovery for the blank associated with batch 237485 was outside recovery limits. All associated sample surrogates fell within acceptance criteria; therefore, the data have been reported.

No other difficulties were encountered during the haloacetic acids analysis. All other quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)

Samples MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/16/2012 and analyzed on 05/18/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Total Petroleum Hydrocarbons (C10-C32) was detected in method blank MB 240-44281/17-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 44281.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

TOTAL METALS (ICP)
Samples MW18S-051012 (240-11217-2) and MW18I-051012 (240-11217-5) were analyzed for total metals (ICP) in accordance with EPA SW-846 Method 6010C. The samples were prepared on 05/16/2012 and analyzed on 05/21/2012.

Several analytes were detected in method blank MB 240-44236/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Samples MW18S-051012 (240-11217-2)[5X] and MW18I-051012 (240-11217-5)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), MW31D-051012 (240-11217-4), MW18I-051012 (240-11217-5), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/16/2012 and 05/21/2012 and analyzed on 05/17/2012 and 05/22/2012.

The following samples were diluted due to the nature of the sample matrix: DMW2S-051012 (240-11217-6), MW18I-051012 (240-11217-5). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), MW31D-051012 (240-11217-4), MW18I-051012 (240-11217-5), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/16/2012 and 05/18/2012 and analyzed on 05/17/2012 and 05/21/2012.

Several analytes were detected in method blank MB 240-44254/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-44621/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged.

Several analytes were detected in method blank MB 240-44713/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

The following samples were diluted due to the nature of the sample matrix: DMW2S-051012 (240-11217-6), MW18I-051012 (240-11217-5). Elevated reporting limits (RLs) are provided.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY
Samples MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), MW31D-051012 (240-11217-4), MW18I-051012 (240-11217-5), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/16/2012 and analyzed on 05/17/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Samples MW18S-051012 (240-11217-2), DMW10S-051012 (240-11217-3), MW31D-051012 (240-11217-4), MW18I-051012 (240-11217-5), DMW2S-051012 (240-11217-6) and DMW1S-051012 (240-11217-7) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/16/2012 and analyzed on 05/17/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL DISSOLVED SOLIDS

Samples MW18S-051012 (240-11217-2) and MW18I-051012 (240-11217-5) were analyzed for total dissolved solids in accordance with EPA Method 160.1. The samples were analyzed on 05/17/2012.

Samples MW18S-051012 (240-11217-2)[4X] and MW18I-051012 (240-11217-5)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the TDS analyses. All quality control parameters were within the acceptance limits.

ANIONS

Samples MW18S-051012 (240-11217-2) and MW18I-051012 (240-11217-5) were analyzed for anions in accordance with EPA Method 300.0. The samples were analyzed on 05/11/2012 and 05/21/2012.

Orthophosphate failed the recovery criteria high for the MS/MSD of sample 240-11142-1 in batch 240-43653.

The following sample analyzed for nitrite was diluted due to interference from a neighboring chloride peak: MW18S-051012 (240-11217-2). Elevated reporting limits (RLs) are provided.

Samples MW18S-051012 (240-11217-2)[10X], MW18S-051012 (240-11217-2)[20X] and MW18I-051012 (240-11217-5)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the anions analyses. All quality control parameters were within the acceptance limits.

ALKALINITY

Samples MW18S-051012 (240-11217-2) and MW18I-051012 (240-11217-5) were analyzed for alkalinity in accordance with EPA Method 310.1. The samples were analyzed on 05/15/2012.

Alkalinity was detected in method blank MB 240-44227/36 at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the alkalinity analyses. All other quality control parameters were within the acceptance limits.

AMMONIA

Samples MW18S-051012 (240-11217-2) and MW18I-051012 (240-11217-5) were analyzed for ammonia in accordance with EPA Method 350.3. The samples were analyzed on 05/22/2012.

Samples MW18S-051012 (240-11217-2)[10X] and MW18I-051012 (240-11217-5)[2X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No difficulties were encountered during the ammonia analyses. All quality control parameters were within the acceptance limits.

DISSOLVED ORGANIC CARBON

Samples MW18S-051012 (240-11217-2) and MW18I-051012 (240-11217-5) were analyzed for dissolved organic carbon in accordance with EPA SW-846 Method 9060. The samples were analyzed on 05/29/2012.

No difficulties were encountered during the DOC analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech Inc.	Client Project Manager: Tony Apanavage	Site Contact: Walt Pryor	Lab Contact: Pat O'meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	2 of 2 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)		For lab use only
Phone: 301 528-3021		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client ☐ Lab pickup ☐ Lab sampling ☐
Project Name: MSA Ground Water Sampling	Method of Shipment/Carrier: Fed EX			
Project Number: 112IC04021-02	Shipping/Tracking No:			Job/SDG No:
PO#				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite-C / Grab-G	Diss Gasses	Ammonia	Alk, TDS, Anions	DOC	6 metals						Sample Specific Notes / Special Instructions:
MW18S-051012	5-10-12	1045		X				X		X			X				X	X	X	X	X						* 6 metals
MW18I-051012	↓	1300		X				X		X			X				X	X	X	X	X						take out of
																											Total metals *

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Pryor	TT Inc.	5-10/12 / 1624	Paul Gifford	Test America	5/10/12 / 1625
Paul Gifford	Test America	5/10/12 / 1725			
			Received in Laboratory by: [signature]	TAL	5-11-12 945

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TAL-0018 (1008)

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech INC	Client Project Manager: Tony Apuravage	Site Contact: Walt Payson	Lab Contact: Pat O'Meara	COC No:
Address: 20251 Century Blvd.	Telephone: 301 528-3021	Telephone: 301 991-3914	Telephone: 330 497-9396	1 of 2 COCs
City/State/Zip: Germantown MD 20874	Email:	Analysis Turnaround Time (in BUS days)	Analyses	For lab use only
Phone: 301 528-3021		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		Walk-in client: ☐ Lab pickup: ☐ Lab sampling: ☐ Job/SDG No.:
Project Name: NSA Ground Water Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 127C0421-02	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C / Grab=G	VOCs	Total ppm	Diss ppm	1,4 Dioxane	DRO	GRO	Perchlorate	RDX	Halocarbons	Sample Specific Notes / Special Instructions:
TB-05-1012	5-10-12	—		X						2					N	G	X									
MW18s-051012		1045		X					X	X			X				X	X	X	X	X	X	X	X		
DMW10s-051012		1104		X					X	X			X				X	X	X	X	X	X	X			
MW31D-051012		1242		X					X	X			X				X	X	X	X			X			* MS/MSD
MW18I-051012		1300		X					X	X			X				X	X	X	X			X			
DMW2s-051012		1425		X				X	X	X			X				X	X	X	X	X	X	O		X	
DMW1s-051012	↓	1515		X					X	X			X		↓	↓	X	X	X	X	X	X	X			

Possible Hazard Identification
☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Walt Payson	TT INC.	5-10-12 1624	Paul Shepherd	TestAmerica	5/10/12 1625
Relinquished by: Paul Shepherd	Company: TestAmerica	Date/Time: 5/10/12 1725	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: TAL	Date/Time: 5-11-12 945

Page 2443 of 2448

06/01/2012

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TestAmerica North Canton Sample Receipt Form/Narrative Login # : 11217

Client Tetra Tech Site Name _____ By: _____ (Signature)

Cooler Received on 5-11-12 Opened on 5-11-12

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # _____ Foam Box Client Cooler Box (Other) _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 4G	(CF -1°C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	☒ Multiple on Back
IR GUN# 5G	(CF -1°C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	
IR GUN# 6Y	(CF -2°C) Observed Sample Temp._____°C	Corrected Sample Temp._____°C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 4	(Yes)	No
-Were custody seals on the outside of the cooler(s) signed & dated?	(Yes)	No NA
-Were custody seals on the bottle(s)?	Yes	(No)
3. Shippers' packing slip attached to the cooler(s)?	(Yes)	No
4. Did custody papers accompany the sample(s)?	(Yes)	No
5. Were the custody papers relinquished & signed in the appropriate place?	(Yes)	No
6. Did all bottles arrive in good condition (Unbroken)?	(Yes)	No
7. Could all bottle labels be reconciled with the COC?	(Yes)	No
8. Were correct bottle(s) used for the test(s) indicated?	(Yes)	No
9. Sufficient quantity received to perform indicated analyses?	(Yes)	No
10. Were sample(s) at the correct pH upon receipt?	(Yes)	No NA
11. Were VOAs on the COC?	(Yes)	No
12. Were air bubbles >6 mm in any VOA vials?	Yes	(No) NA
13. Was a trip blank present in the cooler(s)?	(Yes)	No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
1TS	<2 <2 <2	5.11.12	KS
1DS	<2 <2 <2		
3TD	<2 <2 <2 <2 <2 <2 <2		
1BJ	<2 <2 <2		
2S	<2 <2 <2		
1S	<2 <2 <2		

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
Client	3.9	2.9	4G	Ice
Nott	5.6	4.6		
KB23	4.9	3.9		
Client	4.2	3.2		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11217-1

Login Number: 11217

List Source: TestAmerica Canton

List Number: 1

Creator: Sutek, Nick

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

G2E120412

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

G2E120412

Client Information (Sub Contract Lab)	Sampler:	Lab PM: O'Meara, Patrick J	Carrier Tracking No(s):	COC No: 240-5841.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: patrick.omeara@testamericainc.com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc.				Job #: 240-11217-1
Address: 880 Riverside Parkway, ,	Due Date Requested: 5/30/2012			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel)	PO #:			
Email:	WO #:			
Project Name: MSA Groundwater Sampling	Project #: 24005772			
Site:	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ 6850 Perchlorate-West Sacramento	SUBCONTRACT/ Explosive-RDX	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MW18S-051012 (240-11217-2)	5/10/12	10:45 Eastern		Water			X	X	3	
DMW10S-051012 (240-11217-3)	5/10/12	11:04 Eastern		Water			X		1	
MW31D-051012 (240-11217-4)	5/10/12	12:42 Eastern		Water			X		3	
MW31D-051012 (240-11217-4MS)	5/10/12	12:42 Eastern	MS	Water			X		1	
MW31D-051012 (240-11217-4MSD)	5/10/12	12:42 Eastern	MSD	Water			X		1	
MW18I-051012 (240-11217-5)	5/10/12	13:00 Eastern		Water			X		1	
DMW1S-051012 (240-11217-7)	5/10/12	15:15 Eastern		Water			X		1	
		1425								
Rec'd 240-11217-6 @ 5-12-12		1455								

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested: I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment:		
Relinquished by:	Date/Time:	Company	Received by:	Date/Time: 5-12-12 1720	Company TALS
Relinquished by:	Date/Time:	Company	Received by	Date/Time	Company
Relinquished by:	Date/Time:	Company	Received by	Date/Time:	Company

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: | Cooler Temperature(s) °C and Other Remarks: 1.2

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TAL CANTON PM KD

LOT# (QUANTIMS ID) G2E120412 QUOTE# 88936 LOCATION W8C

Checked (✓)

DATE RECEIVED 5/12/12 TIME RECEIVED 9:20 ☑

DELIVERED BY ☑ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☐ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☑ N/A ☐ ☑

CUSTODY SEAL #(S) NA

COC #(S) 240-5841.1 ☐ ☑

TEMPERATURE BLANK Observed: 0.8 Corrected: 0

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 1.4,1.8,2.1 Average 1.7 Corrected Average 1.2

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☐ #5 ☑ ☐ OTHER ☐ ☑

CH (Initials) 5/12/12 (Date)

==========

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY..... CH ☑

LOGGED IN BY..... CH ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☐ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☑ N/A ☑

☑ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)*1 ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

CH (Initials) 5/12/12 (Date)

Notes Received -6 not listed on coc.

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11217-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-11217-1	TB-051012	Water	05/10/2012 0000	05/11/2012 0945
240-11217-2	MW18S-051012	Water	05/10/2012 1045	05/11/2012 0945
240-11217-3	DMW10S-051012	Water	05/10/2012 1104	05/11/2012 0945
240-11217-4	MW31D-051012	Water	05/10/2012 1242	05/11/2012 0945
240-11217-4MS	MW31D-051012	Water	05/10/2012 1242	05/11/2012 0945
240-11217-4MSD	MW31D-051012	Water	05/10/2012 1242	05/11/2012 0945
240-11217-4DU	MW31D-051012	Water	05/10/2012 1242	05/11/2012 0945
240-11217-5	MW18I-051012	Water	05/10/2012 1300	05/11/2012 0945
240-11217-6	DMW2S-051012	Water	05/10/2012 1425	05/11/2012 0945
240-11217-7	DMW1S-051012	Water	05/10/2012 1515	05/11/2012 0945

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11217-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Dissolved Gases (GC)	TAL NC	RSK RSK-175	
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL NC		SW846 3510C
Metals (ICP)	TAL NC	SW846 6010C	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Solids, Total Dissolved (TDS)	TAL NC	MCAWW 160.1	
Anions, Ion Chromatography	TAL NC	MCAWW 300.0	
Alkalinity	TAL NC	MCAWW 310.1	
Nitrogen, Ammonia	TAL NC	MCAWW 350.3	
Organic Carbon, Dissolved (DOC)	TAL NC	SW846 9060	
Sample Filtration, Field			FIELD_FLTRD
Haloacetic Acids (HAAs) (GC)	TAL SAV	EPA 552.2	
Microextraction	TAL SAV		EPA 552.2
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL SAV = TestAmerica Savannah

TAL WSC = TestAmerica West Sacramento

HOLDTIME

SDG 240-11217-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/20/2012	6	4	10
HG	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HG	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HG	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HG	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HG	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HG	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
M	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
M	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/18/2012	5/21/2012	8	3	11
M	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/21/2012	6	5	11
M	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
M	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/16/2012	5/21/2012	6	5	11
M	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
M	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
M	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HGF	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HGF	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HGF	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HGF	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HGF	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
HGF	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
MF	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
MF	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/21/2012	5/22/2012	11	1	12
MF	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
MF	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
MF	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
MF	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/17/2012	6	1	7
ALK	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/15/2012	5/15/2012	5	0	5
ALK	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/15/2012	5/15/2012	5	0	5
CL	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CL	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
DOC	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/29/2012	5/29/2012	19	0	19
DOC	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/29/2012	5/29/2012	19	0	19

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
NH3	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/22/2012	5/22/2012	12	0	12
NH3	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/22/2012	5/22/2012	12	0	12
NTA	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
NTA	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
NTI	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
NTI	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
OPO4	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
OPO4	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
PCL	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/21/2012	5/26/2012	11	5	16
PCL	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/21/2012	5/26/2012	11	5	16
PCL	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/21/2012	5/26/2012	11	5	16
PCL	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/21/2012	5/26/2012	11	5	16
PCL	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/21/2012	5/26/2012	11	5	16
PCL	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/21/2012	5/29/2012	11	8	19
SO4	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/21/2012	5/21/2012	11	0	11
SO4	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
TDS	MG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
TDS	MG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OS	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/16/2012	5/22/2012	6	6	12
OS	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/22/2012	6	6	12
OS	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/16/2012	5/22/2012	6	6	12
OS	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/16/2012	5/22/2012	6	6	12
OS	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/16/2012	5/22/2012	6	6	12
OS	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/16/2012	5/22/2012	6	6	12
OS	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/24/2012	5/30/2012	14	6	20
OV	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/16/2012	5/16/2012	6	0	6
OV	UG/L	TB-051012	240-11217-1	NM	5/10/2012	5/23/2012	5/23/2012	13	0	13
OV	UG/L	MW31D-051012	240-11217-4	NM	5/10/2012	5/23/2012	5/23/2012	13	0	13
OV	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/23/2012	5/23/2012	13	0	13
OV	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/23/2012	5/23/2012	13	0	13
OV	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/23/2012	5/23/2012	13	0	13
OV	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/23/2012	5/23/2012	13	0	13
OV	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/23/2012	5/23/2012	13	0	13
ETHA	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
ETHA	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
ETHE	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
ETHE	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
METH	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
METH	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
OVG	UG/L	MW18I-051012	240-11217-5	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
OVG	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/17/2012	5/17/2012	7	0	7
DRO	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/16/2012	5/18/2012	6	2	8
DRO	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/16/2012	5/18/2012	6	2	8
DRO	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/16/2012	5/18/2012	6	2	8
DRO	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/16/2012	5/18/2012	6	2	8
GRO	UG/L	DMW10S-051012	240-11217-3	NM	5/10/2012	5/22/2012	5/22/2012	12	0	12
GRO	UG/L	DMW1S-051012	240-11217-7	NM	5/10/2012	5/22/2012	5/22/2012	12	0	12
GRO	UG/L	DMW2S-051012	240-11217-6	NM	5/10/2012	5/22/2012	5/22/2012	12	0	12
GRO	UG/L	MW18S-051012	240-11217-2	NM	5/10/2012	5/22/2012	5/22/2012	12	0	12

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: BFB2951.D BFB Injection Date: 05/09/2012

Instrument ID: A3UX16 BFB Injection Time: 16:26

Analysis Batch No.: 43409

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.5	
75	30.0 - 60.0 % of mass 95	47.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	79.3	
175	5.0 - 9.0 % of mass 174	5.7	(7.2)1
176	95.0 - 101.0 % of mass 174	78.8	(99.5)1
177	5.0 - 9.0 % of mass 176	4.7	(5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-43409/2	UXM5660.D	05/09/2012	16:50
	STD8260 240-43409/3	UXM5661.D	05/09/2012	17:12
	STD8260 240-43409/4	UXM5662.D	05/09/2012	17:35
	STD8260 240-43409/5	UXM5663.D	05/09/2012	17:58
	STD8260 240-43409/6	UXM5664.D	05/09/2012	18:20
	STD8260 240-43409/7	UXM5665.D	05/09/2012	18:43
	ICV 240-43409/8	UXM5666.D	05/09/2012	19:06

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-43409/7	UXM5665.D
Level 2	STD8260 240-43409/6	UXM5664.D
Level 3	STD8260 240-43409/5	UXM5663.D
Level 4	STD8260 240-43409/4	UXM5662.D
Level 5	STD8260 240-43409/3	UXM5661.D
Level 6	STD8260 240-43409/2	UXM5660.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3032 0.3143	0.2539	0.2973	0.2657	0.3062	Ave		0.2901			0.1000	8.4		15.0			
Chloromethane	0.6852 0.6205	0.6371	0.6849	0.6156	0.6587	Ave		0.6503			0.1000	4.7		15.0			
Vinyl chloride	0.4547 0.4560	0.4270	0.4657	0.4279	0.4758	Ave		0.4512			0.1000	4.4		15.0			
Bromomethane	0.2084 0.1529	0.1821	0.1851	0.1563	0.1804	Ave		0.1775			0.0500	12.0		15.0			
Chloroethane	0.2573 0.2377	0.2580	0.2693	0.2344	0.2581	Ave		0.2524				5.4		15.0			
Trichlorofluoromethane	0.3101 0.3295	0.3079	0.3225	0.2997	0.3473	Ave		0.3195			0.1000	5.4		15.0			
Acrolein	0.0620 0.0594	0.0566	0.0598	0.0605	0.0630	Ave		0.0602				3.7		15.0			
1,1-Dichloroethene	0.2593 0.2847	0.2457	0.2768	0.2781	0.2948	Ave		0.2733			0.1000	6.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1558 0.2077	0.1678	0.1758	0.1970	0.2009	Ave		0.1842			0.0500	11.0		15.0			
Acetone	0.1950 0.0973	0.1448	0.1189	0.1063	0.1066	Lin1	0.1992	0.0970			0.0500				0.9990		0.9950
Iodomethane	0.4877 0.4873	0.4523	0.4923	0.4807	0.4978	Ave		0.4830				3.3		15.0			
Carbon disulfide	0.8203 0.9849	0.8078	0.8789	0.8856	0.9660	Ave		0.8906			0.1000	8.2		15.0			
Acetonitrile	0.0521 0.0408	0.0448	0.0457	0.0427	0.0442	Ave		0.0451				8.6		15.0			
Methyl acetate	0.2743 0.2474	0.2522	0.2631	0.2590	0.2628	Ave		0.2598			0.1000	3.6		15.0			
Methylene Chloride	0.5939 0.3427	0.4564	0.4050	0.3631	0.3666	Lin1	0.2534	0.3421			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.2834 0.4163	0.2994	0.3340	0.3600	0.3897	Ave		0.3471			0.1000	15.0		15.0			
1,2-Dichloropropane	0.3163 0.3393	0.3026	0.3214	0.3206	0.3464	Ave		0.3244			0.1000	4.9		15.0			
Dibromomethane	0.1317 0.1397	0.1303	0.1368	0.1366	0.1460	Ave		0.1369				4.1		15.0			
1,4-Dioxane	0.0019 0.0018	0.0020	0.0021	0.0020	0.0021	Ave		0.0020				7.2		15.0			
Bromodichloromethane	0.2564 0.3265	0.2419	0.2713	0.2771	0.3245	Ave		0.2830			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1506 0.1609	0.1383	0.1637	0.1582	0.1703	Ave		0.1570				7.1		15.0			
cis-1,3-Dichloropropene	0.2551 0.3710	0.2499	0.2985	0.3081	0.3650	Lin1	-0.188	0.3666			0.1500				0.9960		0.9950
4-Methyl-2-pentanone	0.2837 0.2990	0.2651	0.2929	0.2909	0.3111	Ave		0.2905			0.0500	5.3		15.0			
Toluene	1.6482 1.7043	1.5200	1.5382	1.5720	1.7039	Ave		1.6145			0.4000	5.1		15.0			
trans-1,3-Dichloropropene	0.2583 0.4170	0.2712	0.3095	0.3332	0.4003	Qua	-0.269	0.3783	0.0012		0.1000				0.9990		0.9900
Ethyl methacrylate	0.3360 0.4227	0.3466	0.3745	0.3996	0.4375	Ave		0.3861				11.0		15.0			
1,1,2-Trichloroethane	0.2835 0.2793	0.2694	0.2686	0.2750	0.2894	Ave		0.2775			0.1000	2.9		15.0			
1,3-Dichloropropane	0.5297 0.5095	0.5041	0.4977	0.5018	0.5376	Ave		0.5134				3.2		15.0			
Tetrachloroethene	0.2829 0.3018	0.2688	0.2694	0.2845	0.3065	Ave		0.2856			0.2000	5.5		15.0			
2-Hexanone	0.2570 0.2616	0.2458	0.2583	0.2602	0.2737	Ave		0.2594			0.0500	3.5		15.0			
Dibromochloromethane	0.1998 0.2905	0.1878	0.2173	0.2406	0.2828	Lin1	-0.158	0.2858							0.9950		0.9950
1,2-Dibromoethane	0.2771 0.2885	0.2414	0.2810	0.2689	0.2989	Ave		0.2760				7.2		15.0			
Chlorobenzene	1.0779 1.0958	1.0292	1.0419	1.0268	1.0997	Ave		1.0619			0.3000	3.1		15.0			
1,1,1,2-Tetrachloroethane	0.2890 0.3687	0.2701	0.3001	0.3244	0.3603	Ave		0.3188				12.0		15.0			
Ethylbenzene	0.5370 0.5872	0.5263	0.5398	0.5618	0.5955	Ave		0.5579				5.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6927 0.7473	0.6545	0.6868	0.6838	0.7439	Ave		0.7015				5.2		15.0			
o-Xylene	0.6585 0.7303	0.6697	0.6826	0.7022	0.7337	Ave		0.6962				4.5		15.0			
Styrene	1.0101 1.2393	1.0332	1.0826	1.1410	1.2330	Ave		1.1232			0.3000	8.8		15.0			
Bromoform	0.0997 0.1652	0.1002	0.1141	0.1314	0.1520	Qua	-0.092	0.1394	0.0007		0.1000				1.0000		0.9900
Isopropylbenzene	1.5686 1.8453	1.5081	1.5792	1.6843	1.7759	Ave		1.6603			0.1000	7.9		15.0			
1,1,2,2-Tetrachloroethane	0.6421 0.6392	0.5897	0.6508	0.6293	0.6884	Ave		0.6399			0.3000	5.0		15.0			
Bromobenzene	0.7124 0.8007	0.7229	0.7655	0.7154	0.8316	Ave		0.7581				6.6		15.0			
1,2,3-Trichloropropane	0.2331 0.2050	0.1899	0.2018	0.2064	0.2197	Ave		0.2093				7.2		15.0			
trans-1,4-Dichloro-2-butene	0.0972 0.1779	0.1139	0.1228	0.1331	0.1671	Qua	-0.117	0.1526	0.0007						0.9990		0.9900
n-Propylbenzene	0.7268 0.8204	0.6778	0.7587	0.7438	0.8378	Ave		0.7609				7.8		15.0			
2-Chlorotoluene	0.6703 0.7397	0.6758	0.6924	0.6931	0.7657	Ave		0.7061				5.4		15.0			
1,3,5-Trimethylbenzene	2.0828 2.5958	2.0405	2.3124	2.3306	2.5681	Ave		2.3217				10.0		15.0			
4-Chlorotoluene	0.7205 0.7747	0.6930	0.7396	0.7189	0.7965	Ave		0.7405				5.2		15.0			
tert-Butylbenzene	1.9330 2.3935	1.9972	1.9127	2.1455	2.3504	Ave		2.1221				9.9		15.0			
1,2,4-Trimethylbenzene	2.2784 2.6594	2.2133	2.3747	2.3863	2.6735	Ave		2.4310				8.0		15.0			
sec-Butylbenzene	2.3140 2.8409	2.3222	2.4938	2.5429	2.7579	Ave		2.5453				8.6		15.0			
1,3-Dichlorobenzene	1.3846 1.4804	1.3348	1.4061	1.3608	1.4933	Ave		1.4100			0.6000	4.6		15.0			
p-Isopropyltoluene	1.8496 2.5189	1.9566	2.1436	2.2002	2.4336	Ave		2.1837				12.0		15.0			
1,4-Dichlorobenzene	1.5343 1.5331	1.3976	1.4633	1.4252	1.5585	Ave		1.4853			0.5000	4.5		15.0			
n-Butylbenzene	1.5207 2.0613	1.5638	1.6967	1.7858	1.9861	Ave		1.7691				12.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3844 1.4205	1.3540	1.3870	1.3472	1.4582	Ave		1.3919			0.4000	3.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0794 0.0870	0.0683	0.0814	0.0746	0.0883	Ave		0.0798			0.0500	9.5		15.0			
1,3,5-Trichlorobenzene	0.7539 0.8344	0.7656	0.7991	0.8104	0.8665	Ave		0.8050				5.2		15.0			
1,2,4-Trichlorobenzene	0.6479 0.6976	0.6519	0.6850	0.7123	0.7408	Ave		0.6892			0.2000	5.2		15.0			
Hexachlorobutadiene	0.2984 0.2880	0.3131	0.3156	0.3236	0.3074	Ave		0.3077				4.2		15.0			
Naphthalene	1.3167 1.5171	1.2964	1.5138	1.5269	1.6839	Ave		1.4758				9.9		15.0			
1,2,3-Trichlorobenzene	0.6093 0.5088	0.5775	0.5956	0.5994	0.6006	Ave		0.5819				6.4		15.0			
Dibromofluoromethane (Surr)	0.2449 0.2557	0.2414	0.2613	0.2511	0.2697	Ave		0.2540				4.1		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3352 0.3180	0.3022	0.3162	0.3092	0.3364	Ave		0.3195				4.3		15.0			
Toluene-d8 (Surr)	1.3399 1.4228	1.2843	1.2848	1.3063	1.4382	Ave		1.3460				5.1		15.0			
4-Bromofluorobenzene (Surr)	0.5239 0.5294	0.5089	0.5007	0.5033	0.5393	Ave		0.5176				3.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3514		11.0	10.0	10.4	20.0
Diisopropyl ether	Ave	0.2775	0.2746		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0089		517	500	3.5	20.0
Cyclohexanone	Lin1		0.0196		41.7	200	-79.2*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.571		8.62	10.0	-13.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2045	0.1000	7.05	10.0	-29.5*	20.0
Chloromethane	Ave	0.6503	0.5741	0.1000	8.83	10.0	-11.7	20.0
Vinyl chloride	Ave	0.4512	0.4382	0.1000	9.71	10.0	-2.9	20.0
Bromomethane	Ave	0.1775	0.1621	0.0500	9.13	10.0	-8.7	20.0
Chloroethane	Ave	0.2524	0.2375	0.0500	9.41	10.0	-5.9	20.0
Trichlorofluoromethane	Ave	0.3195	0.3224	0.1000	10.1	10.0	0.9	20.0
Acrolein	Ave	0.0602	0.0316		15.7	30.0	-47.6*	20.0
1,1-Dichloroethene	Ave	0.2733	0.2968	0.1000	10.9	10.0	8.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2129	0.0500	11.6	10.0	15.6	20.0
Acetone	Lin1		0.1000	0.0500	18.6	20.0	-7.0	20.0
Iodomethane	Ave	0.4830	0.4930		10.2	10.0	2.1	20.0
Carbon disulfide	Ave	0.8906	0.9121	0.1000	10.2	10.0	2.4	20.0
Acetonitrile	Ave	0.0451	0.0442		29.4	30.0	-2.0	20.0
Methyl acetate	Ave	0.2598	0.2961	0.1000	11.4	10.0	14.0	20.0
Methylene Chloride	Lin1		0.3698	0.1000	10.1	10.0	1.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0177		198	200	-1.0	20.0
Acrylonitrile	Ave	0.1429	0.1377		28.9	30.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.7047	0.1000	9.91	10.0	-0.9	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3422	0.1000	10.3	10.0	3.4	20.0
Hexane	Ave	0.0431	0.0478		11.1	10.0	10.8	20.0
1,1-Dichloroethane	Ave	0.6504	0.6789	0.1000	10.4	10.0	4.4	20.0
Vinyl acetate	Ave	0.0379	0.0349		9.19	10.0	-8.1	20.0
2-Butanone	Ave	0.1434	0.1319	0.0500	18.4	20.0	-8.1	20.0
2,2-Dichloropropane	Ave	0.2584	0.2680		10.4	10.0	3.7	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3544	0.1000	10.2	10.0	1.5	20.0
Bromochloromethane	Ave	0.1454	0.1487		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5335	0.2000	10.2	10.0	2.0	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4102	0.1000	10.4	10.0	4.2	20.0
Cyclohexane	Ave	0.6493	0.6633	0.1000	10.2	10.0	2.2	20.0
1,1-Dichloropropene	Ave	0.3618	0.3695		10.2	10.0	2.1	20.0
Carbon tetrachloride	Lin1		0.3100	0.1000	9.41	10.0	-5.9	20.0
1,2-Dichloroethane	Ave	0.4273	0.4347	0.1000	10.2	10.0	1.7	20.0
Benzene	Ave	1.162	1.177	0.5000	10.1	10.0	1.2	20.0
Trichloroethene	Ave	0.2745	0.2806	0.2000	10.2	10.0	2.2	20.0
1,2-Dichloropropane	Ave	0.3244	0.3251	0.1000	10.0	10.0	0.2	20.0
Methylcyclohexane	Ave	0.3471	0.3473	0.1000	10.0	10.0	0.0	20.0
Dibromomethane	Ave	0.1369	0.1442		10.5	10.0	5.4	20.0
Bromodichloromethane	Ave	0.2830	0.2938	0.1000	10.4	10.0	3.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1570	0.1413		9.00	10.0	-10.0	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
cis-1,3-Dichloropropene	Lin1		0.3014	0.1500	8.73	10.0	-12.7	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2896	0.0500	19.9	20.0	-0.3	20.0
Toluene	Ave	1.614	1.572	0.4000	9.74	10.0	-2.6	20.0
trans-1,3-Dichloropropene	Qua		0.3327	0.1000	9.24	10.0	-7.6	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2762	0.1000	9.95	10.0	-0.5	20.0
1,3-Dichloropropane	Ave	0.5134	0.4975		9.69	10.0	-3.1	20.0
Tetrachloroethene	Ave	0.2856	0.2813	0.2000	9.85	10.0	-1.5	20.0
2-Hexanone	Ave	0.2594	0.2452	0.0500	18.9	20.0	-5.5	20.0
Dibromochloromethane	Lin1		0.2350		8.77	10.0	-12.3	20.0
1,2-Dibromoethane	Ave	0.2760	0.2737		9.92	10.0	-0.8	20.0
Chlorobenzene	Ave	1.062	1.051	0.3000	9.90	10.0	-1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3286		10.3	10.0	3.1	20.0
Ethylbenzene	Ave	0.5579	0.5654		10.1	10.0	1.3	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.6978		19.9	20.0	-0.5	20.0
o-Xylene	Ave	0.6962	0.7046		10.1	10.0	1.2	20.0
Styrene	Ave	1.123	1.167	0.3000	10.4	10.0	3.9	20.0
Bromoform	Qua		0.1291	0.1000	9.47	10.0	-5.3	20.0
Isopropylbenzene	Ave	1.660	1.692	0.1000	10.2	10.0	1.9	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6196	0.3000	9.68	10.0	-3.2	20.0
Bromobenzene	Ave	0.7581	0.7479		9.87	10.0	-1.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.1984		9.48	10.0	-5.2	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1324		16.8	20.0	-16.0	20.0
n-Propylbenzene	Ave	0.7609	0.7738		10.2	10.0	1.7	20.0
2-Chlorotoluene	Ave	0.7061	0.7155		10.1	10.0	1.3	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.338		10.1	10.0	0.7	20.0
4-Chlorotoluene	Ave	0.7405	0.7420		10.0	10.0	0.2	20.0
tert-Butylbenzene	Ave	2.122	2.147		10.1	10.0	1.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.470		10.2	10.0	1.6	20.0
sec-Butylbenzene	Ave	2.545	2.467		9.69	10.0	-3.1	20.0
1,3-Dichlorobenzene	Ave	1.410	1.419	0.6000	10.1	10.0	0.6	20.0
p-Isopropyltoluene	Ave	2.184	2.305		10.6	10.0	5.5	20.0
1,4-Dichlorobenzene	Ave	1.485	1.439	0.5000	9.69	10.0	-3.1	20.0
n-Butylbenzene	Ave	1.769	1.800		10.2	10.0	1.7	20.0
1,2-Dichlorobenzene	Ave	1.392	1.345	0.4000	9.66	10.0	-3.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0779	0.0500	9.76	10.0	-2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6576	0.2000	9.54	10.0	-4.6	20.0
Hexachlorobutadiene	Ave	0.3077	0.2672		8.69	10.0	-13.1	20.0
Naphthalene	Ave	1.476	1.471		9.97	10.0	-0.3	20.0
1,2,3-Trichlorobenzene	Ave	0.5819	0.5595		9.61	10.0	-3.9	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2365		9.50	10.2	-6.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2929		9.36	10.2	-8.3	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Toluene-d8 (Surr)	Ave	1.346	1.233		9.35	10.2	-8.4	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4948		9.76	10.2	-4.4	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: BFB2981.D BFB Injection Date: 05/23/2012

Instrument ID: A3UX16 BFB Injection Time: 11:50

Analysis Batch No.: 45083

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.6	
75	30.0 - 60.0 % of mass 95	46.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.2	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	81.9	
175	5.0 - 9.0 % of mass 174	5.7	(6.9)1
176	95.0 - 101.0 % of mass 174	82.3	(100.4)1
177	5.0 - 9.0 % of mass 176	5.3	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-45083/3	UXM6187.D	05/23/2012	12:43
	CCVIS 240-45083/2	UXM6188.D	05/23/2012	13:08
	LCS 240-45083/4	UXM6189.D	05/23/2012	13:31
	MRL 240-45083/5	UXM6190.D	05/23/2012	13:55
	MB 240-45083/6	UXM6191.D	05/23/2012	14:18
TB-051012	240-11217-1	UXM6192.D	05/23/2012	14:41
MW18S-051012	240-11217-2	UXM6193.D	05/23/2012	15:04
DMW10S-051012	240-11217-3	UXM6194.D	05/23/2012	15:26
MW31D-051012	240-11217-4	UXM6195.D	05/23/2012	15:49
MW31D-051012 MS	240-11217-4 MS	UXM6196.D	05/23/2012	16:12
MW31D-051012 MSD	240-11217-4 MSD	UXM6197.D	05/23/2012	16:35
MW18I-051012	240-11217-5	UXM6198.D	05/23/2012	16:58
DMW2S-051012	240-11217-6	UXM6199.D	05/23/2012	17:21
DMW1S-051012	240-11217-7	UXM6200.D	05/23/2012	17:43

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-45083/3 Calibration Date: 05/23/2012 12:43

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM6187.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4543		8.59	10.0	-14.1	20.0
Ethyl ether	Ave	0.3182	0.3414		10.7	10.0	7.3	20.0
3-Chloro-1-propene	Ave	0.1408	0.1365		9.70	10.0	-3.0	20.0
Diisopropyl ether	Ave	0.2775	0.2665		48.0	50.0	-4.0	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.7147		13.9	10.0	38.6*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	1.059		11.9	10.0	19.1	20.0
Propionitrile	Ave	0.0386	0.0543		28.1	20.0	40.6*	20.0
Ethyl acetate	Ave	0.2719	0.3146		23.1	20.0	15.7	20.0
Methacrylonitrile	Ave	0.1921	0.2277		11.9	10.0	18.5	20.0
Isobutyl alcohol	Ave	0.0086	0.0110		256	200	27.9*	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.5981		8.36	10.0	-16.4	20.0
n-Heptane	Ave	0.0406	0.0424		10.4	10.0	4.3	20.0
n-Butanol	Lin1		0.0074		221	200	10.7	20.0
2-Nitropropane	Qua		0.0523		24.7	20.0	23.5*	20.0
Cyclohexanone	Lin1		0.0767		76.5	100	-23.5*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.613		8.76	10.0	-12.4	20.0
2-Methylnaphthalene	Qua		0.4240		9.25	20.0	-53.8*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-45083/3 Calibration Date: 05/23/2012 12:43

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6187.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2403		9.66	10.2	-5.4	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3229		10.3	10.2	1.1	20.0
Toluene-d8 (Surr)	Ave	1.346	1.288		9.77	10.2	-4.3	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5152		10.2	10.2	-0.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCVIS 240-45083/2 Calibration Date: 05/23/2012 13:08

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6188.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2850	0.1000	9.82	10.0	-1.8	20.0
Chloromethane	Ave	0.6503	0.5645	0.1000	8.68	10.0	-13.2	20.0
Vinyl chloride	Ave	0.4512	0.3952	0.1000	8.76	10.0	-12.4	20.0
Bromomethane	Ave	0.1775	0.1130	0.0500	6.36	10.0	-36.4*	20.0
Chloroethane	Ave	0.2524	0.1886	0.0500	7.47	10.0	-25.3*	20.0
Trichlorofluoromethane	Ave	0.3195	0.3001	0.1000	9.39	10.0	-6.1	20.0
Acrolein	Ave	0.0602	0.0656		109	100	8.9	20.0
1,1-Dichloroethene	Ave	0.2733	0.2506	0.1000	9.17	10.0	-8.3	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.1989	0.0500	10.8	10.0	8.0	20.0
Acetone	Lin1		0.1064	0.0500	19.9	20.0	-0.5	20.0
Iodomethane	Ave	0.4830	0.4413		9.14	10.0	-8.6	20.0
Carbon disulfide	Ave	0.8906	0.7519	0.1000	8.44	10.0	-15.6	20.0
Acetonitrile	Ave	0.0451	0.0485		108	100	7.6	20.0
Methyl acetate	Ave	0.2598	0.2777	0.1000	21.4	20.0	6.9	20.0
Methylene Chloride	Lin1		0.3198	0.1000	8.61	10.0	-13.9	20.0
tert-Butyl alcohol	Ave	0.0178	0.0180		201	200	0.6	20.0
Acrylonitrile	Ave	0.1429	0.1506		21.1	20.0	5.4	20.0
Methyl tert-butyl ether	Ave	0.7108	0.6498	0.1000	9.14	10.0	-8.6	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.2947	0.1000	8.91	10.0	-10.9	20.0
Hexane	Ave	0.0431	0.0468		10.8	10.0	8.5	20.0
1,1-Dichloroethane	Ave	0.6504	0.6142	0.1000	9.44	10.0	-5.6	20.0
Vinyl acetate	Ave	0.0379	0.0442		11.7	10.0	16.7	20.0
2-Butanone	Ave	0.1434	0.1553	0.0500	21.6	20.0	8.2	20.0
2,2-Dichloropropane	Ave	0.2584	0.2696		10.4	10.0	4.3	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3163	0.1000	9.06	10.0	-9.4	20.0
Bromochloromethane	Ave	0.1454	0.1522		10.5	10.0	4.7	20.0
Tetrahydrofuran	Ave	0.0944	0.0959		10.2	10.0	1.6	20.0
Chloroform	Ave	0.5228	0.5034	0.2000	9.63	10.0	-3.7	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.3945	0.1000	10.0	10.0	0.2	20.0
Cyclohexane	Ave	0.6493	0.6658	0.1000	10.3	10.0	2.5	20.0
1,1-Dichloropropene	Ave	0.3618	0.3681		10.2	10.0	1.7	20.0
Carbon tetrachloride	Lin1		0.3142	0.1000	9.53	10.0	-4.7	20.0
1,2-Dichloroethane	Ave	0.4273	0.4680	0.1000	11.0	10.0	9.5	20.0
Benzene	Ave	1.162	1.129	0.5000	9.72	10.0	-2.8	20.0
Trichloroethene	Ave	0.2745	0.2913	0.2000	10.6	10.0	6.2	20.0
1,2-Dichloropropane	Ave	0.3244	0.3384	0.1000	10.4	10.0	4.3	20.0
Methylcyclohexane	Ave	0.3471	0.3358	0.1000	9.67	10.0	-3.3	20.0
Dibromomethane	Ave	0.1369	0.1503		11.0	10.0	9.8	20.0
1,4-Dioxane	Ave	0.0020	0.0020		495	500	-1.0	20.0
Bromodichloromethane	Ave	0.2830	0.2996	0.1000	10.6	10.0	5.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCVIS 240-45083/2 Calibration Date: 05/23/2012 13:08

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6188.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1570	0.1610		20.5	20.0	2.6	20.0
cis-1,3-Dichloropropene	Lin1		0.3336	0.1500	9.61	10.0	-3.9	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.3188	0.0500	22.0	20.0	9.8	20.0
Toluene	Ave	1.614	1.621	0.4000	10.0	10.0	0.4	20.0
trans-1,3-Dichloropropene	Qua		0.3795	0.1000	10.4	10.0	4.0	20.0
Ethyl methacrylate	Ave	0.3861	0.4221		10.9	10.0	9.3	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2952	0.1000	10.6	10.0	6.4	20.0
1,3-Dichloropropane	Ave	0.5134	0.5227		10.2	10.0	1.8	20.0
Tetrachloroethene	Ave	0.2856	0.3093	0.2000	10.8	10.0	8.3	20.0
2-Hexanone	Ave	0.2594	0.2961	0.0500	22.8	20.0	14.1	20.0
Dibromochloromethane	Lin1		0.2669		9.89	10.0	-1.1	20.0
1,2-Dibromoethane	Ave	0.2760	0.2940		10.7	10.0	6.5	20.0
Chlorobenzene	Ave	1.062	1.053	0.3000	9.92	10.0	-0.8	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3474		10.9	10.0	9.0	20.0
Ethylbenzene	Ave	0.5579	0.5581		10.0	10.0	0.0	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7041		20.1	20.0	0.4	20.0
o-Xylene	Ave	0.6962	0.7079		10.2	10.0	1.7	20.0
Styrene	Ave	1.123	1.172	0.3000	10.4	10.0	4.4	20.0
Bromoform	Qua		0.1470	0.1000	10.6	10.0	6.0	20.0
Isopropylbenzene	Ave	1.660	1.678	0.1000	10.1	10.0	1.1	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6327	0.3000	9.89	10.0	-1.1	20.0
Bromobenzene	Ave	0.7581	0.7458		9.84	10.0	-1.6	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2043		9.76	10.0	-2.4	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1452		9.83	10.0	-1.7	20.0
n-Propylbenzene	Ave	0.7609	0.7384		9.70	10.0	-3.0	20.0
2-Chlorotoluene	Ave	0.7061	0.6589		9.33	10.0	-6.7	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.216		9.55	10.0	-4.5	20.0
4-Chlorotoluene	Ave	0.7405	0.7049		9.52	10.0	-4.8	20.0
tert-Butylbenzene	Ave	2.122	2.054		9.68	10.0	-3.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.281		9.38	10.0	-6.2	20.0
sec-Butylbenzene	Ave	2.545	2.338		9.18	10.0	-8.2	20.0
1,3-Dichlorobenzene	Ave	1.410	1.346	0.6000	9.55	10.0	-4.5	20.0
p-Isopropyltoluene	Ave	2.184	2.084		9.54	10.0	-4.6	20.0
1,4-Dichlorobenzene	Ave	1.485	1.433	0.5000	9.65	10.0	-3.5	20.0
n-Butylbenzene	Ave	1.769	1.629		9.21	10.0	-7.9	20.0
1,2-Dichlorobenzene	Ave	1.392	1.336	0.4000	9.60	10.0	-4.0	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0766	0.0500	9.59	10.0	-4.1	20.0
1,3,5-Trichlorobenzene	Ave	0.8050	0.7831		9.73	10.0	-2.7	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6436	0.2000	9.34	10.0	-6.6	20.0
Hexachlorobutadiene	Ave	0.3077	0.2933		9.53	10.0	-4.7	20.0
Naphthalene	Ave	1.476	1.358		9.21	10.0	-7.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCVIS 240-45083/2 Calibration Date: 05/23/2012 13:08

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6188.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Ave	0.5819	0.5471		9.40	10.0	-6.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2370		9.53	10.2	-6.7	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3108		9.93	10.2	-2.7	20.0
Toluene-d8 (Surr)	Ave	1.346	1.279		9.70	10.2	-5.0	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4878		9.62	10.2	-5.8	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: UXM6191.D Lab Sample ID: MB 240-45083/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/23/2012 14:18

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-45083/4	UXM6189.D	05/23/2012 13:31
TB-051012	240-11217-1	UXM6192.D	05/23/2012 14:41
MW18S-051012	240-11217-2	UXM6193.D	05/23/2012 15:04
DMW10S-051012	240-11217-3	UXM6194.D	05/23/2012 15:26
MW31D-051012	240-11217-4	UXM6195.D	05/23/2012 15:49
MW31D-051012 MS	240-11217-4 MS	UXM6196.D	05/23/2012 16:12
MW31D-051012 MSD	240-11217-4 MSD	UXM6197.D	05/23/2012 16:35
MW18I-051012	240-11217-5	UXM6198.D	05/23/2012 16:58
DMW2S-051012	240-11217-6	UXM6199.D	05/23/2012 17:21
DMW1S-051012	240-11217-7	UXM6200.D	05/23/2012 17:43

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45083/6

Matrix: Water | Lab File ID: UXM6191.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 14:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
78-93-3	2-Butanone	10	U	10	0.57
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45083/6

Matrix: Water | Lab File ID: UXM6191.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 14:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
108-20-3	Diisopropyl ether	10	U	10	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	50	U	50	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45083/6

Matrix: Water | Lab File ID: UXM6191.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/23/2012 14:18

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45083 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	102		63-129
460-00-4	4-Bromofluorobenzene (Surr)	92		66-117
1868-53-7	Dibromofluoromethane (Surr)	90		75-121
2037-26-5	Toluene-d8 (Surr)	96		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-45083/6

Matrix: Water Lab File ID: UXM6191.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 14:18

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.18

CAS NO.	COMPOUND NAME	RT	RESULT	Q
107-20-0	Acetaldehyde, chloro-	1.90	1.18	T J N

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-051012	240-11217-1	89	100	91	85
MW18S-051012	240-11217-2	97	114	103	95
DMW10S-051012	240-11217-3	103	119	105	101
MW31D-051012	240-11217-4	100	109	98	91
MW18I-051012	240-11217-5	98	112	102	95
DMW2S-051012	240-11217-6	89	99	91	86
DMW1S-051012	240-11217-7	89	101	91	83
	MB 240-45083/6	90	102	96	92
	LCS 240-45083/4	99	104	101	101
	MRL 240-45083/5	90	101	91	91
MW31D-051012 MS	240-11217-4 MS	97	106	101	101
MW31D-051012 MSD	240-11217-4 MSD	97	104	99	100

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6189.D

Lab ID: LCS 240-45083/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	11.2	112	72-116	
1,1,1-Trichloroethane	10.0	10.5	105	74-118	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.3	123	74-151	
1,1-Dichloroethane	10.0	10.3	103	82-115	
1,1-Dichloroethene	10.0	9.93	99	78-131	
1,1-Dichloropropene	10.0	10.5	105	83-114	
1,2,3-Trichlorobenzene	10.0	10.7	107	54-126	
1,2,3-Trichloropropane	10.0	10.6	106	73-129	
1,2,3-Trimethylbenzene	10.0	8.69	87	70-130	
1,2,4-Trichlorobenzene	10.0	10.2	102	48-135	
1,2,4-Trimethylbenzene	10.0	10.3	103	76-120	
1,2-Dibromo-3-Chloropropane	10.0	11.9	119	42-136	
1,2-Dibromoethane	10.0	11.3	113	79-113	
1,2-Dichlorobenzene	10.0	10.4	104	81-110	
1,2-Dichloroethane	10.0	11.6	116	71-127	
1,2-Dichloropropane	10.0	11.0	110	81-115	
1,3-Dichlorobenzene	10.0	10.5	105	80-110	
1,3-Dichloropropane	10.0	10.5	105	79-116	
1,4-Dichlorobenzene	10.0	10.4	104	82-110	
2,2-Dichloropropane	10.0	11.1	111	50-129	
2-Butanone	20.0	23.5	118	60-126	
2-Chloroethyl vinyl ether	10.0	10.3	103	52-131	
2-Chlorotoluene	10.0	10.3	103	76-116	
2-Hexanone	20.0	24.4	122	55-133	
4-Chlorotoluene	10.0	10.4	104	77-115	
4-Methyl-2-pentanone	20.0	23.9	120	63-128	
Acetone	20.0	20.9	105	43-136	
Benzene	10.0	10.1	101	83-112	
Bromobenzene	10.0	10.6	106	76-115	
Bromochloromethane	10.0	10.4	104	77-120	
Bromodichloromethane	10.0	11.3	113	72-121	
Bromoform	10.0	11.3	113	40-131	
Bromomethane	10.0	6.68	67	11-185	
Carbon disulfide	10.0	8.62	86	62-142	
Carbon tetrachloride	10.0	10.2	102	66-128	
Chlorobenzene	10.0	10.4	104	85-110	
Chloroethane	10.0	7.08	71	25-153	
Chloroform	10.0	10.0	100	79-117	
Chloromethane	10.0	7.24	72	44-126	
cis-1,2-Dichloroethene	10.0	9.84	98	80-113	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6189.D

Lab ID: LCS 240-45083/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	10.0	9.47	95	61-115	
Dibromochloromethane	10.0	10.3	103	64-119	
Dibromomethane	10.0	11.6	116	81-120	
Dichlorodifluoromethane	10.0	5.31	53	19-129	
Diisopropyl ether	10.0	9.36 J	94	77-118	
Ethylbenzene	10.0	10.6	106	83-112	
Hexachlorobutadiene	10.0	10.3	103	36-134	
Isopropylbenzene	10.0	10.4	104	75-114	
Methyl tert-butyl ether	10.0	9.77	98	52-144	
Methylene Chloride	10.0	9.15	92	66-131	
m-Xylene & p-Xylene	20.0	21.1	106	83-113	
Naphthalene	10.0	10.6	106	32-141	
n-Butylbenzene	10.0	9.94	99	66-125	
n-Propylbenzene	10.0	10.6	106	74-121	
o-Xylene	10.0	10.7	107	83-113	
p-Isopropyltoluene	10.0	10.7	107	74-120	
sec-Butylbenzene	10.0	9.84	98	70-117	
Styrene	10.0	10.9	109	79-114	
tert-Butyl alcohol	200	231	116	70-130	
tert-Butylbenzene	10.0	10.3	103	71-115	
Tetrachloroethene	10.0	11.4	114	79-114	
Toluene	10.0	10.3	103	84-111	
trans-1,2-Dichloroethene	10.0	9.75	98	83-117	
trans-1,3-Dichloropropene	10.0	10.6	106	58-117	
Trichloroethene	10.0	11.2	112	76-117	
Trichlorofluoromethane	10.0	9.96	100	49-157	
Vinyl acetate	10.0	10.1	101	46-161	
Vinyl chloride	10.0	7.74	77	53-127	
Xylenes, Total	30.0	31.8	106	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6190.D

Lab ID: MRL 240-45083/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	1.00	1.01	101		
1,1,1-Trichloroethane	1.00	0.941 J	94		
1,1,2,2-Tetrachloroethane	1.00	1.03	103		
1,1,2-Trichloro-1,2,2-trichfluoroethane	1.00	1.16	116		
1,1-Dichloroethane	1.00	0.974 J	97		
1,1-Dichloroethene	1.00	1.00	100		
1,1-Dichloropropene	1.00	1.03	103		
1,2,3-Trichlorobenzene	1.00	1.36	136		
1,2,3-Trichloropropane	1.00	1.04	104		
1,2,4-Trichlorobenzene	1.00	1.18	118		
1,2,4-Trimethylbenzene	1.00	0.858 J	86		
1,2-Dibromo-3-Chloropropane	1.00	0.926 J	93		
1,2-Dibromoethane	1.00	1.01	101		
1,2-Dichlorobenzene	1.00	1.08	108		
1,2-Dichloroethane	1.00	1.21	121		
1,2-Dichloropropane	1.00	1.06	106		
1,3-Dichlorobenzene	1.00	1.06	106		
1,3-Dichloropropane	1.00	1.06	106		
1,4-Dichlorobenzene	1.00	1.08	108		
2,2-Dichloropropane	1.00	1.05	105		
2-Butanone	2.00	2.38 J	119		
2-Chloroethyl vinyl ether	2.00	1.96 J	98		
2-Chlorotoluene	1.00	1.02	102		
2-Hexanone	2.00	1.94 J	97		
4-Chlorotoluene	1.00	1.04	104		
4-Methyl-2-pentanone	2.00	2.01 J	101		
Acetone	2.00	1.35 J	68		
Benzene	1.00	0.990 J	99		
Bromobenzene	1.00	1.03	103		
Bromochloromethane	1.00	1.09	109		
Bromodichloromethane	1.00	0.990 J	99		
Bromoform	1.00	1.48	148		
Bromomethane	1.00	0.838 J	84		
Carbon disulfide	1.00	0.839 J	84		
Carbon tetrachloride	1.00	1.37	137		
Chlorobenzene	1.00	1.05	105		
Chloroethane	1.00	0.920 J	92		
Chloroform	1.00	1.00	100		
Chloromethane	1.00	1.00	100		
cis-1,2-Dichloroethene	1.00	0.929 J	93		
cis-1,3-Dichloropropene	1.00	1.27	127		

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6190.D

Lab ID: MRL 240-45083/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Dibromochloromethane	1.00	1.32	132		
Dibromomethane	1.00	1.11	111		
Dichlorodifluoromethane	1.00	1.14	114		
Ethylbenzene	1.00	0.962 J	96		
Hexachlorobutadiene	1.00	1.61	161		
Isopropylbenzene	1.00	0.898 J	90		
Methyl tert-butyl ether	1.00	0.924 J	92		
Methylene Chloride	1.00	0.690 J	69		
m-Xylene & p-Xylene	2.00	1.89 J	95		
Naphthalene	1.00	0.923 J	92		
n-Butylbenzene	1.00	0.932 J	93		
n-Propylbenzene	1.00	0.952 J	95		
o-Xylene	1.00	0.891 J	89		
p-Isopropyltoluene	1.00	0.871 J	87		
sec-Butylbenzene	1.00	0.871 J	87		
Styrene	1.00	0.911 J	91		
tert-Butyl alcohol	20.0	23.3 J	117		
tert-Butylbenzene	1.00	0.946 J	95		
Tetrachloroethene	1.00	1.15	115		
Toluene	1.00	1.04	104		
trans-1,2-Dichloroethene	1.00	0.929 J	93		
trans-1,3-Dichloropropene	1.00	1.47	147		
Trichloroethene	1.00	1.11	111		
Trichlorofluoromethane	1.00	0.972 J	97		
Vinyl acetate	1.00	1.28 J	128		
Vinyl chloride	1.00	0.964 J	96		
Xylenes, Total	3.00	2.78	93		

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6196.D

Lab ID: 240-11217-4 MS Client ID: MW31D-051012 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	20.0	2.0 U	22.2	111	64-118	
1,1,1-Trichloroethane	20.0	2.0 U	20.2	101	68-121	
1,1,2,2-Tetrachloroethane	20.0	2.0 U	20.0	100	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	20.0	2.0 U	24.0	120	70-152	
1,1-Dichloroethane	20.0	2.0 U	20.0	100	79-116	
1,1-Dichloroethene	20.0	2.0 U	19.2	96	74-135	
1,1-Dichloropropene	20.0	2.0 U	20.6	103	80-114	
1,2,3-Trichlorobenzene	20.0	2.0 U	20.6	103	45-129	
1,2,3-Trichloropropane	20.0	2.0 U	21.0	105	67-132	
1,2,3-Trimethylbenzene	20.0	10 U	16.6	83	70-130	
1,2,4-Trichlorobenzene	20.0	2.0 U	18.8	94	38-138	
1,2,4-Trimethylbenzene	20.0	2.0 U	19.4	97	67-124	
1,2-Dibromo-3-Chloropropane	20.0	4.0 U	22.0	110	32-139	
1,2-Dibromoethane	20.0	2.0 U	23.6	118	74-113	F
1,2-Dichlorobenzene	20.0	2.0 U	19.9	100	75-111	
1,2-Dichloroethane	20.0	2.0 U	23.2	116	68-129	
1,2-Dichloropropane	20.0	2.0 U	22.2	111	78-115	
1,3-Dichlorobenzene	20.0	2.0 U	20.2	101	73-110	
1,3-Dichloropropane	20.0	2.0 U	21.6	108	74-118	
1,4-Dichlorobenzene	20.0	2.0 U	19.8	99	75-110	
2,2-Dichloropropane	20.0	2.0 U	21.0	105	38-127	
2-Butanone	40.0	20 U	47.6	119	54-129	
2-Chloroethyl vinyl ether	20.0	20 U	20 U	0	10-150	F
2-Chlorotoluene	20.0	2.0 U	19.6	98	69-117	
2-Hexanone	40.0	20 U	48.4	121	47-139	
4-Chlorotoluene	20.0	2.0 U	20.0	100	71-116	
4-Methyl-2-pentanone	40.0	20 U	47.4	119	56-131	
Acetone	40.0	2.7 J	43.4	102	33-145	
Benzene	20.0	2.0 U	20.0	100	72-121	
Bromobenzene	20.0	2.0 U	20.4	102	71-116	
Bromochloromethane	20.0	2.0 U	21.0	105	73-121	
Bromodichloromethane	20.0	2.0 U	22.4	112	67-120	
Bromoform	20.0	2.0 U	21.4	107	32-128	
Bromomethane	20.0	2.0 U	11.5	57	10-186	
Carbon disulfide	20.0	0.57 J	17.3	84	57-147	
Carbon tetrachloride	20.0	2.0 U	19.5	98	59-129	
Chlorobenzene	20.0	2.0 U	20.4	102	80-110	
Chloroethane	20.0	2.0 U	14.0	70	21-165	
Chloroform	20.0	2.0 U	19.4	97	76-118	
Chloromethane	20.0	2.0 U	12.0	60	33-132	
cis-1,2-Dichloroethene	20.0	2.0 U	18.9	94	70-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6196.D

Lab ID: 240-11217-4 MS Client ID: MW31D-051012 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	20.0	2.0 U	17.8	89	51-110	
Dibromochloromethane	20.0	2.0 U	20.2	101	56-118	
Dibromomethane	20.0	2.0 U	23.6	118	77-121	
Dichlorodifluoromethane	20.0	2.0 U	9.88	49	17-128	
Diisopropyl ether	20.0	20 U	17.9 J	90	73-118	
Ethylbenzene	20.0	2.0 U	20.6	103	75-116	
Hexachlorobutadiene	20.0	2.0 U	18.1	91	27-132	
Isopropylbenzene	20.0	2.0 U	20.2	101	68-116	
Methyl tert-butyl ether	20.0	10 U	19.0	95	46-144	
Methylene Chloride	20.0	2.0 U	17.1	86	63-128	
m-Xylene & p-Xylene	40.0	4.0 U	41.4	104	75-117	
Naphthalene	20.0	2.0 U	20.0	100	15-158	
n-Butylbenzene	20.0	2.0 U	18.5	93	56-127	
n-Propylbenzene	20.0	2.0 U	19.9	100	64-124	
o-Xylene	20.0	2.0 U	20.4	102	76-116	
p-Isopropyltoluene	20.0	2.0 U	20.0	100	64-122	
sec-Butylbenzene	20.0	2.0 U	18.3	91	60-119	
Styrene	20.0	2.0 U	21.0	105	71-117	
tert-Butyl alcohol	400	100 U	470	118	70-130	
tert-Butylbenzene	20.0	2.0 U	19.2	96	61-119	
Tetrachloroethene	20.0	2.0 U	22.6	113	70-117	
Toluene	20.0	0.98 J	21.6	103	78-114	
trans-1,2-Dichloroethene	20.0	2.0 U	18.3	92	80-119	
trans-1,3-Dichloropropene	20.0	2.0 U	18.4	92	46-116	
Trichloroethene	20.0	2.0 U	22.0	110	66-120	
Trichlorofluoromethane	20.0	2.0 U	17.4	87	46-157	
Vinyl acetate	20.0	4.0 U	20.8	104	43-157	
Vinyl chloride	20.0	2.0 U	14.4	72	49-130	
Xylenes, Total	60.0	4.0 U	61.8	103	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6197.D

Lab ID: 240-11217-4 MSD Client ID: MW31D-051012 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	20.0	22.0	110	1	30	64-118	
1,1,1-Trichloroethane	20.0	20.6	103	2	30	68-121	
1,1,2,2-Tetrachloroethane	20.0	20.6	103	3	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	20.0	23.8	119	1	30	70-152	
1,1-Dichloroethane	20.0	20.2	101	1	30	79-116	
1,1-Dichloroethene	20.0	19.6	98	2	30	74-135	
1,1-Dichloropropene	20.0	21.2	106	3	30	80-114	
1,2,3-Trichlorobenzene	20.0	21.2	106	3	30	45-129	
1,2,3-Trichloropropane	20.0	22.2	111	6	30	67-132	
1,2,3-Trimethylbenzene	20.0	16.6	83	0	30	70-130	
1,2,4-Trichlorobenzene	20.0	19.8	99	5	30	38-138	
1,2,4-Trimethylbenzene	20.0	19.7	98	1	30	67-124	
1,2-Dibromo-3-Chloropropane	20.0	23.2	116	5	30	32-139	
1,2-Dibromoethane	20.0	23.4	117	1	30	74-113	F
1,2-Dichlorobenzene	20.0	20.4	102	2	30	75-111	
1,2-Dichloroethane	20.0	23.4	117	1	30	68-129	
1,2-Dichloropropane	20.0	22.2	111	0	30	78-115	
1,3-Dichlorobenzene	20.0	20.2	101	0	30	73-110	
1,3-Dichloropropane	20.0	22.0	110	2	30	74-118	
1,4-Dichlorobenzene	20.0	20.0	100	1	30	75-110	
2,2-Dichloropropane	20.0	20.8	104	1	30	38-127	
2-Butanone	40.0	49.0	123	3	30	54-129	
2-Chloroethyl vinyl ether	20.0	20 U	0	NC	30	10-150	F
2-Chlorotoluene	20.0	19.6	98	0	30	69-117	
2-Hexanone	40.0	49.0	123	1	30	47-139	
4-Chlorotoluene	20.0	20.4	102	2	30	71-116	
4-Methyl-2-pentanone	40.0	49.6	124	5	30	56-131	
Acetone	40.0	43.4	102	0	30	33-145	
Benzene	20.0	20.4	102	2	30	72-121	
Bromobenzene	20.0	20.6	103	1	30	71-116	
Bromochloromethane	20.0	20.2	101	4	30	73-121	
Bromodichloromethane	20.0	22.8	114	2	30	67-120	
Bromoform	20.0	20.2	101	6	30	32-128	
Bromomethane	20.0	11.3	57	1	30	10-186	
Carbon disulfide	20.0	18.0	87	4	30	57-147	
Carbon tetrachloride	20.0	19.7	98	1	30	59-129	
Chlorobenzene	20.0	20.6	103	1	30	80-110	
Chloroethane	20.0	14.2	71	2	30	21-165	
Chloroform	20.0	19.6	98	1	30	76-118	
Chloromethane	20.0	12.0	60	0	30	33-132	
cis-1,2-Dichloroethene	20.0	19.1	96	1	30	70-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6197.D

Lab ID: 240-11217-4 MSD Client ID: MW31D-051012 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
cis-1,3-Dichloropropene	20.0	16.6	83	7	30	51-110	
Dibromochloromethane	20.0	20.2	101	0	30	56-118	
Dibromomethane	20.0	23.4	117	1	30	77-121	
Dichlorodifluoromethane	20.0	10.3	52	5	30	17-128	
Diisopropyl ether	20.0	18.9 J	95	5	30	73-118	
Ethylbenzene	20.0	20.8	104	1	30	75-116	
Hexachlorobutadiene	20.0	19.9	100	9	30	27-132	
Isopropylbenzene	20.0	20.0	100	1	30	68-116	
Methyl tert-butyl ether	20.0	19.5	97	2	30	46-144	
Methylene Chloride	20.0	17.5	88	2	30	63-128	
m-Xylene & p-Xylene	40.0	41.4	104	0	30	75-117	
Naphthalene	20.0	21.4	107	7	30	15-158	
n-Butylbenzene	20.0	18.8	94	2	30	56-127	
n-Propylbenzene	20.0	20.2	101	1	30	64-124	
o-Xylene	20.0	20.4	102	0	30	76-116	
p-Isopropyltoluene	20.0	20.4	102	2	30	64-122	
sec-Butylbenzene	20.0	18.7	93	2	30	60-119	
Styrene	20.0	20.8	104	1	30	71-117	
tert-Butyl alcohol	400	509	127	8	30	70-130	
tert-Butylbenzene	20.0	19.9	100	4	30	61-119	
Tetrachloroethene	20.0	21.6	108	5	30	70-117	
Toluene	20.0	21.2	101	2	30	78-114	
trans-1,2-Dichloroethene	20.0	19.3	96	5	30	80-119	
trans-1,3-Dichloropropene	20.0	16.8	84	9	30	46-116	
Trichloroethene	20.0	22.2	111	1	30	66-120	
Trichlorofluoromethane	20.0	17.4	87	0	30	46-157	
Vinyl acetate	20.0	23.0	115	10	30	43-157	
Vinyl chloride	20.0	14.7	74	3	30	49-130	
Xylenes, Total	60.0	61.8	103	0	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: STD8260 240-43409/4 Date Analyzed: 05/09/2012 17:35

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5662.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1744720	5.70	1311107	8.39	771411	10.64
UPPER LIMIT		3489440	6.20	2622214	8.89	1542822	11.14
LOWER LIMIT		872360	5.20	655554	7.89	385706	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43409/8		1716805	5.70	1288543	8.39	755167	10.64
CCVIS 240-45083/2		1820477	5.70	1321608	8.39	821484	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCVIS 240-45083/2 Date Analyzed: 05/23/2012 13:08

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): UXM6188.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1820477	5.70	1321608	8.39	821484	10.64
UPPER LIMIT		3640954	6.20	2643216	8.89	1642968	11.14
LOWER LIMIT		910239	5.20	660804	7.89	410742	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
LCS 240-45083/4		1686251	5.70	1220287	8.39	747388	10.64
MRL 240-45083/5		1775044	5.70	1331495	8.39	786896	10.64
MB 240-45083/6		1748565	5.70	1289491	8.39	715970	10.64
240-11217-1	TB-051012	1742855	5.70	1326176	8.39	721172	10.64
240-11217-2	MW18S-051012	1616980	5.70	1205656	8.39	649332	10.64
240-11217-3	DMW10S-051012	1519576	5.70	1136853	8.39	629276	10.64
240-11217-4	MW31D-051012	1633912	5.70	1239609	8.39	658771	10.64
240-11217-4 MS	MW31D-051012 MS	1705845	5.70	1266380	8.39	775319	10.64
240-11217-4 MSD	MW31D-051012 MSD	1726097	5.70	1301208	8.39	783075	10.64
240-11217-5	MW18I-051012	1626937	5.70	1241933	8.39	665619	10.64
240-11217-6	DMW2S-051012	1855815	5.70	1363355	8.39	731067	10.64
240-11217-7	DMW1S-051012	1810855	5.70	1367679	8.39	711124	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\Ncchrom\ChromData\A3UX16\20120523-10212.b\UXM6198.D
Lims ID: 240-11217-B-5 Client ID: MW18I-051012
Inject. Date: 23-May-2012 16:58:30 Dil. Factor: 333.3300
Sample Type: Client
Sample ID: 240-0010212-013
Misc. Info.: M20523A,8260LLUX16,,1644
Operator: 1644 Instrument ID: A3UX16
Vol. Injected: 1.0000 ALS Bottle#: 13
Lims Batch ID: 45083 Lims Sample ID: 13
Detector: MS SCAN

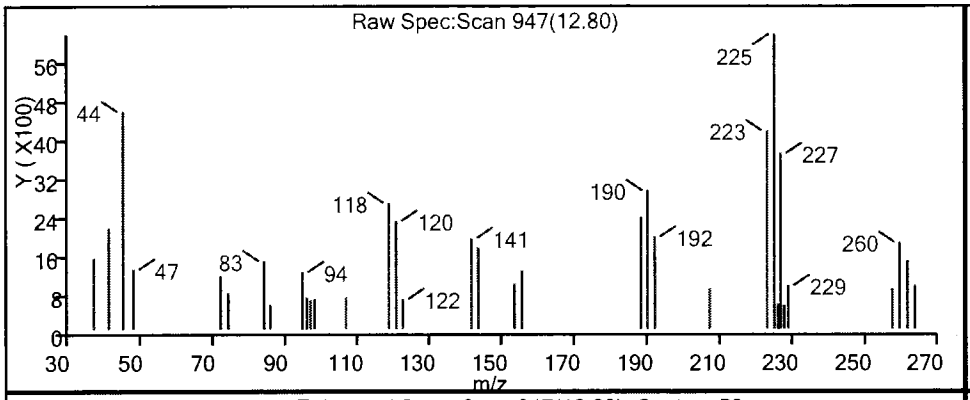
Method: \\Ncchrom\ChromData\A3UX16\20120523-10212.b\8260_16.m
Last Update: 24-May-2012 09:54:19 Calib Date: 09-May-2012 18:43:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A3UX16\20120509-9809.b\UXM5665.D
Limit Group: MSV 8260DOD ICAL
Integrator: RTE ID Type: Deconvolution ID
Process Host: CORP-CTX-18

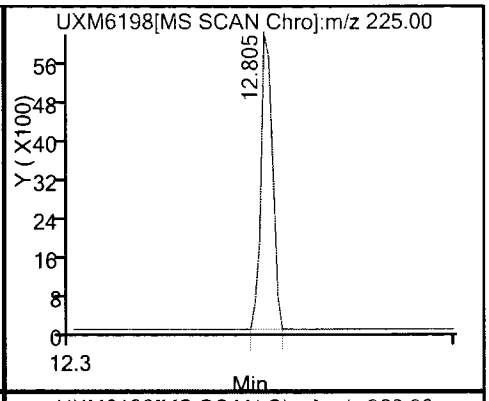
Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1626937	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.394	-0.001	90	1241933	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	665619	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.120	5.121	-0.001	59	414807	10.0	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	590460	11.4	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1731094	10.4	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	92	626720	9.75	
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62	1.954	1.954	0.0	96	119181	1.62	
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.405					
18 Trichlorofluoromethane	101		2.654					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
26 Carbon disulfide	76		3.354					
30 Methylene Chloride	84	3.591	3.591	0.0	88	47521	0.1130	
31 2-Methyl-2-propanol	59	3.686	3.674	0.012	66	9622	3.31	
34 Methyl tert-butyl ether	73		3.840					
33 trans-1,2-Dichloroethene	96		3.840					
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.279					
40 Tert-butyl ethyl ether	59		4.587					
41 2-Butanone (MEK)	43		4.705					
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.0	73	211991	3.73	
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.919					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97		5.156					
52 1,1-Dichloropropene	75		5.298					

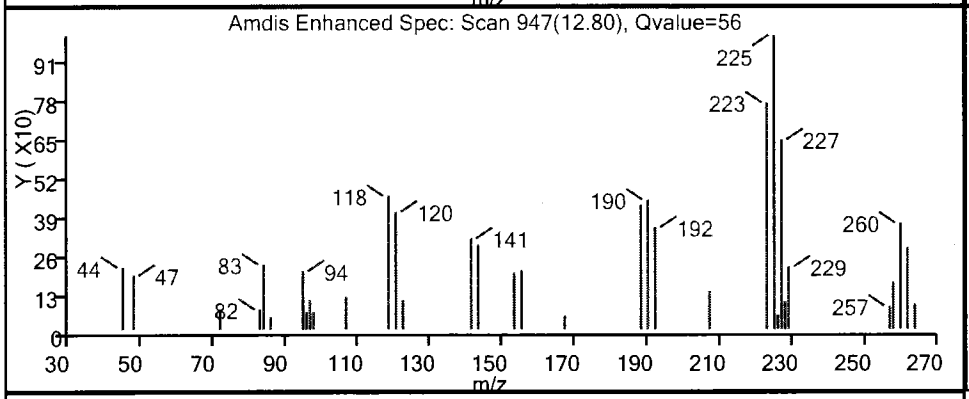
Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
53 Carbon tetrachloride	117		5.310					
56 1,2-Dichloroethane	62	5.476	5.476	0.0	54	14657	0.2109	
55 Benzene	78		5.476					
57 Tert-amyl methyl ether	73		5.559					
60 Trichloroethene	130	6.022	6.022	0.0	90	1536018	34.4	
62 1,2-Dichloropropane	63		6.211					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91		7.136					
73 trans-1,3-Dichloropropene	75		7.314					
76 1,3-Dichloropropane	76		7.634					
77 Tetrachloroethene	164	7.646	7.646	0.0	50	3583	0.1010	
78 2-Hexanone	43		7.694					
79 Chlorodibromomethane	129		7.848					
123 Ethylene Dibromide	107		7.967					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
85 o-Xylene	106		9.010					
86 Styrene	104		9.010					
87 Bromoform	173		9.188					
88 Isopropylbenzene	105		9.354					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.840					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.243					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.575					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.658					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
109 1,2,4-Trichlorobenzene	180	12.639	12.639	0.0	71	21946	0.4784	
110 Hexachlorobutadiene	225	12.805	12.817	-0.012	56	12837	0.6268	
111 Naphthalene	128	12.888	12.888	0.0	55	20559	0.2093	
112 1,2,3-Trichlorobenzene	180	13.149	13.149	0.0	56	15624	0.4034	
S 114 Xylenes, Total	106		16.530					

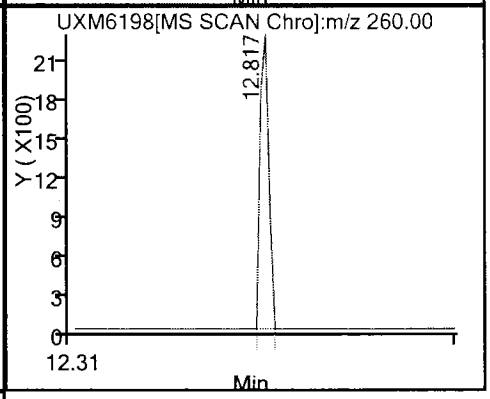
Report Date: 24-May-2012 09:54:26 Chrom Revision: 2.0 08-Feb-2012 11:07:54
Data File: \\Ncchrom\ChromData\A3UX16\20120523-10212.b\UXM6198.D
Injection Date: 23-May-2012 16:58:30 Limit Group: MSV 8260DOD ICAL
Client ID: MW18I-051012 Instrument ID: A3UX16
Lims Batch ID: 45083 Lims Sample ID: 13
Operator ID: 1644
Column Type: DB-624 Column Dia: 0.18 mm

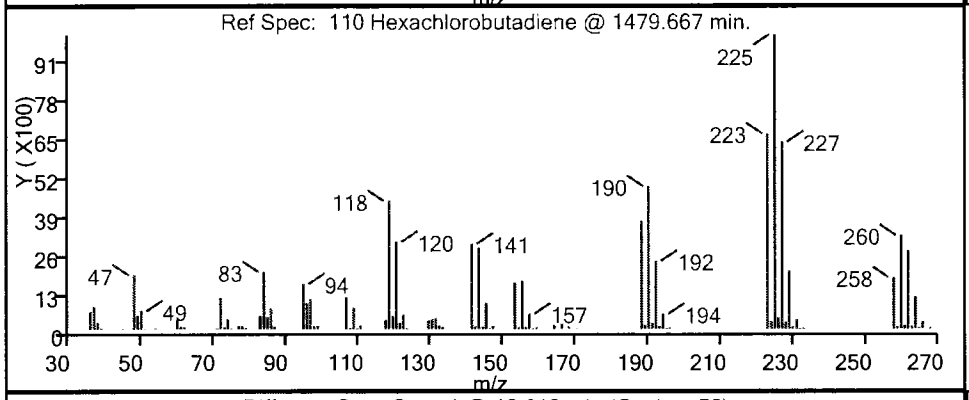
110 Hexachlorobutadiene

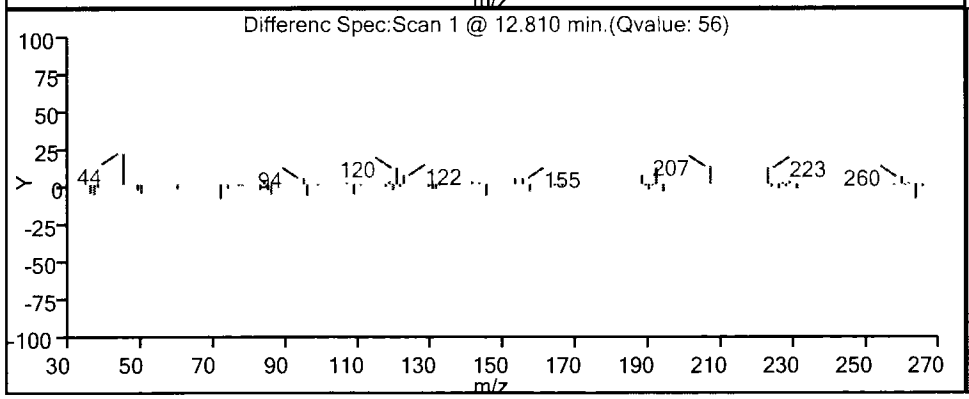


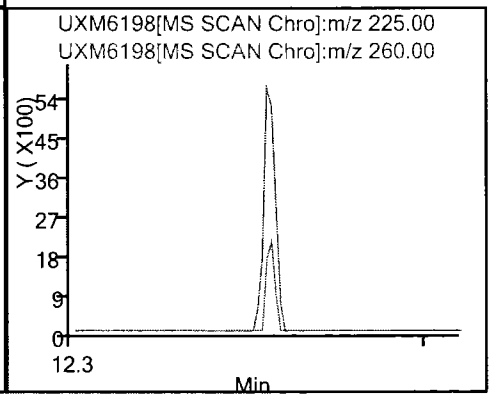




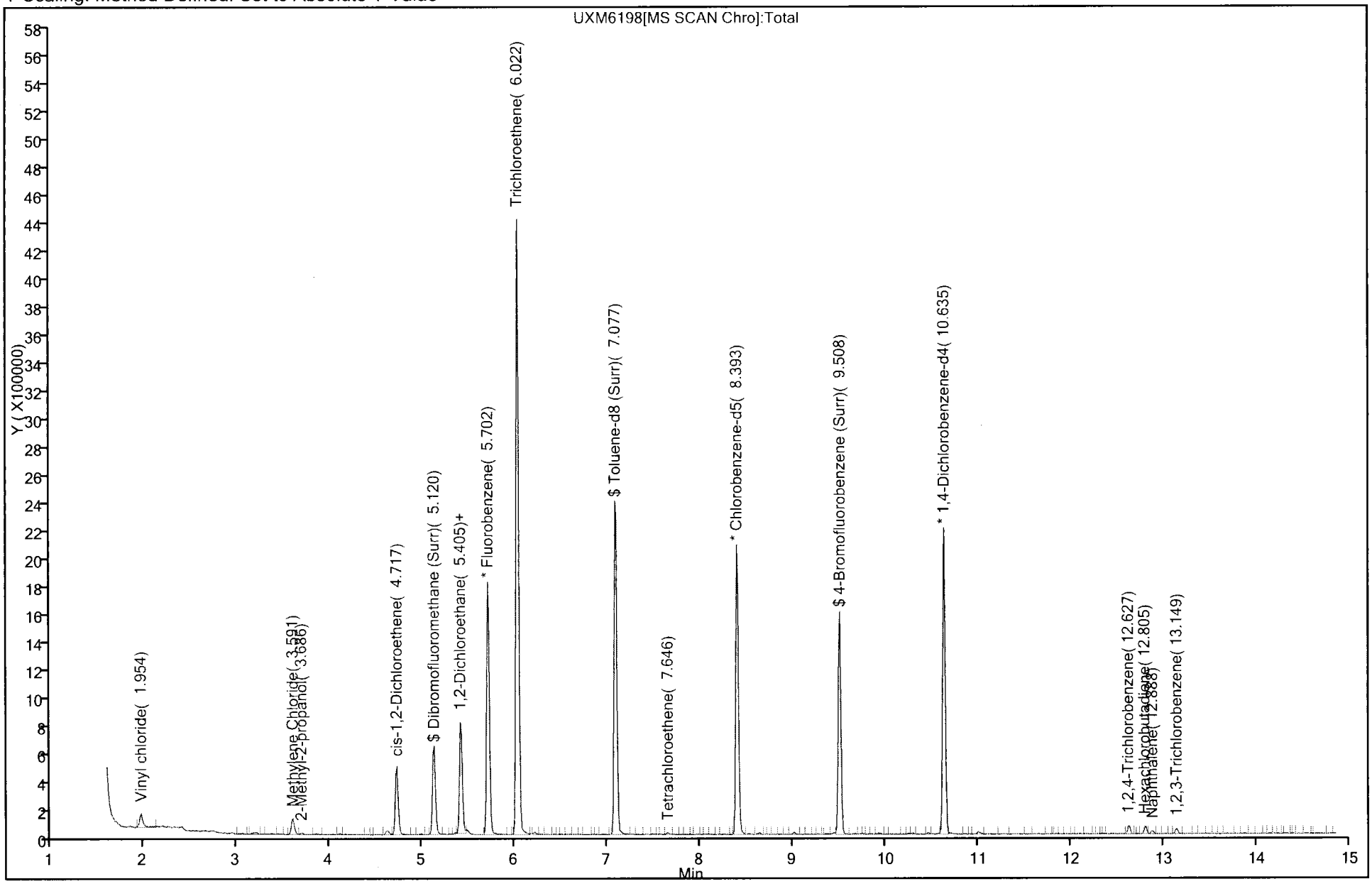








Report Date: 24-May-2012 09:54:25 Chrom Revision: 2.0 08-Feb-2012 11:07:54
Data File: \\Ncchrom\ChromData\A3UX16\20120523-10212.b\UXM6198.D
Injection Date: 23-May-2012 16:58:30 Limit Group: MSV 8260DOD ICAL
Client ID: MW18I-051012 Instrument ID: A3UX16
Lims Batch ID: 45083 Lims Sample ID: 13
Operator ID: 1644
Column Type: DB-624 Column Dia: 0.18 mm
Y Scaling: Method Defined: Set to Absolute Y Value



FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: 0530001.D DFTPP Injection Date: 05/30/2012

Instrument ID: A4AG2 DFTPP Injection Time: 09:34

Analysis Batch No.: 45634

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	42.1	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	49.3	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	62.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	27.6	
365	Greater than 0.75% of mass 198	3.2	
441	Present, but less than mass 443	7.3	
442	40.0 - 110.0% of mass 198	50.2	
443	15.0 - 24.0% of mass 442	10.0	(19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-45634/2	0530002.D	05/30/2012	09:52
	STD8 240-45634/3	0530003.D	05/30/2012	10:10
	STD7 240-45634/4	0530004.D	05/30/2012	10:27
	STD6 240-45634/5	0530005.D	05/30/2012	10:45
	STD5 240-45634/6	0530006.D	05/30/2012	11:03
	STD4 240-45634/7	0530007.D	05/30/2012	11:21
	STD3 240-45634/8	0530008.D	05/30/2012	11:38
	STD2 240-45634/9	0530009.D	05/30/2012	11:56
	STD1 240-45634/10	0530010.D	05/30/2012	12:14
	ICV 240-45634/11	0530011.D	05/30/2012	12:31
	MB 240-45149/14-A	0530024.D	05/30/2012	16:22
	LCS 240-45149/15-A	0530025.D	05/30/2012	16:40
MW31D-051012 RE	240-11217-4 RE	0530036.D	05/30/2012	19:55
MW31D-051012 MS RE	240-11217-4 MS RE	0530037.D	05/30/2012	20:12
MW31D-051012 MSD RE	240-11217-4 MSD RE	0530038.D	05/30/2012	20:30

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 45634

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/30/2012 09:52 Calibration End Date: 05/30/2012 12:14 Calibration ID: 9046

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-45634/10	0530010.D
Level 2	STD2 240-45634/9	0530009.D
Level 3	STD3 240-45634/8	0530008.D
Level 4	STD4 240-45634/7	0530007.D
Level 5	STD5 240-45634/6	0530006.D
Level 6	STD6 240-45634/5	0530005.D
Level 7	STD7 240-45634/4	0530004.D
Level 8	STD8 240-45634/3	0530003.D
Level 9	STD9 240-45634/2	0530002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5308	0.5660 0.5234	0.5711 0.5204	0.5246 0.4931	0.5445	Ave		0.5342				4.8		15.0			
N-Nitrosodimethylamine	0.9106	0.9649 0.9378	1.0168 0.9077	0.9872 0.9383	0.9420	Ave		0.9507				3.9		15.0			
Pyridine	1.5593	1.3856 1.6085	1.5879 1.6386	1.5813 1.6474	1.5176	Ave		1.5658				5.4		15.0			
Ethyl methacrylate	1.2254	1.2503 1.2358	1.2868 1.2039	1.2196 1.1553	1.1861	Ave		1.2204				3.3		15.0			
3-Chloropropionitrile	0.8269	0.8480 0.8431	0.8552 0.8248	0.8268 0.8209	0.8083	Ave		0.8317				1.9		15.0			
Malononitrile	1.8870	1.8119 1.8632	1.8914 1.7799	1.9590 1.7480	1.8006	Ave		1.8426				3.8		15.0			
Benzaldehyde	1.7454 1.4284	1.5633 1.2447	1.5937 +++++	1.5226 +++++	1.4910	Ave		1.5127				10.0		15.0			
Phenol	2.0785	1.9774 2.1399	2.0321 2.1077	2.0393 2.1660	1.9979	Ave		2.0673				3.3		15.0			
Aniline	2.5705	2.4847 2.6204	2.4746 2.6862	2.5213 2.7057	2.4844	Ave		2.5685				3.6		15.0			
Bis(2-chloroethyl)ether	1.8307	1.9052 1.9621	2.1246 1.8641	1.8981 2.0800	1.8932	Ave		1.9448				5.4		15.0			
2-Chlorophenol	1.6239	1.5457 1.6982	1.5645 1.6915	1.5251 1.7606	1.5707	Ave		1.6225				5.3		15.0			
1,3-Dichlorobenzene	1.7259	1.6806 1.7982	1.7343 1.8045	1.6918 1.8195	1.6888	Ave		1.7430				3.3		15.0			
1,4-Dichlorobenzene	1.6062	1.5733 1.6733	1.6485 1.6761	1.5818 1.7023	1.5494	Ave		1.6264				3.5		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-45634/11 Calibration Date: 05/30/2012 12:31

Instrument ID: A4AG2 Calib Start Date: 05/30/2012 09:52

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/30/2012 12:14

Lab File ID: 0530011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5342	0.5808		10.9	10.0	8.7	50.0
N-Nitrosodimethylamine	Ave	0.9507	0.9707		10.2	10.0	2.1	50.0
Pyridine	Ave	1.566	1.708		10.9	10.0	9.1	50.0
Ethyl methacrylate	Ave	1.220	1.322		10.8	10.0	8.3	50.0
3-Chloropropionitrile	Ave	0.8317	0.8468		10.2	10.0	1.8	50.0
Malononitrile	Ave	1.843	1.925		10.4	10.0	4.5	50.0
Phenol	Ave	2.067	2.068		10.0	10.0	0.0	20.0
Benzaldehyde	Ave	1.513	1.471		9.72	10.0	-2.8	50.0
Aniline	Ave	2.568	2.545		9.91	10.0	-0.9	50.0
Bis(2-chloroethyl)ether	Ave	1.945	1.944		10.0	10.0	-0.0	50.0
2-Chlorophenol	Ave	1.623	1.619		9.98	10.0	-0.2	50.0
1,3-Dichlorobenzene	Ave	1.743	1.749		10.0	10.0	0.4	50.0
1,4-Dichlorobenzene	Ave	1.626	1.624		9.99	10.0	-0.1	20.0
Benzyl alcohol	Ave	1.091	1.063		9.75	10.0	-2.5	50.0
1,2-Dichlorobenzene	Ave	1.703	1.696		9.96	10.0	-0.4	50.0
2-Methylphenol	Ave	1.591	1.561		9.81	10.0	-1.9	50.0
bis (2-chloroisopropyl) ether	Ave	1.994	2.000		10.0	10.0	0.3	50.0
3 & 4 Methylphenol	Ave	1.594	1.569		9.84	10.0	-1.6	50.0
N-Nitrosodi-n-propylamine	Ave	1.180	1.154	0.0500	9.78	10.0	-2.2	50.0
Acetophenone	Ave	2.259	2.211		9.79	10.0	-2.1	50.0
Hexachloroethane	Ave	0.6858	0.7016		10.2	10.0	2.3	50.0
Nitrobenzene	Ave	0.4520	0.4621		10.2	10.0	2.2	50.0
Isophorone	Ave	0.7344	0.7460		10.2	10.0	1.6	50.0
2,4-Dimethylphenol	Ave	0.3976	0.4038		10.2	10.0	1.6	50.0
2-Nitrophenol	Ave	0.1888	0.1933		10.2	10.0	2.4	20.0
1,3,5-Trichlorobenzene	Ave	0.3057	0.3085		10.1	10.0	0.9	50.0
Benzoic acid	Qua		0.2049		18.0	20.0	-10.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4987	0.5039		10.1	10.0	1.0	50.0
2,4-Dichlorophenol	Ave	0.2510	0.2519		10.0	10.0	0.4	20.0
1,2,4-Trichlorobenzene	Ave	0.3063	0.2989		9.76	10.0	-2.4	50.0
Naphthalene	Ave	1.041	1.067		10.3	10.0	2.5	50.0
4-Chloroaniline	Ave	0.4604	0.4607		10.0	10.0	0.0	50.0
Hexachlorobutadiene	Ave	0.1525	0.1475		9.68	10.0	-3.2	20.0
1,2,3-Trichlorobenzene	Ave	0.2847	0.2759		9.69	10.0	-3.1	50.0
Caprolactam	Ave	0.1156	0.1225		10.6	10.0	6.0	50.0
4-Chloro-3-methylphenol	Ave	0.3222	0.3267		10.1	10.0	1.4	20.0
2-Methylnaphthalene	Ave	0.6831	0.6718		9.83	10.0	-1.7	50.0
1-Methylnaphthalene	Ave	0.6538	0.6438		9.85	10.0	-1.5	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5314	0.5474		10.3	10.0	3.0	50.0
Hexachlorocyclopentadiene	Qua		0.3504	0.0500	8.90	10.0	-11.0	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: 0530024.D Lab Sample ID: MB 240-45149/14-A

Matrix: Water Date Extracted: 05/24/2012 08:20

Instrument ID: A4AG2 Date Analyzed: 05/30/2012 16:22

Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-45149/15-A	0530025.D	05/30/2012 16:40
MW31D-051012 RE	240-11217-4 RE	0530036.D	05/30/2012 19:55
MW31D-051012 MS RE	240-11217-4 MS RE	0530037.D	05/30/2012 20:12
MW31D-051012 MSD RE	240-11217-4 MSD RE	0530038.D	05/30/2012 20:30

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45149/14-A

Matrix: Water | Lab File ID: 0530024.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1000(mL) | Date Analyzed: 05/30/2012 16:22

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45634 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	38		28-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	33		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	42		27-111
4165-62-2	Phenol-d5 (Surr)	47		10-110
1718-51-0	Terphenyl-d14 (Surr)	68		37-119

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: 20516001.D DFTPP Injection Date: 05/16/2012

Instrument ID: A4HP10 DFTPP Injection Time: 10:51

Analysis Batch No.: 44206

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	53.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	51.1	
70	Less than 2.0% of mass 69	0.2	(0.4)1
127	25.0 - 75.0% of mass 198	54.9	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	24.5	
365	Greater than 0.75% of mass 198	2.6	
441	Present, but less than mass 443	9.1	
442	40.0 - 110.0% of mass 198	55.6	
443	15.0 - 24.0% of mass 442	11.2	(20.1)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-44206/2	20516002.D	05/16/2012	11:09
	STD4 240-44206/3	20516003.D	05/16/2012	11:28
	STD3 240-44206/4	20516004.D	05/16/2012	13:35
	STD2 240-44206/5	20516005.D	05/16/2012	13:53
	STD1 240-44206/6	20516006.D	05/16/2012	14:12
	STD9 240-44206/7	20516007.D	05/16/2012	14:30
	STD8 240-44206/8	20516008.D	05/16/2012	14:49
	STD7 240-44206/9	20516009.D	05/16/2012	15:08
	STD6 240-44206/10	20516010.D	05/16/2012	15:26
	ICV 240-44206/11	20516011.D	05/16/2012	15:44

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 44206

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/16/2012 11:09 Calibration End Date: 05/16/2012 15:26 Calibration ID: 8767

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-44206/6	20516006.D
Level 2	STD2 240-44206/5	20516005.D
Level 3	STD3 240-44206/4	20516004.D
Level 4	STD4 240-44206/3	20516003.D
Level 5	STD5 240-44206/2	20516002.D
Level 6	STD6 240-44206/10	20516010.D
Level 7	STD7 240-44206/9	20516009.D
Level 8	STD8 240-44206/8	20516008.D
Level 9	STD9 240-44206/7	20516007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5565	0.5912 0.5339	0.5922 0.5872	0.5660 0.5670	0.5564	Ave		0.5688				3.6		15.0			
N-Nitrosodimethylamine	0.9674	0.9387 0.9287	0.9903 1.0177	0.9566 0.9706	0.9448	Ave		0.9644				3.0		15.0			
Pyridine	1.6033	1.1406 1.5757	1.4614 1.6915	1.4717 1.6368	1.4760	Ave		1.5071				11.0		15.0			
Ethyl methacrylate	1.3911	1.3089 1.3530	1.4366 1.4452	1.4012 1.3876	1.3597	Ave		1.3854				3.2		15.0			
Malononitrile	1.7610	1.7257 1.4747	1.9251 1.3491	1.9233 +++++	1.8662	Ave		1.7179				13.0		15.0			
Benzaldehyde	1.6101 0.9196	1.3384 +++++	1.4372 +++++	1.3533 +++++	1.2589	Ave		1.3196				17.0	*	15.0			
3-Chloropropionitrile	1.0895	1.0078 1.0533	1.1291 1.1423	1.0829 1.0968	1.0500	Ave		1.0815				4.1		15.0			
Phenol	1.9848	1.7296 1.9545	1.9414 2.0854	1.8785 1.9812	1.8587	Ave		1.9267				5.5		15.0			
Aniline	2.4075	1.8788 2.5808	2.3237 2.6905	2.4486 2.4781	2.3085	Ave		2.3896				10.0		15.0			
Bis(2-chloroethyl)ether	1.6859	1.8102 1.5416	1.5925 1.6776	1.5737 1.6806	1.4680	Ave		1.6288				6.5		15.0			
2-Chlorophenol	1.5509	1.4166 1.5403	1.5207 1.6604	1.4985 1.5449	1.4532	Ave		1.5232				4.8		15.0			
1,3-Dichlorobenzene	1.5919	1.5162 1.5718	1.5649 1.6702	1.5653 1.5667	1.5182	Ave		1.5707				3.1		15.0			
1,4-Dichlorobenzene	1.6477	1.5160 1.5959	1.5946 1.7286	1.6396 1.6132	1.5769	Ave		1.6141				3.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-44206/11 Calibration Date: 05/16/2012 15:44

Instrument ID: A4HP10 Calib Start Date: 05/16/2012 11:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/16/2012 15:26

Lab File ID: 20516011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5688	0.7692		13.5	10.0	35.2	50.0
N-Nitrosodimethylamine	Ave	0.9644	0.9715		10.1	10.0	0.7	50.0
Pyridine	Ave	1.507	1.595		10.6	10.0	5.9	50.0
Ethyl methacrylate	Ave	1.385	1.386		10.0	10.0	0.0	50.0
3-Chloropropionitrile	Ave	1.081	1.089		10.1	10.0	0.7	50.0
Malononitrile	Ave	1.718	1.714		9.98	10.0	-0.2	50.0
Benzaldehyde	Ave	1.320	0.7969		6.04	10.0	-39.6	50.0
Phenol	Ave	1.927	1.940		10.1	10.0	0.7	20.0
Aniline	Ave	2.390	2.394		10.0	10.0	0.2	50.0
Bis(2-chloroethyl)ether	Ave	1.629	1.630		10.0	10.0	0.1	50.0
2-Chlorophenol	Ave	1.523	1.529		10.0	10.0	0.4	50.0
1,3-Dichlorobenzene	Ave	1.571	1.575		10.0	10.0	0.3	50.0
1,4-Dichlorobenzene	Ave	1.614	1.641		10.2	10.0	1.7	20.0
Benzyl alcohol	Ave	0.9307	0.9440		10.1	10.0	1.4	50.0
1,2-Dichlorobenzene	Ave	1.497	1.510		10.1	10.0	0.9	50.0
2-Methylphenol	Ave	1.397	1.390		9.95	10.0	-0.5	50.0
bis (2-chloroisopropyl) ether	Ave	2.702	2.736		10.1	10.0	1.2	50.0
3 & 4 Methylphenol	Ave	1.425	1.431		10.0	10.0	0.4	50.0
N-Nitrosodi-n-propylamine	Ave	1.196	1.215	0.0500	10.2	10.0	1.5	50.0
Acetophenone	Ave	2.073	2.097		10.1	10.0	1.2	50.0
Hexachloroethane	Ave	0.6126	0.6228		10.2	10.0	1.7	50.0
Nitrobenzene	Ave	0.4313	0.4398		10.2	10.0	2.0	50.0
Isophorone	Ave	0.7711	0.7816		10.1	10.0	1.4	50.0
2,4-Dimethylphenol	Ave	0.3943	0.3928		9.96	10.0	-0.4	50.0
2-Nitrophenol	Ave	0.1969	0.2024		10.3	10.0	2.8	20.0
1,3,5-Trichlorobenzene	Ave	0.3323	0.3327		10.0	10.0	0.1	50.0
Bis(2-chloroethoxy)methane	Ave	0.4333	0.4414		10.2	10.0	1.9	50.0
Benzoic acid	Qua		0.2402		21.7	20.0	8.5	50.0
2,4-Dichlorophenol	Ave	0.2816	0.2860		10.2	10.0	1.5	20.0
1,2,4-Trichlorobenzene	Ave	0.3220	0.3275		10.2	10.0	1.7	50.0
Naphthalene	Ave	1.096	1.084		9.89	10.0	-1.1	50.0
4-Chloroaniline	Ave	0.4413	0.4416		10.0	10.0	0.0	50.0
Hexachlorobutadiene	Ave	0.1744	0.1782		10.2	10.0	2.2	20.0
1,2,3-Trichlorobenzene	Ave	0.3031	0.3021		9.97	10.0	-0.3	50.0
Caprolactam	Qua		0.1273		9.80	10.0	-2.0	50.0
4-Chloro-3-methylphenol	Ave	0.3300	0.3265		9.90	10.0	-1.1	20.0
2-Methylnaphthalene	Ave	0.7056	0.7011		9.94	10.0	-0.6	50.0
1-Methylnaphthalene	Ave	0.6729	0.6525		9.70	10.0	-3.0	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5338	0.5277		9.89	10.0	-1.1	50.0
Hexachlorocyclopentadiene	Ave	0.3164	0.3197	0.0500	10.1	10.0	1.1	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: 20518001.D DFTPP Injection Date: 05/18/2012

Instrument ID: A4HP10 DFTPP Injection Time: 09:02

Analysis Batch No.: 44531

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	54.6	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	52.5	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	54.9	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.5	
275	10.0- 30.0% of mass 198	25.6	
365	Greater than 0.75% of mass 198	2.5	
441	Present, but less than mass 443	9.6	
442	40.0 - 110.0% of mass 198	60.2	
443	15.0 - 24.0% of mass 442	12.0	(19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-44531/2	20518002.D	05/18/2012	09:20
	MB 240-44240/21-A	20518010.D	05/18/2012	11:46
	LCS 240-44240/22-A	20518011.D	05/18/2012	12:05

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44531/2 Calibration Date: 05/18/2012 09:20

Instrument ID: A4HP10 Calib Start Date: 05/16/2012 11:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/16/2012 15:26

Lab File ID: 20518002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5688	0.5360		9.42	10.0	-5.8	50.0
N-Nitrosodimethylamine	Ave	0.9644	0.9460		9.81	10.0	-1.9	50.0
Pyridine	Ave	1.507	1.580		10.5	10.0	4.9	50.0
Ethyl methacrylate	Ave	1.385	1.392		10.0	10.0	0.5	50.0
3-Chloropropionitrile	Ave	1.081	1.090		10.1	10.0	0.8	50.0
Malononitrile	Ave	1.718	1.757		10.2	10.0	2.3	50.0
Benzaldehyde	Ave	1.320	0.8324		6.31	10.0	-36.9	50.0
Phenol	Ave	1.927	1.935		10.0	10.0	0.4	20.0
Aniline	Ave	2.390	2.384		9.98	10.0	-0.2	50.0
Bis(2-chloroethyl)ether	Ave	1.629	1.721		10.6	10.0	5.7	50.0
2-Chlorophenol	Ave	1.523	1.515		9.95	10.0	-0.5	50.0
1,3-Dichlorobenzene	Ave	1.571	1.588		10.1	10.0	1.1	50.0
1,4-Dichlorobenzene	Ave	1.614	1.635		10.1	10.0	1.3	50.0
Benzyl alcohol	Ave	0.9307	0.8255		8.87	10.0	-11.3	50.0
1,2-Dichlorobenzene	Ave	1.497	1.525		10.2	10.0	1.9	50.0
2-Methylphenol	Ave	1.397	1.464		10.5	10.0	4.7	50.0
bis (2-chloroisopropyl) ether	Ave	2.702	2.767		10.2	10.0	2.4	50.0
3 & 4 Methylphenol	Ave	1.425	1.468		10.3	10.0	3.0	50.0
N-Nitrosodi-n-propylamine	Ave	1.196	1.237	0.0500	10.3	10.0	3.4	50.0
Acetophenone	Ave	2.073	2.126		10.3	10.0	2.6	50.0
Hexachloroethane	Ave	0.6126	0.6382		10.4	10.0	4.2	50.0
Nitrobenzene	Ave	0.4313	0.4388		10.2	10.0	1.8	50.0
Isophorone	Ave	0.7711	0.7855		10.2	10.0	1.9	50.0
2,4-Dimethylphenol	Ave	0.3943	0.4052		10.3	10.0	2.8	50.0
2-Nitrophenol	Ave	0.1969	0.2081		10.6	10.0	5.7	20.0
1,3,5-Trichlorobenzene	Ave	0.3323	0.3333		10.0	10.0	0.3	50.0
Bis(2-chloroethoxy)methane	Ave	0.4333	0.4370		10.1	10.0	0.9	50.0
Benzoic acid	Qua		0.2185		20.0	20.0	0.0	50.0
2,4-Dichlorophenol	Ave	0.2816	0.2798		9.93	10.0	-0.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3220	0.3182		9.88	10.0	-1.2	50.0
Naphthalene	Ave	1.096	1.082		9.87	10.0	-1.3	50.0
4-Chloroaniline	Ave	0.4413	0.4619		10.5	10.0	4.7	50.0
Hexachlorobutadiene	Ave	0.1744	0.1753		10.1	10.0	0.5	20.0
1,2,3-Trichlorobenzene	Ave	0.3031	0.2979		9.83	10.0	-1.7	50.0
Caprolactam	Qua		0.1289		9.92	10.0	-0.8	50.0
4-Chloro-3-methylphenol	Ave	0.3300	0.3338		10.1	10.0	1.2	20.0
2-Methylnaphthalene	Ave	0.7056	0.7082		10.0	10.0	0.4	50.0
1-Methylnaphthalene	Ave	0.6729	0.6656		9.89	10.0	-1.1	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5338	0.5335		10.0	10.0	-0.0	50.0
Hexachlorocyclopentadiene	Ave	0.3164	0.3263	0.0500	10.3	10.0	3.1	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: 20518010.D Lab Sample ID: MB 240-44240/21-A

Matrix: Water Date Extracted: 05/16/2012 10:08

Instrument ID: A4HP10 Date Analyzed: 05/18/2012 11:46

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-44240/22-A	20518011.D	05/18/2012 12:05
MW31D-051012	240-11217-4	20522026.D	05/22/2012 16:17
MW31D-051012 MS	240-11217-4 MS	20522027.D	05/22/2012 16:35
MW31D-051012 MSD	240-11217-4 MSD	20522028.D	05/22/2012 16:54
DMW10S-051012	240-11217-3	20522029.D	05/22/2012 17:13
DMW1S-051012	240-11217-7	20522030.D	05/22/2012 17:32
MW18S-051012	240-11217-2	20522031.D	05/22/2012 17:51
DMW2S-051012	240-11217-6	20522033.D	05/22/2012 18:28
MW18I-051012	240-11217-5	20522034.D	05/22/2012 18:47

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-44240/21-A

Matrix: Water | Lab File ID: 20518010.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/16/2012 10:08

Sample wt/vol: 1000(mL) | Date Analyzed: 05/18/2012 11:46

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44531 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	64		28-110
367-12-4	2-Fluorophenol (Surr)	66		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	61		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	65		27-111
4165-62-2	Phenol-d5 (Surr)	67		10-110
1718-51-0	Terphenyl-d14 (Surr)	84		37-119

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab File ID: 20522001.D DFTPP Injection Date: 05/22/2012

Instrument ID: A4HP10 DFTPP Injection Time: 09:05

Analysis Batch No.: 44839

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	48.7	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	48.8	
70	Less than 2.0% of mass 69	0.0	(0.0)1
127	25.0 - 75.0% of mass 198	51.9	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.8	
275	10.0- 30.0% of mass 198	25.2	
365	Greater than 0.75% of mass 198	2.5	
441	Present, but less than mass 443	11.1	
442	40.0 - 110.0% of mass 198	65.7	
443	15.0 - 24.0% of mass 442	13.0	(19.8)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-44839/2	20522002.D	05/22/2012	09:24
	CCV 240-44839/3	20522003.D	05/22/2012	09:42
	CCV 240-44839/4	20522004.D	05/22/2012	10:01
MW31D-051012	240-11217-4	20522026.D	05/22/2012	16:17
MW31D-051012 MS	240-11217-4 MS	20522027.D	05/22/2012	16:35
MW31D-051012 MSD	240-11217-4 MSD	20522028.D	05/22/2012	16:54
DMW10S-051012	240-11217-3	20522029.D	05/22/2012	17:13
DMW1S-051012	240-11217-7	20522030.D	05/22/2012	17:32
MW18S-051012	240-11217-2	20522031.D	05/22/2012	17:51
DMW2S-051012	240-11217-6	20522033.D	05/22/2012	18:28
MW18I-051012	240-11217-5	20522034.D	05/22/2012	18:47

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44839/2 Calibration Date: 05/22/2012 09:24

Instrument ID: A4HP10 Calib Start Date: 05/16/2012 11:09

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/16/2012 15:26

Lab File ID: 20522002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5688	0.5003		8.80	10.0	-12.0	50.0
N-Nitrosodimethylamine	Ave	0.9644	0.9197		9.54	10.0	-4.6	50.0
Pyridine	Ave	1.507	1.548		10.3	10.0	2.7	50.0
Ethyl methacrylate	Ave	1.385	1.347		9.72	10.0	-2.8	50.0
3-Chloropropionitrile	Ave	1.081	1.045		9.66	10.0	-3.4	50.0
Malononitrile	Ave	1.718	1.725		10.0	10.0	0.4	50.0
Benzaldehyde	Ave	1.320	0.6633		5.03	10.0	-49.7	50.0
Phenol	Ave	1.927	1.990		10.3	10.0	3.3	20.0
Aniline	Ave	2.390	2.565		10.7	10.0	7.3	50.0
Bis(2-chloroethyl)ether	Ave	1.629	1.615		9.92	10.0	-0.8	50.0
2-Chlorophenol	Ave	1.523	1.560		10.2	10.0	2.4	50.0
1,3-Dichlorobenzene	Ave	1.571	1.605		10.2	10.0	2.2	50.0
1,4-Dichlorobenzene	Ave	1.614	1.642		10.2	10.0	1.7	50.0
Benzyl alcohol	Ave	0.9307	0.9689		10.4	10.0	4.1	50.0
1,2-Dichlorobenzene	Ave	1.497	1.533		10.2	10.0	2.4	50.0
2-Methylphenol	Ave	1.397	1.447		10.4	10.0	3.6	50.0
bis (2-chloroisopropyl) ether	Ave	2.702	2.644		9.78	10.0	-2.2	50.0
3 & 4 Methylphenol	Ave	1.425	1.514		10.6	10.0	6.2	50.0
N-Nitrosodi-n-propylamine	Ave	1.196	1.250	0.0500	10.4	10.0	4.5	50.0
Acetophenone	Ave	2.073	2.172		10.5	10.0	4.8	50.0
Hexachloroethane	Ave	0.6126	0.6060		9.89	10.0	-1.1	50.0
Nitrobenzene	Ave	0.4313	0.4212		9.77	10.0	-2.3	50.0
Isophorone	Ave	0.7711	0.7764		10.1	10.0	0.7	50.0
2-Nitrophenol	Ave	0.1969	0.2122		10.8	10.0	7.7	20.0
2,4-Dimethylphenol	Ave	0.3943	0.4062		10.3	10.0	3.0	50.0
1,3,5-Trichlorobenzene	Ave	0.3323	0.3289		9.90	10.0	-1.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4333	0.4381		10.1	10.0	1.1	50.0
Benzoic acid	Qua		0.1114		11.2	20.0	-44.0	50.0
2,4-Dichlorophenol	Ave	0.2816	0.2894		10.3	10.0	2.8	20.0
1,2,4-Trichlorobenzene	Ave	0.3220	0.3180		9.88	10.0	-1.2	50.0
Naphthalene	Ave	1.096	1.108		10.1	10.0	1.1	50.0
4-Chloroaniline	Ave	0.4413	0.4671		10.6	10.0	5.9	50.0
Hexachlorobutadiene	Ave	0.1744	0.1704		9.77	10.0	-2.3	20.0
1,2,3-Trichlorobenzene	Ave	0.3031	0.2997		9.89	10.0	-1.1	50.0
Caprolactam	Qua		0.1271		9.79	10.0	-2.1	50.0
4-Chloro-3-methylphenol	Ave	0.3300	0.3369		10.2	10.0	2.1	20.0
2-Methylnaphthalene	Ave	0.7056	0.7231		10.2	10.0	2.5	50.0
1-Methylnaphthalene	Ave	0.6729	0.6782		10.1	10.0	0.8	50.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5338	0.5421		10.2	10.0	1.6	50.0
Hexachlorocyclopentadiene	Ave	0.3164	0.2646	0.0500	8.36	10.0	-16.4	50.0

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MW18S-051012	240-11217-2	42	47	43	44	55	52
DMW10S-051012	240-11217-3	61	65	59	59	71	75
MW31D-051012	240-11217-4	20	21	19 X	18 X	24	16 X
MW31D-051012 RE	240-11217-4 RE	52	54	46	44	72	42
MW18I-051012	240-11217-5	47	52	48	50	64	68
DMW2S-051012	240-11217-6	36	38	38	38	56	62
DMW1S-051012	240-11217-7	51	55	50	51	67	59
	MB 240-44240/21-A	66	67	65	64	61	84
	MB 240-45149/14-A	47	47	42	38	33	68
	LCS 240-44240/22-A	68	69	71	65	75	86
	LCS 240-45149/15-A	66	64	56	54	68	69
MW31D-051012 MS	240-11217-4 MS	60	63	57	55	70	34 X
MW31D-051012 MS RE	240-11217-4 MS RE	58	60	49	46	73	37
MW31D-051012 MSD	240-11217-4 MSD	50	54	49	52	69	42
MW31D-051012 MSD RE	240-11217-4 MSD RE	58	58	48	47	73	31 X

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20518011.D

Lab ID: LCS 240-44240/22-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	11.9	60	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0530025.D

Lab ID: LCS 240-45149/15-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	12.5	63	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20522027.D

Lab ID: 240-11217-4 MS Client ID: MW31D-051012 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.4	0.95 U	8.14	42	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0530037.D

Lab ID: 240-11217-4 MS RE Client ID: MW31D-051012 MS RE

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.0	0.95 U	8.80	46	10-110	H

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20522028.D

Lab ID: 240-11217-4 MSD Client ID: MW31D-051012 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	7.05	37	14	30	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0530038.D

Lab ID: 240-11217-4 MSD RE Client ID: MW31D-051012 MSD RE

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	9.03	47	3	30	10-110	H

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: STD6 240-45634/5 Date Analyzed: 05/30/2012 10:45

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0530005.D Heated Purge: (Y/N) N

Calibration ID: 9046

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		294405	3.51	1271693	4.40	649302	5.68
UPPER LIMIT		588810	4.01	2543386	4.90	1298604	6.18
LOWER LIMIT		147203	3.01	635847	3.90	324651	5.18
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-45634/11		217801	3.51	914982	4.40	464052	5.68
MB 240-45149/14-A		256425	3.51	1041421	4.40	582434	5.68
LCS 240-45149/15-A		202642	3.51	867421	4.40	469331	5.68
240-11217-4 RE	MW31D-051012 RE	395793	3.51	1683396	4.40	965520	5.68
240-11217-4 MS RE	MW31D-051012 MS RE	309731	3.51	1452819	4.40	815612	5.68
240-11217-4 MSD RE	MW31D-051012 MSD RE	305730	3.51	1373134	4.40	765330	5.68

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: STD6 240-45634/5 Date Analyzed: 05/30/2012 10:45

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0530005.D Heated Purge: (Y/N) N

Calibration ID: 9046

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		960615	6.77	932772	8.74	689730	10.17
UPPER LIMIT		1921230	7.27	1865544	9.24	1379460	10.67
LOWER LIMIT		480308	6.27	466386	8.24	344865	9.67
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-45634/11		657248	6.77	623765	8.74	481403	10.17
MB 240-45149/14-A		889587	6.77	783415	8.74	673274	10.18
LCS 240-45149/15-A		691934	6.77	670385	8.75	516805	10.18
240-11217-4 RE	MW31D-051012 RE	1507729	6.77	1389679	8.75	1212616	10.19
240-11217-4 MS RE	MW31D-051012 MS RE	1228948	6.77	1192236	8.76	975105	10.19
240-11217-4 MSD RE	MW31D-051012 MSD RE	1182450	6.77	1124618	8.75	939906	10.19

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: STD6 240-44206/10 Date Analyzed: 05/16/2012 15:26

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20516010.D Heated Purge: (Y/N) N

Calibration ID: 8767

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		273483	3.47	1128963	4.37	643062	5.63
UPPER LIMIT		546966	3.97	2257926	4.87	1286124	6.13
LOWER LIMIT		136742	2.97	564482	3.87	321531	5.13
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-44206/11		280459	3.47	1120040	4.37	645455	5.63
CCV 240-44531/2 CCVIS		213964	3.41	865245	4.30	491188	5.56
CCV 240-44839/2 CCVIS		226113	3.43	937811	4.32	532536	5.58

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: STD6 240-44206/10 Date Analyzed: 05/16/2012 15:26

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): 20516010.D Heated Purge: (Y/N) N

Calibration ID: 8767

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1069200	6.71	956332	8.69	842317	10.08
UPPER LIMIT		2138400	7.21	1912664	9.19	1684634	10.58
LOWER LIMIT		534600	6.21	478166	8.19	421159	9.58
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-44206/11		1070672	6.71	947721	8.69	829595	10.07
CCV 240-44531/2 CCVIS		797783	6.64	714148	8.60	637663	9.94
CCV 240-44839/2 CCVIS		869069	6.66	795730	8.62	698647	9.98

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCV 240-44531/2 Date Analyzed: 05/18/2012 09:20

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20518002.D Heated Purge: (Y/N) N

Calibration ID: 8775

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		213964	3.41	865245	4.30	491188	5.56
UPPER LIMIT		427928	3.91	1730490	4.80	982376	6.06
LOWER LIMIT		106982	2.91	432623	3.80	245594	5.06
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-44240/21-A		210261	3.41	844902	4.30	482332	5.56
LCS 240-44240/22-A		227107	3.41	910847	4.30	524980	5.56

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCV 240-44531/2 Date Analyzed: 05/18/2012 09:20

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): 20518002.D Heated Purge: (Y/N) N

Calibration ID: 8775

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		797783	6.64	714148	8.60	637663	9.94
UPPER LIMIT		1595566	7.14	1428296	9.10	1275326	10.44
LOWER LIMIT		398892	6.14	357074	8.10	318832	9.44
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-44240/21-A		789639	6.64	742458	8.60	644276	9.94
LCS 240-44240/22-A		850004	6.64	769000	8.60	686740	9.94

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCV 240-44839/2 Date Analyzed: 05/22/2012 09:24

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20522002.D Heated Purge: (Y/N) N

Calibration ID: 8775

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		226113	3.43	937811	4.32	532536	5.58
UPPER LIMIT		452226	3.93	1875622	4.82	1065072	6.08
LOWER LIMIT		113057	2.93	468906	3.82	266268	5.08
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-44839/3		184183	3.43	785595	4.32	454247	5.58
CCV 240-44839/4		261885	3.43	1085126	4.32	617996	5.58
240-11217-4	MW31D-051012	226735	3.42	939149	4.31	539770	5.58
240-11217-4 MS	MW31D-051012 MS	190965	3.43	798490	4.32	474277	5.58
240-11217-4 MSD	MW31D-051012 MSD	213373	3.43	887809	4.32	514283	5.58
240-11217-3	DMW10S-051012	197301	3.42	842274	4.31	504982	5.58
240-11217-7	DMW1S-051012	214238	3.42	881467	4.31	514348	5.58
240-11217-2	MW18S-051012	229229	3.43	963944	4.31	566586	5.58
240-11217-6	DMW2S-051012	203259	3.43	843268	4.31	497491	5.58
240-11217-5	MW18I-051012	208748	3.43	867300	4.31	501361	5.58

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCV 240-44839/2 Date Analyzed: 05/22/2012 09:24

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): 20522002.D Heated Purge: (Y/N) N

Calibration ID: 8775

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		869069	6.66	795730	8.62	698647	9.98
UPPER LIMIT		1738138	7.16	1591460	9.12	1397294	10.48
LOWER LIMIT		434535	6.16	397865	8.12	349324	9.48
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-44839/3		746938	6.66	675243	8.62	599451	9.98
CCV 240-44839/4		1005852	6.66	921393	8.62	829191	9.98
240-11217-4	MW31D-051012	896415	6.66	829210	8.62	734127	9.97
240-11217-4 MS	MW31D-051012 MS	794394	6.66	772918	8.62	675255	9.97
240-11217-4 MSD	MW31D-051012 MSD	845748	6.66	795214	8.62	697937	9.97
240-11217-3	DMW10S-051012	809842	6.66	756030	8.62	690445	9.98
240-11217-7	DMW1S-051012	839841	6.66	780328	8.61	707636	9.97
240-11217-2	MW18S-051012	915291	6.66	856634	8.61	766184	9.97
240-11217-6	DMW2S-051012	845020	6.66	784091	8.62	711324	9.97
240-11217-5	MW18I-051012	845906	6.66	798454	8.61	713544	9.96

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: ZPID Start Date: 12/12/2011 19:24

Analysis Batch Number: 26502 End Date: 12/13/2011 09:02

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-26502/5 IC		12/12/2011 19:24	1	Z0121205.D	
STD2 240-26502/6 IC		12/12/2011 19:57	1	Z0121206.D	
STD3 240-26502/7 IC		12/12/2011 20:30	1	Z0121207.D	
STD4 240-26502/8 IC		12/12/2011 21:03	1	Z0121208.D	
STD5 240-26502/9 IC		12/12/2011 21:35	1	Z0121209.D	
STD6 240-26502/10 ICRT		12/12/2011 22:08	1	Z0121210.D	
STD7 240-26502/11 IC		12/12/2011 22:41	1	Z0121211.D	
STD8 240-26502/12 IC		12/12/2011 23:14	1	Z0121212.D	
STD9 240-26502/13 IC		12/12/2011 23:46	1	Z0121213.D	
ICV 240-26502/14		12/13/2011 00:19	1	Z0121214.D	
ZZZZZ		12/13/2011 00:52	1		
ZZZZZ		12/13/2011 01:24	1		
ZZZZZ		12/13/2011 01:57	1		
ZZZZZ		12/13/2011 02:30	1		
ZZZZZ		12/13/2011 03:35	1		
ZZZZZ		12/13/2011 04:41	1		
ZZZZZ		12/13/2011 05:46	1		
ZZZZZ		12/13/2011 06:52	1		
ZZZZZ		12/13/2011 07:57	1		
ZZZZZ		12/13/2011 09:02	1		

GC VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: ZPID Start Date: 05/17/2012 14:58

Analysis Batch Number: 44479 End Date: 05/19/2012 01:46

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-44479/2		05/17/2012 14:58	1	Z2051702.D	
MB 240-44479/3		05/17/2012 15:31	1	Z2051703.D	
LCS 240-44479/4		05/17/2012 16:04	1	Z2051704.D	
240-11217-2	MW18S-051012	05/17/2012 16:38	1	Z2051705.D	
240-11217-5	MW18I-051012	05/17/2012 17:11	1	Z2051706.D	
ZZZZZ		05/17/2012 17:43	1		
ZZZZZ		05/17/2012 18:16	1		
ZZZZZ		05/17/2012 18:49	1		
ZZZZZ		05/17/2012 19:21	1		
ZZZZZ		05/17/2012 19:54	1		
ZZZZZ		05/17/2012 20:27	1		
ZZZZZ		05/17/2012 21:00	1		
ZZZZZ		05/17/2012 21:32	1		
ZZZZZ		05/17/2012 22:05	1		
ZZZZZ		05/17/2012 22:38	1		
ZZZZZ		05/17/2012 23:10	1		
ZZZZZ		05/17/2012 23:43	1		
ZZZZZ		05/18/2012 00:16	1		
ZZZZZ		05/18/2012 00:49	1		
ZZZZZ		05/18/2012 01:21	1		
ZZZZZ		05/18/2012 01:54	1		
ZZZZZ		05/18/2012 02:27	1		
ZZZZZ		05/18/2012 03:00	1		
ZZZZZ		05/18/2012 13:54	5		
CCV 240-44479/26		05/18/2012 14:59	1	Z2051746.D	
ZZZZZ		05/18/2012 15:32	1		
ZZZZZ		05/18/2012 16:05	1		
ZZZZZ		05/18/2012 16:38	5		
ZZZZZ		05/18/2012 17:43	5		
ZZZZZ		05/18/2012 18:16	1		
ZZZZZ		05/18/2012 18:48	5		
240-11285-D-1 MS		05/18/2012 19:21	5	Z2051754.D	
240-11285-D-1 MSD		05/18/2012 19:54	5	Z2051755.D	
ZZZZZ		05/18/2012 23:36	10		
ZZZZZ		05/19/2012 00:41	5		
ZZZZZ		05/19/2012 01:14	5		
ZZZZZ		05/19/2012 01:46	5		

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 26502

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 12/12/2011 19:24 Calibration End Date: 12/12/2011 23:46 Calibration ID: 6094

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-26502/5	Z0121205.D
Level 2	STD2 240-26502/6	Z0121206.D
Level 3	STD3 240-26502/7	Z0121207.D
Level 4	STD5 240-26502/9	Z0121209.D
Level 5	STD4 240-26502/8	Z0121208.D
Level 6	STD6 240-26502/10	Z0121210.D
Level 7	STD7 240-26502/11	Z0121211.D
Level 8	STD8 240-26502/12	Z0121212.D
Level 9	STD9 240-26502/13	Z0121213.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	17331 14405 16016	13653 14688	13601 15608	14006 15026	Ave		14926.0108				8.2		30.0			
Ethene	9217.4 12628 13270	10517 12742	11760 13291	12091 12765	Ave		12031.3914				11.0		30.0			
Acetylene	3587.0 5052.4 5089.3	4424.5 5054.6	4752.2 5388.2	4942.8 5100.0	Ave		4821.21377				11.0		30.0			
Ethane	15067 14556 15424	13094 14284	13757 15131	13673 14503	Ave		14387.6497				5.3		30.0			
Propene	9593.3 13178 11834	13077 11423	12527 11950	11082 11410	Ave		11786.0484				9.4		30.0			
Propane	9799.0 15896 15100	13214 13866	14546 14746	13140 14144	Ave		13827.9917				13.0		30.0			
Propane, 2-methyl	12655 16451 12645	13774 11735	15844 12342	11428 11777	Ave		13183.5551				14.0		30.0			
Butane	2882.3 11934 10583	9045.1 9683.7	10754 10308	9153.4 9873.2	Ave		9357.32972				28.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-26502/14 Calibration Date: 12/13/2011 00:19

Instrument ID: ZPID Calib Start Date: 12/12/2011 19:24

GC Column: ID: Calib End Date: 12/12/2011 23:46

Lab File ID: Z0121214.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	14926	13889		108	116	-6.9	30.0
Ethene	Ave	12031	12490		211	203	3.8	30.0
Acetylene	Ave	4821	5395		211	188	11.9	30.0
Ethane	Ave	14388	14058		213	218	-2.3	30.0
Propene	Ave	11786	12832		332	305	8.9	30.0
Propane	Ave	13828	15509		357	318	12.2	30.0
Propane, 2-methyl	Ave	13184	16006		510	420	21.4	30.0
Butane	Ave	9357	15243		685	420	62.9*	30.0
Pentane	Ave	4696	13498		1500	522	187.5*	30.0
1,1,1-Trifluoroethane	Ave	6418	5193		1970	2440	-19.1	30.0

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCVRT 240-44479/2 Calibration Date: 05/17/2012 14:58

Instrument ID: ZPID Calib Start Date: 12/12/2011 19:24

GC Column: ID: Calib End Date: 12/12/2011 23:46

Lab File ID: Z2051702.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	14926	14754		114	116	-1.2	30.0
Ethene	Ave	12031	13608		230	203	13.1	30.0
Acetylene	Ave	4821	5270		206	188	9.3	30.0
Ethane	Ave	14388	14887		225	218	3.5	30.0
Propene	Ave	11786	12302		318	305	4.4	30.0
Propane	Ave	13828	14412		333	319	4.2	30.0
Propane, 2-methyl	Ave	13184	11887		379	420	-9.8	30.0
Butane	Ave	9357	10169		457	420	8.7	30.0
Pentane	Ave	4696	4047		450	522	-13.8	30.0
1,1,1-Trifluoroethane	Ave	6418	5387		2040	2440	-16.1	30.0

FORM VII
GC VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44479/26 Calibration Date: 05/18/2012 14:59

Instrument ID: ZPID Calib Start Date: 12/12/2011 19:24

GC Column: ID: Calib End Date: 12/12/2011 23:46

Lab File ID: Z2051746.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Methane	Ave	14926	14768		115	116	-1.1	30.0
Ethene	Ave	12031	13069		221	203	8.6	30.0
Acetylene	Ave	4821	5422		212	188	12.5	30.0
Ethane	Ave	14388	15026		227	218	4.4	30.0
Propene	Ave	11786	11578		299	305	-1.8	30.0
Propane	Ave	13828	14608		337	319	5.6	30.0
Propane, 2-methyl	Ave	13184	12305		392	420	-6.7	30.0
Butane	Ave	9357	10307		463	420	10.1	30.0
Pentane	Ave	4696	3790		421	522	-19.3	30.0
1,1,1-Trifluoroethane	Ave	6418	4966		1880	2440	-22.6	30.0

FORM IV
GC VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: MB 240-44479/3

Matrix: Water Date Extracted:

Lab File ID:(1) Z2051703.D Lab File ID:(2)

Date Analyzed:(1) 05/17/2012 15:31 Date Analyzed:(2)

Instrument ID:(1) ZPID Instrument ID:(2)

GC Column:(1) ID: GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-44479/4	05/17/2012 16:04	
MW18S-051012	240-11217-2	05/17/2012 16:38	
MW18I-051012	240-11217-5	05/17/2012 17:11	
	240-11285-D-1 MS	05/18/2012 19:21	
	240-11285-D-1 MSD	05/18/2012 19:54	

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-44479/3

Matrix: Water Lab File ID: Z2051703.D

Analysis Method: RSK-175 Date Collected:

Sample wt/vol: 17(mL) Date Analyzed: 05/17/2012 15:31

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: ID:

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44479 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	0.50	U	0.50	0.37
74-84-0	Ethane	0.50	U	0.50	0.10
74-82-8	Methane	0.50	U	0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	84		40-122

FORM II
GC VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): ID:

Client Sample ID	Lab Sample ID	TFE1 #
MW18S-051012	240-11217-2	94
MW18I-051012	240-11217-5	95
	MB 240-44479/3	84
	LCS 240-44479/4	84
	240-11285-D-1 MS	81
	240-11285-D-1 MSD	79

	QC LIMITS
TFE = 1,1,1-Trifluoroethane	40-122

Column to be used to flag recovery values

FORM II RSK-175

FORM III
GC VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z2051704.D

Lab ID: LCS 240-44479/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Ethene	203	206	101	64-130	
Ethane	218	204	94	77-127	
Methane	116	103	89	79-113	

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z2051754.D

Lab ID: 240-11285-D-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Ethene	1020	2.5 U	1010	100	51-129	
Ethane	1090	2.5 U	1010	93	59-133	
Methane	579	2900	3520	103	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM III
GC VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: Z2051755.D

Lab ID: 240-11285-D-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Ethene	1020	1010	99	0	34	51-129	
Ethane	1090	1030	95	2	34	59-133	
Methane	579	3740	140	6	42	13-173	4

Column to be used to flag recovery and RPD values

FORM III RSK-175

FORM VIII
GC VOA ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCVRT 240-44479/2 Date Analyzed: 05/17/2012 14:58

Instrument ID: ZPID GC Column: ID: ()

Lab File ID (Standard): Z2051702.D Heated Purge: (Y/N) N

Calibration ID: 6094

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFE RT #		
CONTINUING CALIBRATION SURROGATE				14.95		
UPPER LIMIT				15.00		
LOWER LIMIT				14.90		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-44479/2		05/17/2012 14:58	Z2051702.D	14.95		
MB 240-44479/3		05/17/2012 15:31	Z2051703.D	14.95		
LCS 240-44479/4		05/17/2012 16:04	Z2051704.D	14.95		
240-11217-2	MW18S-051012	05/17/2012 16:38	Z2051705.D	14.94		
240-11217-5	MW18I-051012	05/17/2012 17:11	Z2051706.D	14.94		
CCV 240-44479/26		05/18/2012 14:59	Z2051746.D	14.94		
240-11285-D-1 MS		05/18/2012 19:21	Z2051754.D	14.94		
240-11285-D-1 MSD		05/18/2012 19:54	Z2051755.D	14.94		

TFE = 1,1,1-Trifluoroethane

TFE RT Limit = ± 0.05 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII RSK-175

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: AFID Start Date: 02/10/2012 11:48

Analysis Batch Number: 33438 End Date: 02/10/2012 22:48

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 11:48	1		RTX-VRX 0.45(mm)
STD1 240-33438/14 IC		02/10/2012 17:20	1	AF021014.D	RTX-VRX 0.45(mm)
STD2 240-33438/15 IC		02/10/2012 17:56	1	AF021015.D	RTX-VRX 0.45(mm)
STD3 240-33438/16 IC		02/10/2012 18:32	1	AF021016.D	RTX-VRX 0.45(mm)
STD4 240-33438/17 ICRT		02/10/2012 19:09	1	AF021017.D	RTX-VRX 0.45(mm)
STD5 240-33438/18 IC		02/10/2012 19:46	1	AF021018.D	RTX-VRX 0.45(mm)
STD6 240-33438/19 IC		02/10/2012 20:22	1	AF021019.D	RTX-VRX 0.45(mm)
ICV 240-33438/20		02/10/2012 20:59	1	AF021020.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:11	1		RTX-VRX 0.45(mm)
CCV 240-33438/23		02/10/2012 22:48	1		RTX-VRX 0.45(mm)

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: AFID Start Date: 05/21/2012 11:23

Analysis Batch Number: 44701 End Date: 05/22/2012 08:28

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/21/2012 11:23	1		RTX-VRX 0.45(mm)
CCV 240-44701/5 CCVRT		05/21/2012 12:38	1	AF052105.D	RTX-VRX 0.45(mm)
CCV 240-44701/15		05/21/2012 18:56	1	AF052115.D	RTX-VRX 0.45(mm)
MB 240-44701/16		05/21/2012 19:34	1	AF052116.D	RTX-VRX 0.45(mm)
LCS 240-44701/17		05/21/2012 20:11	1	AF052117.D	RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 20:48	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 21:25	1		RTX-VRX 0.45(mm)
240-11230-B-1 MS		05/21/2012 22:02	1	AF052120.D	RTX-VRX 0.45(mm)
240-11230-B-1 MSD		05/21/2012 22:39	1	AF052121.D	RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 23:17	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 23:54	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 00:31	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 01:09	1		RTX-VRX 0.45(mm)
CCV 240-44701/26		05/22/2012 01:46	1	AF052126.D	RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 02:23	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 03:00	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 03:37	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 04:14	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 04:50	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 05:27	1		RTX-VRX 0.45(mm)
240-11217-2	MW18S-051012	05/22/2012 06:03	2	AF052133.D	RTX-VRX 0.45(mm)
240-11217-3	DMW10S-051012	05/22/2012 06:39	1	AF052134.D	RTX-VRX 0.45(mm)
240-11217-6	DMW2S-051012	05/22/2012 07:15	5	AF052135.D	RTX-VRX 0.45(mm)
240-11217-7	DMW1S-051012	05/22/2012 07:51	1	AF052136.D	RTX-VRX 0.45(mm)
CCV 240-44701/37		05/22/2012 08:28	1	AF052137.D	RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 33438

SDG No.:

Instrument ID: AFID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 17:20 Calibration End Date: 02/10/2012 20:22 Calibration ID: 6972

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33438/14	AF021014.D
Level 2	STD2 240-33438/15	AF021015.D
Level 3	STD3 240-33438/16	AF021016.D
Level 4	STD4 240-33438/17	AF021017.D
Level 5	STD5 240-33438/18	AF021018.D
Level 6	STD6 240-33438/19	AF021019.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	413318 332298	381704 319349	324961	330527	Ave		350359.609				11.0		20.0			
C6-C12	477220 364247	429686 349887	360866	362529	Ave		390739.136				13.0		20.0			
Trifluorotoluene (Surr)	338791 402599	358328 418139	375665	373847	Ave		377894.900				7.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-33438/20 Calibration Date: 02/10/2012 20:59

Instrument ID: AFID Calib Start Date: 02/10/2012 17:20

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 20:22

Lab File ID: AF021020.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	350360	389858		890	800	11.3	20.0
C6-C12	Ave	390739	435695		892	800	11.5	20.0
Trifluorotoluene (Surr)	Ave	377895	403777		10.7	10.0	6.8	20.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44701/5 Calibration Date: 05/21/2012 12:38

Instrument ID: AFID Calib Start Date: 02/10/2012 17:20

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 20:22

Lab File ID: AF052105.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	350360	349553		798	800	-0.2	15.0
C6-C12	Ave	390739	389992		799	800	-0.2	15.0
Trifluorotoluene (Surr)	Ave	377895	339955		9.00	10.0	-10.0	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44701/15 Calibration Date: 05/21/2012 18:56

Instrument ID: AFID Calib Start Date: 02/10/2012 17:20

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 20:22

Lab File ID: AF052115.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	350360	349000		797	800	-0.4	15.0
C6-C12	Ave	390739	388740		796	800	-0.5	15.0
Trifluorotoluene (Surr)	Ave	377895	342870		9.07	10.0	-9.3	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44701/26 Calibration Date: 05/22/2012 01:46

Instrument ID: AFID Calib Start Date: 02/10/2012 17:20

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 20:22

Lab File ID: AF052126.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	350360	334489		764	800	-4.5	15.0
C6-C12	Ave	390739	372665		763	800	-4.6	15.0
Trifluorotoluene (Surr)	Ave	377895	328572		8.69	10.0	-13.1	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44701/37 Calibration Date: 05/22/2012 08:28

Instrument ID: AFID Calib Start Date: 02/10/2012 17:20

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 20:22

Lab File ID: AF052137.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Total Petroleum Hydrocarbons (C6-C10)	Ave	350360	326605		746	800	-6.8	15.0
C6-C12	Ave	390739	362669		743	800	-7.2	15.0
Trifluorotoluene (Surr)	Ave	377895	314329		8.32	10.0	-16.8*	15.0

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: MB 240-44701/16

Matrix: Water Date Extracted: 05/21/2012 19:34

Lab File ID:(1) AF052116.D Lab File ID:(2)

Date Analyzed:(1) 05/21/2012 19:34 Date Analyzed:(2)

Instrument ID:(1) AFID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-44701/17	05/21/2012 20:11	
	240-11230-B-1 MS	05/21/2012 22:02	
	240-11230-B-1 MSD	05/21/2012 22:39	
MW18S-051012	240-11217-2	05/22/2012 06:03	
DMW10S-051012	240-11217-3	05/22/2012 06:39	
DMW2S-051012	240-11217-6	05/22/2012 07:15	
DMW1S-051012	240-11217-7	05/22/2012 07:51	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-44701/16

Matrix: Water Lab File ID: AF052116.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/21/2012 19:34

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44701 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	100	U	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	69		10-150

FORM II

GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MW18S-051012	240-11217-2	84
DMW10S-051012	240-11217-3	82
DMW2S-051012	240-11217-6	75
DMW1S-051012	240-11217-7	71
	MB 240-44701/16	69
	LCS 240-44701/17	88
	240-11230-B-1 MS	82
	240-11230-B-1 MSD	77

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: AF052117.D

Lab ID: LCS 240-44701/17 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	901	113	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: AF052120.D

Lab ID: 240-11230-B-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	35 J	895	108	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: AF052121.D

Lab ID: 240-11230-B-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	854	102	5	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCV 240-44701/5 Date Analyzed: 05/21/2012 12:38

Instrument ID: AFID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): AF052105.D Heated Purge: (Y/N) N

Calibration ID: 6972

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				10.45		
UPPER LIMIT				10.55		
LOWER LIMIT				10.35		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-44701/5 CCVRT		05/21/2012 12:38	AF052105.D	10.45		
CCV 240-44701/15		05/21/2012 18:56	AF052115.D	10.46		
MB 240-44701/16		05/21/2012 19:34	AF052116.D	10.45		
LCS 240-44701/17		05/21/2012 20:11	AF052117.D	10.46		
240-11230-B-1 MS		05/21/2012 22:02	AF052120.D	10.46		
240-11230-B-1 MSD		05/21/2012 22:39	AF052121.D	10.45		
CCV 240-44701/26		05/22/2012 01:46	AF052126.D	10.46		
240-11217-2	MW18S-051012	05/22/2012 06:03	AF052133.D	10.47		
240-11217-3	DMW10S-051012	05/22/2012 06:39	AF052134.D	10.46		
240-11217-6	DMW2S-051012	05/22/2012 07:15	AF052135.D	10.46		
240-11217-7	DMW1S-051012	05/22/2012 07:51	AF052136.D	10.46		
CCV 240-44701/37		05/22/2012 08:28	AF052137.D	10.47		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: A2HP6F Start Date: 05/17/2012 11:52

Analysis Batch Number: 44398 End Date: 05/18/2012 04:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-44398/4 IC		05/17/2012 11:52	1	P6F51704.D	RTX-5 0.53(mm)
STD2 240-44398/5 IC		05/17/2012 12:23	1	P6F51705.D	RTX-5 0.53(mm)
ICRT 240-44398/6		05/17/2012 12:54	1	P6F51706.D	RTX-5 0.53(mm)
STD4 240-44398/7 IC		05/17/2012 13:25	1	P6F51707.D	RTX-5 0.53(mm)
STD5 240-44398/8 IC		05/17/2012 13:56	1	P6F51708.D	RTX-5 0.53(mm)
ICV 240-44398/9		05/17/2012 14:27	1	P6F51709.D	RTX-5 0.53(mm)
STD1 240-44398/10 IC		05/17/2012 14:58	1		RTX-5 0.53(mm)
STD2 240-44398/11 IC		05/17/2012 15:29	1		RTX-5 0.53(mm)
STD3 240-44398/12 IC		05/17/2012 16:00	1		RTX-5 0.53(mm)
STD4 240-44398/13 IC		05/17/2012 16:31	1		RTX-5 0.53(mm)
STD5 240-44398/14 IC		05/17/2012 17:03	1		RTX-5 0.53(mm)
ICV 240-44398/15		05/17/2012 17:34	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 18:05	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 18:36	1		RTX-5 0.53(mm)
CCV 240-44398/19		05/17/2012 19:38	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 20:09	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 20:40	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 21:12	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 21:43	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 22:14	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 22:44	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 23:15	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 23:46	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 00:17	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 00:48	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 01:19	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 01:50	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 02:21	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 02:52	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 03:23	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 03:53	1		RTX-5 0.53(mm)
CCV 240-44398/36		05/18/2012 04:23	1		RTX-5 0.53(mm)

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: A2HP6F Start Date: 05/18/2012 11:21

Analysis Batch Number: 44529 End Date: 05/19/2012 02:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-44529/5		05/18/2012 11:21	1	P6F51805.D	RTX-5 0.53(mm)
ZZZZZ		05/18/2012 12:01	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 12:40	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 13:20	1		RTX-5 0.53(mm)
CCV 240-44529/9		05/18/2012 13:59	1	P6F51809.D	RTX-5 0.53(mm)
240-11217-2	MW18S-051012	05/18/2012 14:39	1	P6F51810.D	RTX-5 0.53(mm)
240-11217-3	DMW10S-051012	05/18/2012 15:18	1	P6F51811.D	RTX-5 0.53(mm)
240-11217-6	DMW2S-051012	05/18/2012 15:58	1	P6F51812.D	RTX-5 0.53(mm)
240-11217-7	DMW1S-051012	05/18/2012 16:37	1	P6F51813.D	RTX-5 0.53(mm)
ZZZZZ		05/18/2012 17:17	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 17:56	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 18:35	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 19:14	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 19:53	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 20:32	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 21:11	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 21:49	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 22:28	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 23:07	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 23:46	1		RTX-5 0.53(mm)
ZZZZZ		05/19/2012 00:24	1		RTX-5 0.53(mm)
MB 240-44281/17-A		05/19/2012 01:03	1	P6F51826.D	RTX-5 0.53(mm)
LCS 240-44281/18-A		05/19/2012 01:42	1	P6F51827.D	RTX-5 0.53(mm)
CCV 240-44529/28		05/19/2012 02:21	1	P6F51828.D	RTX-5 0.53(mm)

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 44398

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/17/2012 11:52 Calibration End Date: 05/17/2012 13:56 Calibration ID: 8780

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-44398/4	P6F51704.D
Level 2	STD2 240-44398/5	P6F51705.D
Level 3	ICRT 240-44398/6	P6F51706.D
Level 4	STD4 240-44398/7	P6F51707.D
Level 5	STD5 240-44398/8	P6F51708.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198437 175405	186914	193120	178770	Ave		186529.226				5.2		20.0			
n-Nonane	234271 222460	224689	235678	225392	Ave		228498.010				2.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICV 240-44398/9 Calibration Date: 05/17/2012 14:27

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51709.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	186529	191370		513	500	2.6	20.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCVRT 240-44529/5 Calibration Date: 05/18/2012 11:21

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51805.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	186529	186028		499	500	-0.3	15.0
n-Nonane	Ave	228498	233001		51.0	50.0	2.0	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44529/9 Calibration Date: 05/18/2012 13:59

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51809.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	186529	175455		470	500	-5.9	15.0
n-Nonane	Ave	228498	219939		48.1	50.0	-3.7	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 240-44529/28 Calibration Date: 05/19/2012 02:21

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51828.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	186529	199303		534	500	6.8	15.0
n-Nonane	Ave	228498	248130		54.3	50.0	8.6	15.0

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: MB 240-44281/17-A

Matrix: Water Date Extracted: 05/16/2012 12:53

Lab File ID:(1) P6F51826.D Lab File ID:(2)

Date Analyzed:(1) 05/19/2012 01:03 Date Analyzed:(2)

Instrument ID:(1) A2HP6F Instrument ID:(2)

GC Column:(1) RTX-5 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MW18S-051012	240-11217-2	05/18/2012 14:39	
DMW10S-051012	240-11217-3	05/18/2012 15:18	
DMW2S-051012	240-11217-6	05/18/2012 15:58	
DMW1S-051012	240-11217-7	05/18/2012 16:37	
	LCS 240-44281/18-A	05/19/2012 01:42	

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-44281/17-A

Matrix: Water | Lab File ID: P6F51826.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 1000(mL) | Date Analyzed: 05/19/2012 01:03

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	417	J	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	69		10-110

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-5 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	C91 #
MW18S-051012	240-11217-2	65
DMW10S-051012	240-11217-3	61
DMW2S-051012	240-11217-6	64
DMW1S-051012	240-11217-7	58
	MB 240-44281/17-A	69
	LCS 240-44281/18-A	60

C9 = n-Nonane

QC LIMITS
10-110

Column to be used to flag recovery values

FORM II 8015B

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P6F51827.D

Lab ID: LCS 240-44281/18-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	1970	79	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Sample No.: CCVRT 240-44529/5 Date Analyzed: 05/18/2012 11:21

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm)

Lab File ID (Standard): P6F51805.D Heated Purge: (Y/N) N

Calibration ID: 8780

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				4.35		
UPPER LIMIT				4.45		
LOWER LIMIT				4.25		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-44529/5		05/18/2012 11:21	P6F51805.D	4.35		
CCV 240-44529/9		05/18/2012 13:59	P6F51809.D	4.35		
240-11217-2	MW18S-051012	05/18/2012 14:39	P6F51810.D	4.35		
240-11217-3	DMW10S-051012	05/18/2012 15:18	P6F51811.D	4.35		
240-11217-6	DMW2S-051012	05/18/2012 15:58	P6F51812.D	4.35		
240-11217-7	DMW1S-051012	05/18/2012 16:37	P6F51813.D	4.35		
MB 240-44281/17-A		05/19/2012 01:03	P6F51826.D	4.36		
LCS 240-44281/18-A		05/19/2012 01:42	P6F51827.D	4.36		
CCV 240-44529/28		05/19/2012 02:21	P6F51828.D	4.36		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Instrument ID: SGY Start Date: 05/10/2012 16:46

Analysis Batch Number: 237317 End Date: 05/10/2012 19:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-237317/1		05/10/2012 16:46	1	ye10008.d	DB-1701-p 0.25(um)
IC 680-237317/1		05/10/2012 16:46	1	ye10008.d	CLP II 0.32(mm)
IC 680-237317/2		05/10/2012 16:55	1	ye10009.d	DB-1701-p 0.25(um)
IC 680-237317/2		05/10/2012 16:55	1	ye10009.d	CLP II 0.32(mm)
IC 680-237317/3		05/10/2012 17:04	1	ye10010.d	DB-1701-p 0.25(um)
IC 680-237317/3		05/10/2012 17:04	1	ye10010.d	CLP II 0.32(mm)
IC 680-237317/4		05/10/2012 17:13	1	ye10011.d	DB-1701-p 0.25(um)
IC 680-237317/4		05/10/2012 17:13	1	ye10011.d	CLP II 0.32(mm)
IC 680-237317/5		05/10/2012 17:22	1	ye10012.d	DB-1701-p 0.25(um)
IC 680-237317/5		05/10/2012 17:22	1	ye10012.d	CLP II 0.32(mm)
IC 680-237317/6		05/10/2012 17:31	1	ye10013.d	DB-1701-p 0.25(um)
IC 680-237317/6		05/10/2012 17:31	1	ye10013.d	CLP II 0.32(mm)
IC 680-237317/7		05/10/2012 17:40	1	ye10014.d	DB-1701-p 0.25(um)
IC 680-237317/7		05/10/2012 17:40	1	ye10014.d	CLP II 0.32(mm)
ZZZZZ		05/10/2012 17:58	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 17:58	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:06	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:06	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:15	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:15	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:24	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:24	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:33	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:33	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:42	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:42	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:51	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:51	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:00	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:00	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:09	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:09	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:18	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:18	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:27	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:27	1		CLP II 0.32(mm)
CCV 680-237317/19		05/10/2012 19:35	1		DB-1701-p 0.25(um)
CCV 680-237317/19		05/10/2012 19:35	1		CLP II 0.32(mm)
PIBLK 680-237317/20		05/10/2012 19:44	1		DB-1701-p 0.25(um)
PIBLK 680-237317/20		05/10/2012 19:44	1		CLP II 0.32(mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Instrument ID: SGY Start Date: 05/16/2012 17:32

Analysis Batch Number: 237954 End Date: 05/16/2012 19:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
PIBLK 680-237954/1		05/16/2012 17:32	1	ye16001.d	DB-1701-p 0.25(um)
PIBLK 680-237954/1		05/16/2012 17:32	1	ye16001.d	CLP II 0.32(mm)
CCVIS 680-237954/2		05/16/2012 17:41	1	ye16002.d	DB-1701-p 0.25(um)
CCVIS 680-237954/2		05/16/2012 17:41	1	ye16002.d	CLP II 0.32(mm)
MB 680-237485/1-A		05/16/2012 17:50	1	ye16003.d	DB-1701-p 0.25(um)
MB 680-237485/1-A		05/16/2012 17:50	1	ye16003.d	CLP II 0.32(mm)
LCS 680-237485/2-A		05/16/2012 17:59	1	ye16004.d	DB-1701-p 0.25(um)
LCS 680-237485/2-A		05/16/2012 17:59	1	ye16004.d	CLP II 0.32(mm)
ZZZZZ		05/16/2012 18:08	1		DB-1701-p 0.25(um)
ZZZZZ		05/16/2012 18:08	1		CLP II 0.32(mm)
680-79363-A-1-A MS		05/16/2012 18:26	1	ye16007.d	DB-1701-p 0.25(um)
680-79363-A-1-A MS		05/16/2012 18:26	1	ye16007.d	CLP II 0.32(mm)
680-79363-A-1-B MSD		05/16/2012 18:35	1	ye16008.d	DB-1701-p 0.25(um)
680-79363-A-1-B MSD		05/16/2012 18:35	1	ye16008.d	CLP II 0.32(mm)
ZZZZZ		05/16/2012 18:44	1		DB-1701-p 0.25(um)
ZZZZZ		05/16/2012 18:44	1		CLP II 0.32(mm)
ZZZZZ		05/16/2012 18:53	1		DB-1701-p 0.25(um)
ZZZZZ		05/16/2012 18:53	1		CLP II 0.32(mm)
240-11217-6	DMW2S-051012	05/16/2012 19:02	1	ye16011.d	DB-1701-p 0.25(um)
240-11217-6	DMW2S-051012	05/16/2012 19:02	1	ye16011.d	CLP II 0.32(mm)
ZZZZZ		05/16/2012 19:11	1		DB-1701-p 0.25(um)
ZZZZZ		05/16/2012 19:11	1		CLP II 0.32(mm)
ZZZZZ		05/16/2012 19:20	1		DB-1701-p 0.25(um)
ZZZZZ		05/16/2012 19:20	1		CLP II 0.32(mm)
ZZZZZ		05/16/2012 19:29	1		DB-1701-p 0.25(um)
ZZZZZ		05/16/2012 19:29	1		CLP II 0.32(mm)
ZZZZZ		05/16/2012 19:38	1		DB-1701-p 0.25(um)
ZZZZZ		05/16/2012 19:38	1		CLP II 0.32(mm)
CCV 680-237954/15		05/16/2012 19:47	1	ye16016.d	DB-1701-p 0.25(um)
CCV 680-237954/15		05/16/2012 19:47	1	ye16016.d	CLP II 0.32(mm)
PIBLK 680-237954/16		05/16/2012 19:56	1	ye16017.d	DB-1701-p 0.25(um)
PIBLK 680-237954/16		05/16/2012 19:56	1	ye16017.d	CLP II 0.32(mm)

FORM VI
GC SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-11217-1 Analy Batch No.: 237317

SDG No.:

Instrument ID: SGY GC Column: DB-1701-p ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 05/10/2012 16:46 Calibration End Date: 05/10/2012 17:40 Calibration ID: 12066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-237317/7	ye10014.d
Level 2	IC 680-237317/6	ye10013.d
Level 3	IC 680-237317/5	ye10012.d
Level 4	IC 680-237317/4	ye10011.d
Level 5	IC 680-237317/3	ye10010.d
Level 6	IC 680-237317/2	ye10009.d
Level 7	IC 680-237317/1	ye10008.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochloroacetic acid	0.7131 0.5387	0.6209 0.4621	0.6557	0.5383	+++++	Qua	0.0003	1.5262	1.3681						0.9991		0.9900
Monobromoacetic acid	7.7858 5.5138	6.0435 5.1721	5.8732	5.3894	+++++	Lin	-0.007	5.1491							0.9991		0.9900
Dichloroacetic acid	14.130 7.9566	9.4190 7.1949	8.5020	7.8967	+++++	Qua	-0.003	0.1215	0.0050						0.9986		0.9900
Trichloroacetic acid	19.996 13.155	12.556 11.818	12.316	13.554	+++++	QuaF		0.0687	0.0027						0.9994		0.9900
Dibromoacetic acid	20.333 16.064	15.433 14.429	15.764	16.144	+++++	Ave		16.361				12.5		20.0			
2,3-Dibromopropionic acid	7.9318 6.7813	7.4801 +++++	7.2221	8.3447	+++++	Ave		7.5520				8.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-11217-1 Analy Batch No.: 237317

SDG No.:

Instrument ID: SGY GC Column: CLP II ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/10/2012 16:46 Calibration End Date: 05/10/2012 17:40 Calibration ID: 12067

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-237317/7	ye10014.d
Level 2	IC 680-237317/6	ye10013.d
Level 3	IC 680-237317/5	ye10012.d
Level 4	IC 680-237317/4	ye10011.d
Level 5	IC 680-237317/3	ye10010.d
Level 6	IC 680-237317/2	ye10009.d
Level 7	IC 680-237317/1	ye10008.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochloroacetic acid	0.5160 0.4202	0.4477 0.3812	0.4830	0.3960	+++++	Ave		0.4407				11.8		20.0			
Monobromoacetic acid	4.7077 3.5620	3.9440 3.2419	4.1118	3.3895	+++++	Qua	-0.001	0.2624	0.0286						0.9991		0.9900
Dichloroacetic acid	9.9550 6.1888	7.1505 5.9508	6.3587	6.1386	+++++	Lin	-0.003	5.9281							0.9987		0.9900
Trichloroacetic acid	15.648 10.711	10.303 9.8949	10.143	10.837	+++++	Qua	0.0017	0.0859	0.0030						0.9996		0.9900
Dibromoacetic acid	19.098 14.439	14.487 12.995	14.799	14.471	+++++	Qua	0.0017	0.0616	0.0023						0.9997		0.9900
2,3-Dibromopropionic acid	7.9813 6.9306	7.5964 +++++	7.4260	8.2684	+++++	Ave		7.6405				6.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCVIS 680-237954/2 Calibration Date: 05/16/2012 17:41

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: DB-1701-p ID: 0.25(um) Calib End Date: 05/10/2012 17:40

Lab File ID: ye16002.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Qua	0.5881	0.6279		0.614	0.500	22.9	30.0
Monobromoacetic acid	Lin	5.963	5.193		1.00	0.250	-2.1	30.0
Dichloroacetic acid	Qua	9.091	7.413		1.00	0.250	-5.6	30.0
Trichloroacetic acid	QuaF	13.90	12.24		1.00	0.250	-6.0	30.0
Dibromoacetic acid	Ave	16.36	15.32		1.00	0.250	-6.4	30.0
2,3-Dibromopropionic acid	Ave	7.552	6.513		0.0755	0.0875	-13.8	30.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCVIS 680-237954/2 Calibration Date: 05/16/2012 17:41

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: CLP II ID: 0.32(mm) Calib End Date: 05/10/2012 17:40

Lab File ID: ye16002.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Ave	0.4407	0.3152		2.00	0.500	-28.5	30.0
Monobromoacetic acid	Qua	3.826	2.642		1.00	0.250	-26.3	30.0
Dichloroacetic acid	Lin	6.849	7.295		1.00	0.250	21.0	30.0
Trichloroacetic acid	Qua	11.26	10.63		1.00	0.250	0.4	30.0
Dibromoacetic acid	Qua	15.05	14.35		1.00	0.250	1.0	30.0
2,3-Dibromopropionic acid	Ave	7.641	6.705		0.0768	0.0875	-12.2	30.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 680-237954/15 Calibration Date: 05/16/2012 19:47

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: DB-1701-p ID: 0.25(um) Calib End Date: 05/10/2012 17:40

Lab File ID: ye16016.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Qua	0.5881	0.6839		2.00	0.250	20.5	30.0
Monobromoacetic acid	Lin	5.963	5.557		1.00	0.125	2.0	30.0
Dichloroacetic acid	Qua	9.091	7.678		1.00	0.125	-7.7	30.0
Trichloroacetic acid	QuaF	13.90	12.13		1.00	0.125	-11.8	30.0
Dibromoacetic acid	Ave	16.36	15.79		1.00	0.125	-3.5	30.0
2,3-Dibromopropionic acid	Ave	7.552	6.095		0.0504	0.0625	-19.3	30.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Lab Sample ID: CCV 680-237954/15 Calibration Date: 05/16/2012 19:47

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: CLP II ID: 0.32(mm) Calib End Date: 05/10/2012 17:40

Lab File ID: ye16016.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Ave	0.4407	0.5219		2.00	0.250	18.4	30.0
Monobromoacetic acid	Qua	3.826	2.988		1.00	0.125	-19.6	30.0
Dichloroacetic acid	Lin	6.849	6.796		1.00	0.125	10.1	30.0
Trichloroacetic acid	Qua	11.26	9.794		1.00	0.125	-10.9	30.0
Dibromoacetic acid	Qua	15.05	14.15		1.00	0.125	-5.7	30.0
2,3-Dibromopropionic acid	Ave	7.641	6.006		0.0491	0.0625	-21.4	30.0

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Lab Sample ID: MB 680-237485/1-A

Matrix: Water Date Extracted: 05/16/2012 09:48

Lab File ID:(1) ye16003.d Lab File ID:(2) ye16003.d

Date Analyzed:(1) 05/16/2012 17:50 Date Analyzed:(2) 05/16/2012 17:50

Instrument ID:(1) SGY Instrument ID:(2) SGY

GC Column:(1) DB-1701-p ID: 0.25(um) GC Column:(2) CLP II ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-237485/2-A	05/16/2012 17:59	05/16/2012 17:59
	680-79363-A-1-A MS	05/16/2012 18:26	05/16/2012 18:26
	680-79363-A-1-B MSD	05/16/2012 18:35	05/16/2012 18:35
DMW2S-051012	240-11217-6	05/16/2012 19:02	05/16/2012 19:02

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-237485/1-A

Matrix: Water | Lab File ID: ye16003.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: 552.2 | Date Extracted: 05/16/2012 09:48

Sample wt/vol: 40(mL) | Date Analyzed: 05/16/2012 17:50

Con. Extract Vol.: 4(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: DB-1701-p ID: 0.25(um)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid	63	X	70-130

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-237485/1-A

Matrix: Water | Lab File ID: ye16003.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: 552.2 | Date Extracted: 05/16/2012 09:48

Sample wt/vol: 40(mL) | Date Analyzed: 05/16/2012 17:50

Con. Extract Vol.: 4(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP II ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid	64	X	70-130

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Client Sample ID: Lab Sample ID: PIBLK 680-237954/1

Matrix: Water Lab File ID: ye16001.d

Analysis Method: 552.2 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: Date Analyzed: 05/16/2012 17:32

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: DB-1701-p ID: 0.25(um)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Client Sample ID: Lab Sample ID: PIBLK 680-237954/1

Matrix: Water Lab File ID: ye16001.d

Analysis Method: 552.2 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: Date Analyzed: 05/16/2012 17:32

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: CLP II ID: 0.32(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	*Monochloroacetic acid*	*2.0*	*U*	*2.0*	*0.40*
79-08-3	*Monobromoacetic acid*	*1.0*	*U*	*1.0*	*0.75*
79-43-6	*Dichloroacetic acid*	*1.0*	*U*	*1.0*	*0.98*
76-03-9	*Trichloroacetic acid*	*1.0*	*U*	*1.0*	*0.38*
631-64-1	*Dibromoacetic acid*	*1.0*	*U*	*1.0*	*0.38*

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: PIBLK 680-237954/16

Matrix: Water | Lab File ID: ye16017.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: | Date Analyzed: 05/16/2012 19:56

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: DB-1701-p ID: 0.25(um)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 | Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11217-1

SDG No.:

Client Sample ID: | Lab Sample ID: PIBLK 680-237954/16

Matrix: Water | Lab File ID: ye16017.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: | Date Analyzed: 05/16/2012 19:56

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP II ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 237954 | Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	*Monochloroacetic acid*	*2.0*	*U*	*2.0*	*0.40*
79-08-3	*Monobromoacetic acid*	*1.0*	*U*	*1.0*	*0.75*
79-43-6	*Dichloroacetic acid*	*1.0*	*U*	*1.0*	*0.98*
76-03-9	*Trichloroacetic acid*	*1.0*	*U*	*1.0*	*0.38*
631-64-1	*Dibromoacetic acid*	*1.0*	*U*	*1.0*	*0.38*

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM II
GC SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-1701-p ID: 0.25 (um) GC Column (2): CLP II ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	23DPA1 #	23DPA2 #
DMW2S-051012	240-11217-6	92	86
	MB 680-237485/1-A	63 X	64 X
	LCS 680-237485/2-A	81	83
	680-79363-A-1-A MS	92	89
	680-79363-A-1-B MSD	77	77

	QC LIMITS
23DPA = 2,3-Dibromopropionic acid	70-130

Column to be used to flag recovery values

FORM II 552.2

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ye16004.d

Lab ID: LCS 680-237485/2-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Monochloroacetic acid	25.0	30.8	123	70-130	
Monobromoacetic acid	12.5	12.8	102	70-130	
Dichloroacetic acid	12.5	14.3	115	70-130	
Trichloroacetic acid	12.5	11.6	93	70-130	
Dibromoacetic acid	12.5	12.3	99	70-130	

Column to be used to flag recovery and RPD values

FORM III 552.2

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ye16007.d

Lab ID: 680-79363-A-1-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Monochloroacetic acid	25.0	2.0 U	30.2	121	70-130	
Monobromoacetic acid	12.5	1.0 U	12.7	102	70-130	
Dichloroacetic acid	12.5	1.0 U	13.1	105	70-130	
Trichloroacetic acid	12.5	1.0 U	12.6	101	70-130	
Dibromoacetic acid	12.5	1.0 U	12.8	102	70-130	

Column to be used to flag recovery and RPD values

FORM III 552.2

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ye16008.d

Lab ID: 680-79363-A-1-B MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Monochloroacetic acid	25.0	25.6	102	16	30	70-130	
Monobromoacetic acid	12.5	12.0	96	5	30	70-130	
Dichloroacetic acid	12.5	12.7	101	3	30	70-130	
Trichloroacetic acid	12.5	11.3	90	11	30	70-130	
Dibromoacetic acid	12.5	11.7	94	9	30	70-130	

Column to be used to flag recovery and RPD values

FORM III 552.2

FORM VIII

GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Sample No.: CCVIS 680-237954/2 Date Analyzed: 05/16/2012 17:41

Instrument ID: SGY GC Column: DB-1701-p ID: 0.25(um)

Lab File ID (Standard): ye16002.d Heated Purge: (Y/N) N

Calibration ID: 12066

		TCP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		25818708	3.64				
UPPER LIMIT							
LOWER LIMIT							
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-237485/1-A		25172820	3.64				
LCS 680-237485/2-A		26049591	3.64				
680-79363-A-1-A MS		25860394	3.64				
680-79363-A-1-B MSD		26125340	3.64				
240-11217-6	DMW2S-051012	26033123	3.64				
CCV 680-237954/15		26181162	3.64				

TCP = 1,2,3-Trichloropropane

Area Limit = 70%-130% of internal standard area

Column used to flag values outside QC limits

FORM VIII 552.2

FORM VIII

GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Sample No.: CCVIS 680-237954/2 Date Analyzed: 05/16/2012 17:41

Instrument ID: SGY GC Column: CLP II ID: 0.32(mm)

Lab File ID (Standard): ye16002.d Heated Purge: (Y/N) N

Calibration ID: 12067

		TCP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		26706064	3.48				
UPPER LIMIT							
LOWER LIMIT							
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-237485/1-A		25848847	3.48				
LCS 680-237485/2-A		26786188	3.48				
680-79363-A-1-A MS		27569550	3.48				
680-79363-A-1-B MSD		26995251	3.48				
240-11217-6	DMW2S-051012	27723076	3.48				
CCV 680-237954/15		27478928	3.48				

TCP = 1,2,3-Trichloropropane

Area Limit = 70%-130% of internal standard area

Column used to flag values outside QC limits

FORM VIII 552.2

GC SEMI VOA BATCH WORKSHEET

Lab Name: TestAmerica Savannah Job No.: 240-11217-1

SDG No.:

Batch Number: 237485 Batch Start Date: 05/16/12 09:48 Batch Analyst: Vasquez, Celia

Batch Method: 552.2 Batch End Date: 05/16/12 17:12

Lab Sample ID	Client Sample ID	Method Chain	Basis	Initial pH	AdjustedpH	InitialAmount	FinalAmount	552 Sur DL 00115	552NEWLCS 00003
MB 680-237485/1		552.2, 552.2		7	<1	40 mL	4 mL	25 uL	
LCS 680-237485/2		552.2, 552.2		7	<1	40 mL	4 mL	25 uL	50 uL
680-79363-A-1 MS		552.2, 552.2	T	7	<1	40 mL	4 mL	25 uL	50 uL
680-79363-A-1 MSD		552.2, 552.2	T	7	<1	40 mL	4 mL	25 uL	50 uL
240-11217-G-6	DMW2S-051012	552.2, 552.2	T	5.5	<1	40 mL	4 mL	25 uL	

Batch Notes	
10% H2SO4 in MeOH ID	2656129
Acid used for pH adjust Lot #	2653547
Copper II Sulfate Pentahydrate ID	2606476
Final Temperature	50 Degrees C
Inital Temperature	50 Degrees C
Methylation End Time	2:42pm
Methylation Start Time	12:42 om
MTBE Lot #	2647404
Na2SO4 Lot Number	2649453
Sodium Bicarbonate ID	2619470
Person's name who witnessed reagent drop	Drew Worsley
ID number of the thermometer	SGWB1

Basis	Basis Description
T	Total/NA

Case Narrative

TestAmerica West Sacramento Project Number G2E120412

General Comments
Sample 240-11217-6 was received but was not listed on the chain of custody. This sample was analyzed by method 6850.

WATER, 6850, Perchlorate
Sample(s): 1, 2, 3, 3, 3, 4, 5, 6
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTMH41AC
SMCS: MTMH41AD

WATER, 8330/8330A, RDX
Sample(s): 1
There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

There were no other anomalies associated with this project.

Sample Summary

TestAmerica West Sacramento Project Number G2E120412

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MTH86	1	MW 18S-051012	5/10/2012 10:45 AM	5/12/2012 09:20 AM
MTH87	2	DMW10S-051012	5/10/2012 11:04 AM	5/12/2012 09:20 AM
MTH88	3	MW31D-051012	5/10/2012 12:42 PM	5/12/2012 09:20 AM
MTH89	4	MW18I-051012	5/10/2012 01:00 PM	5/12/2012 09:20 AM
MTH9A	5	DMW1S-051012	5/10/2012 03:15 PM	5/12/2012 09:20 AM
MTLNM	6	DMW2S-051012	5/10/2012 02:25 PM	5/12/2012 09:20 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

G2E120412

PARAMETER	ANALYTICAL METHOD
Nitroaromatics and Nitramines by HPLC	SW846 8330/8330A
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

P.68

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
25MAY12-perc-003.d	Blank No IS	P2-A5		Sample	5/25/2012 16:21
25MAY12-perc-004.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/25/2012 16:37
25MAY12-perc-005.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL Ratio failed, not used.	P2-B2	1	Sample	5/25/2012 16:53
25MAY12-perc-006.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/25/2012 17:10
25MAY12-perc-007.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/25/2012 17:26
25MAY12-perc-008.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/25/2012 17:42
25MAY12-perc-009.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/25/2012 17:58
25MAY12-perc-010.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/25/2012 18:14
25MAY12-perc-011.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/25/2012 18:31
25MAY12-perc-012.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/25/2012 18:47
25MAY12-perc-013.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/25/2012 19:03
25MAY12-perc-014.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/25/2012 19:19
25MAY12-perc-015.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/25/2012 19:35
25MAY12-perc-016.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/25/2012 19:52
25MAY12-perc-017.d	6850-L IDOC 5/21/12 JR IDOC-MB, 4.00mL/4.00mL	P1-A1		Sample	5/25/2012 20:08
25MAY12-perc-018.d	6850-L IDOC 5/21/12 JR IDOC-1, 4.00mL/4.00mL	P1-A2		Sample	5/25/2012 20:24
25MAY12-perc-019.d	6850-L IDOC 5/21/12 JR IDOC-2, 4.00mL/4.00mL	P1-A3		Sample	5/25/2012 20:40
25MAY12-perc-020.d	6850-L IDOC 5/21/12 JR IDOC-3, 4.00mL/4.00mL	P1-A4		Sample	5/25/2012 20:57
25MAY12-perc-021.d	6850-L IDOC 5/21/12 JR IDOC-4, 4.00mL/4.00mL	P1-A5		Sample	5/25/2012 21:13
25MAY12-perc-022.d	G2E240000-MB, 2145075, 4.00mL/4.00mL, 6850-DOD-L RX	P1-A6		Sample	5/25/2012 21:29
25MAY12-perc-023.d	G2E240000-LCS, 2145075, 4.00mL/4.00mL	P1-A7	LCS_0.5	QC	5/25/2012 21:45
25MAY12-perc-024.d	G2E240000-SMCS, 2145075, 4.00mL/4.00mL	P1-A8	LCS_0.5	QC	5/25/2012 22:02
25MAY12-perc-025.d	G2E020423-2, 2145075, 4.00mL/4.00mL	P1-A9		Sample	5/25/2012 22:18
25MAY12-perc-026.d	G2E020423-2MS, 2145075, 4.00mL/4.00mL	P1-B1	MS_0.5	QC	5/25/2012 22:34
25MAY12-perc-027.d	G2E020423-2SD, 2145075, 4.00mL/4.00mL	P1-B2	MS_0.5	QC	5/25/2012 22:50
25MAY12-perc-028.d	G2E020423-3, 2145075, 4.00mL/4.00mL	P1-B3		Sample	5/25/2012 23:06

5/29/12

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

P. 69

25MAY12-perc-029.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/25/2012 23:23
25MAY12-perc-030.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/25/2012 23:39
25MAY12-perc-031.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/25/2012 23:55
25MAY12-perc-032.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 00:11
25MAY12-perc-033.d	G2E170000-MB, 2138157, 4.00mL/4.00mL, 6850-L	P1-B4		Sample	5/26/2012 00:27
25MAY12-perc-034.d	G2E170000-LCS, 2138157, 4.00mL/4.00mL	P1-B5	LCS_5	QC	5/26/2012 00:44
25MAY12-perc-035.d	G2E170000-SMCS, 2138157, 4.00mL/4.00mL	P1-B6	LCS_5	QC	5/26/2012 01:00
25MAY12-perc-036.d	G2E120412-1, 2138157, 4.00mL/4.00mL	P1-B7		Sample	5/26/2012 01:16
25MAY12-perc-037.d	G2E120412-2, 2138157, 4.00mL/4.00mL	P1-B8		Sample	5/26/2012 01:32
25MAY12-perc-038.d	G2E120412-3, 2138157, 4.00mL/4.00mL	P1-B9		Sample	5/26/2012 01:49
25MAY12-perc-039.d	G2E120412-3MS, 2138157, 4.00mL/4.00mL	P1-C1	MS_5	QC	5/26/2012 02:05
25MAY12-perc-040.d	G2E120412-3SD, 2138157, 4.00mL/4.00mL	P1-C2	MS_5	QC	5/26/2012 02:21
25MAY12-perc-041.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/26/2012 02:37
25MAY12-perc-042.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 02:53
25MAY12-perc-043.d	G2E120412-4, 2138157, 4.00mL/4.00mL	P1-C3		Sample	5/26/2012 03:10
25MAY12-perc-044.d	G2E120412-5, 2138157, 4.00mL/4.00mL	P1-C4		Sample	5/26/2012 03:26
25MAY12-perc-045.d	G2E120412-6, 2138157, 4.00mL/4.00mL, Redo failed. RT.	P1-C5		Sample	5/26/2012 03:42
25MAY12-perc-046.d	G2E120413-1, 2138157, 4.00mL/4.00mL	P1-C6		Sample	5/26/2012 03:58
25MAY12-perc-047.d	G2E120413-2, 2138157, 4.00mL/4.00mL MS 5/29/12	P1-C7		Sample	5/26/2012 04:15
25MAY12-perc-048.d	G2E120413-3, 2138157, 4.00mL/4.00mL	P1-C8		Sample	5/26/2012 04:31
25MAY12-perc-049.d	G2E120413-4, 2138157, 4.00mL/4.00mL	P1-C9		Sample	5/26/2012 04:47
25MAY12-perc-050.d	G2E120413-5, 2138157, 4.00mL/4.00mL	P1-D1		Sample	5/26/2012 05:03
25MAY12-perc-051.d	G2E120413-6, 2138157, 4.00mL/4.00mL	P1-D2		Sample	5/26/2012 05:19
25MAY12-perc-052.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-C5	CCV4	QC	5/26/2012 05:36
25MAY12-perc-053.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/26/2012 05:52
25MAY12-perc-054.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 06:08
25MAY12-perc-055.d	G2E230000-MB, 2144091, 4.00mL/4.00mL, 6850-L	P1-D3		Sample	5/26/2012 06:24
25MAY12-perc-056.d	G2E230000-LCS, 2144091,4.00mL/4.00mL	P1-D4	LCS_5	QC	5/26/2012 06:40
25MAY12-perc-057.d	G2E230000-SMCS, 2144091, 4.00mL/4.00mL	P1-D5	LCS_5	QC	5/26/2012 06:57

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

25MAY12-perc-058.d	G2E150453-1, 2144091, 4.00mL/4.00mL	P1-D6		Sample	5/26/2012 07:13
25MAY12-perc-059.d	G2E150453-2, 2144091, 4.00mL/4.00mL	P1-D7		Sample	5/26/2012 07:29
25MAY12-perc-060.d	G2E150453-3, 2144091, 4.00mL/4.00mL	P1-D8		Sample	5/26/2012 07:45
25MAY12-perc-061.d	G2E150453-3MS, 2144091, 4.00mL/4.00mL	P1-D9	MS_5	QC	5/26/2012 08:02
25MAY12-perc-062.d	G2E150453-3SD, 2144091, 4.00mL/4.00mL	P1-E1	MS_5	QC	5/26/2012 08:18
25MAY12-perc-063.d	G2E150453-4, 2144091, 4.00mL/4.00mL	P1-E2		Sample	5/26/2012 08:34
25MAY12-perc-064.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/26/2012 08:50
25MAY12-perc-065.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 09:06
25MAY12-perc-066.d	G2E160436-1, 2144091, 4.00mL/4.00mL	P1-E3		Sample	5/26/2012 09:23
25MAY12-perc-067.d	G2E160436-2, 2144091, 4.00mL/4.00mL	P1-E4		Sample	5/26/2012 09:39
25MAY12-perc-068.d	G2E160436-3, 2144091, 4.00mL/4.00mL	P1-E5		Sample	5/26/2012 09:55
25MAY12-perc-069.d	G2E160436-4, 2144091, 4.00mL/4.00mL	P1-E6		Sample	5/26/2012 10:11
25MAY12-perc-070.d	G2E170442-1, 2144091, 4.00mL/4.00mL	P1-E7		Sample	5/26/2012 10:28
25MAY12-perc-071.d	G2E170442-2, 2144091, 4.00mL/4.00mL	P1-E8		Sample	5/26/2012 10:44
25MAY12-perc-072.d	G2E170442-3, 2144091, 4.00mL/4.00mL	P1-E9		Sample	5/26/2012 11:00
25MAY12-perc-073.d	G2E170442-4, 2144091, 4.00mL/4.00mL	P1-F1		Sample	5/26/2012 11:16
25MAY12-perc-074.d	G2E170442-5, 2144091, 4.00mL/4.00mL	P1-F2		Sample	5/26/2012 11:32
25MAY12-perc-075.d	G2E190412-1, 2144091, 4.00mL/4.00mL	P1-F3		Sample	5/26/2012 11:49
25MAY12-perc-076.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/26/2012 12:05
25MAY12-perc-077.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/26/2012 12:21
25MAY12-perc-078.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 12:37

TestAmerica West Sacramento (916) 373-5600 Page 2201 of 2448
06/01/2012 38 of 278

P1

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
29MAY12-perc-003.d	Blank No IS	P2-A5		Sample	5/29/2012 16:44
29MAY12-perc-004.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/29/2012 17:00
29MAY12-perc-005.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-B2	1	Calibration	5/29/2012 17:16
29MAY12-perc-006.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/29/2012 17:32
29MAY12-perc-007.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/29/2012 17:49
29MAY12-perc-008.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/29/2012 18:05
29MAY12-perc-009.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/29/2012 18:21
29MAY12-perc-010.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/29/2012 18:37
29MAY12-perc-011.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/29/2012 18:53
29MAY12-perc-012.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/29/2012 19:10
29MAY12-perc-013.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/29/2012 19:26
29MAY12-perc-014.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/29/2012 19:42
29MAY12-perc-015.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/29/2012 19:58
29MAY12-perc-016.d	G2E120412-6, 2138157, 4.00mL/4.00mL	P1-C5		Sample	5/29/2012 20:14
29MAY12-perc-017.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-C5	CCV4	QC	5/29/2012 20:31
29MAY12-perc-018.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/29/2012 20:47
29MAY12-perc-019.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/29/2012 21:03

TestAmerica West Sacramento (916) 373-5600
Page 2202 of 2448
06/01/2012 39 of 278

TestAmerica Inc.
Perchlorate-Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

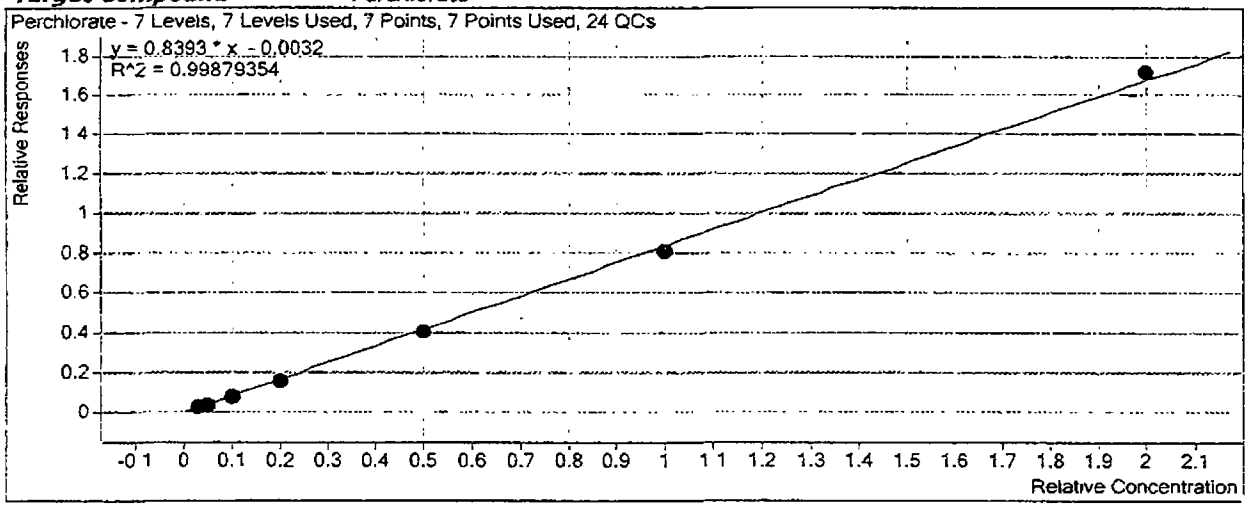
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml		
Analysis Time	5/29/2012 7:59 AM	**Analyst Name**	lores
Report Time	5/29/2012 8:01 AM	**Reporter Name**	lores
Last Calib Update	5/29/2012 7:59 AM	**Batch State**	Processed

Calibration Info Linear fit, Origin ignored, 1/x weighting

MB 5/29/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
25MAY12-perc-006.d	2	☑	3823	0.8051	0.3000
25MAY12-perc-007.d	3	☑	6403	0.7616	0.5000
25MAY12-perc-008.d	4	☑	14047	0.8196	1.0000
25MAY12-perc-009.d	5	☑	24455	0.7840	2.0000
25MAY12-perc-010.d	6	☑	59273	0.8073	5.0000
25MAY12-perc-011.d	7	☑	102959	0.8076	10.0000
25MAY12-perc-012.d	8	☑	205795	0.8610	20.0000
25MAY12-perc-015.d	CCV3	☑	5975	0.7954	0.5000
25MAY12-perc-030.d	CCV3	☑	5861	0.8218	0.5000
25MAY12-perc-053.d	CCV3	☑	6272	0.7910	0.5000
25MAY12-perc-077.d	CCV3	☑	6738	0.8300	0.5000
25MAY12-perc-052.d	CCV4	☑	9008	0.7626	1.0000
25MAY12-perc-029.d	CCV5	☑	15471	0.7561	2.0000
25MAY12-perc-076.d	CCV5	☑	22817	0.8138	2.0000
25MAY12-perc-041.d	CCV6	☑	49558	0.8003	5.0000
25MAY12-perc-064.d	CCV6	☑	53461	0.8091	5.0000
25MAY12-perc-014.d	ICV	☑	61203	0.8361	5.0000
25MAY12-perc-023.d	LCS_0.5	☑	4856	0.7518	0.5000
25MAY12-perc-024.d	LCS_0.5	☑	4953	0.7492	0.5000
25MAY12-perc-034.d	LCS_5	☑	54299	0.8227	5.0000
25MAY12-perc-035.d	LCS_5	☑	53161	0.7836	5.0000
25MAY12-perc-056.d	LCS_5	☑	51098	0.7965	5.0000
25MAY12-perc-057.d	LCS_5	☑	52798	0.7866	5.0000
25MAY12-perc-016.d	LODV	☑	1679	0.7790	0.1500
25MAY12-perc-031.d	LODV	☑	1601	0.7860	0.1500
25MAY12-perc-026.d	MS_0.5	☑	4067	0.8169	0.5000
25MAY12-perc-027.d	MS_0.5	☑	4063	0.8728	0.5000
25MAY12-perc-039.d	MS_5	☑	51669	0.8149	5.0000
25MAY12-perc-040.d	MS_5	☑	52050	0.8177	5.0000
25MAY12-perc-061.d	MS_5	☑	50720	0.8221	5.0000
25MAY12-perc-062.d	MS_5	☑	48757	0.8156	5.0000
25MAY12-perc-005.d	1	☑	2026	0.8773	0.1500

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate-(35Cl18O4)*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
25MAY12-perc-006.d	2	☑	158294	15829.3561	10.0000
25MAY12-perc-007.d	3	☑	168150	16814.9561	10.0000
25MAY12-perc-008.d	4	☑	171394	17139.3584	10.0000
25MAY12-perc-009.d	5	☑	155967	15596.7391	10.0000
25MAY12-perc-010.d	6	☑	146850	14684.9926	10.0000
25MAY12-perc-011.d	7	☑	127486	12748.6088	10.0000
25MAY12-perc-012.d	8	☑	119503	11950.3067	10.0000
25MAY12-perc-015.d	CCV3	☑	150243	15024.2837	10.0000
25MAY12-perc-030.d	CCV3	☑	142641	14264.0870	10.0000
25MAY12-perc-053.d	CCV3	☑	158587	15858.6795	10.0000
25MAY12-perc-077.d	CCV3	☑	162359	16235.8507	10.0000
25MAY12-perc-052.d	CCV4	☑	118132	11813.2347	10.0000
25MAY12-perc-029.d	CCV5	☑	102315	10231.4788	10.0000
25MAY12-perc-076.d	CCV5	☑	140178	14017.7676	10.0000
25MAY12-perc-041.d	CCV6	☑	123842	12384.2002	10.0000
25MAY12-perc-064.d	CCV6	☑	132155	13215.5129	10.0000
25MAY12-perc-014.d	ICV	☑	146394	14639.3669	10.0000
25MAY12-perc-023.d	LCS_0.5	☑	129192	12919.1605	10.0000
25MAY12-perc-024.d	LCS_0.5	☑	132235	13223.4827	10.0000
25MAY12-perc-034.d	LCS_5	☑	131996	13199.6171	10.0000
25MAY12-perc-035.d	LCS_5	☑	135682	13568.1666	10.0000
25MAY12-perc-056.d	LCS_5	☑	128303	12830.2872	10.0000
25MAY12-perc-057.d	LCS_5	☑	134239	13423.8776	10.0000
25MAY12-perc-016.d	LODV	☑	143673	14367.3070	10.0000
25MAY12-perc-031.d	LODV	☑	135814	13581.4040	10.0000
25MAY12-perc-026.d	MS_0.5	☑	99583	9958.2564	10.0000
25MAY12-perc-027.d	MS_0.5	☑	93105	9310.4673	10.0000
25MAY12-perc-039.d	MS_5	☑	126817	12681.7398	10.0000
25MAY12-perc-040.d	MS_5	☑	127317	12731.6938	10.0000
25MAY12-perc-061.d	MS_5	☑	123391	12339.0564	10.0000
25MAY12-perc-062.d	MS_5	☑	119558	11955.8221	10.0000
25MAY12-perc-005.d	1	☑	153921	15392.0503	10.0000

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

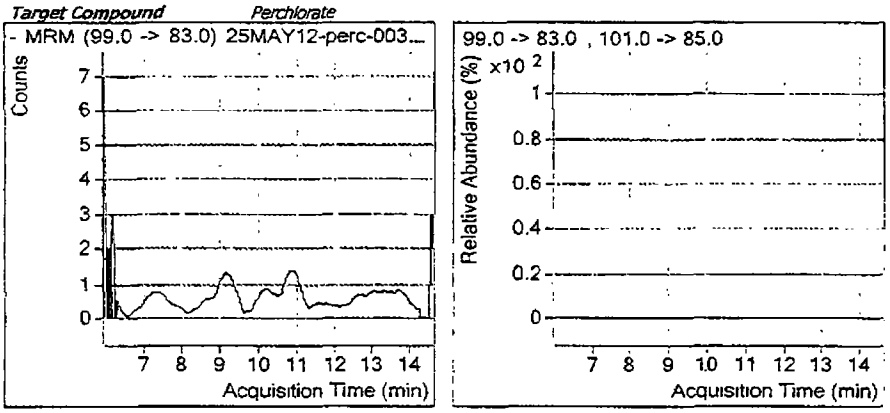
Acquisition Date - Time	5/25/2012 16:21
Analyst	lores
Data File	25MAY12-perc-003.d
Acquisition Method	PercMRM_2.m
Sample Name	Blank No IS
Sample Identification	BLANK
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-A5
Exp. Concentration	
Injection Volume	50

Perchlorate = ND

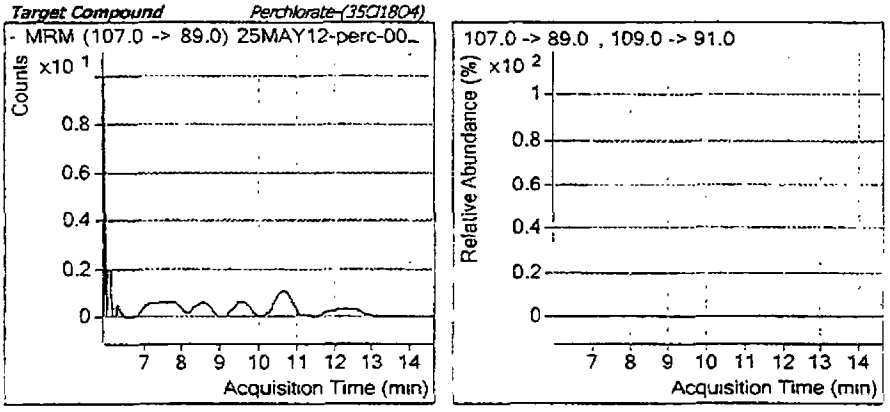
MR 5/29/12

Compound Graphics

Target Compound *Perchlorate*



Target Compound *Perchlorate-(35Cl18O4)*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 16:37
Analyst	lores
Data File	25MAY12-perc-004.d
Acquisition Method	PercMRM_2.m
Sample Name	LC68501L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

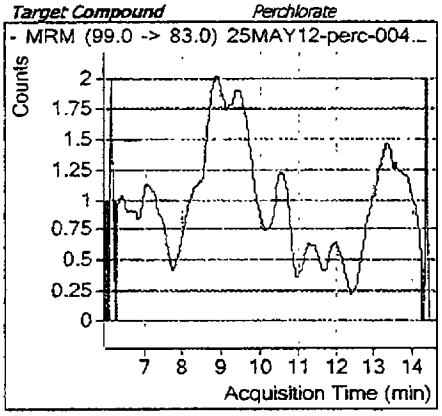
Quantitation Results

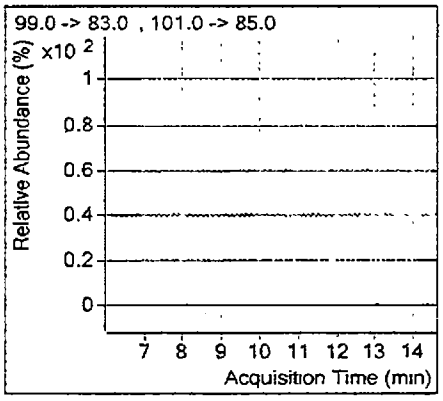
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.736	154142	107	89		Perchlorate = ND	1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	49927	109	91	3.09	2.30	3.80	In Control

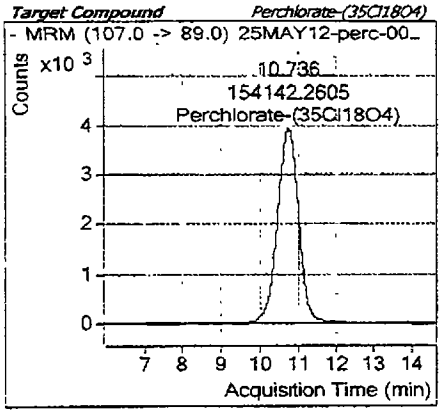
Compound Graphics

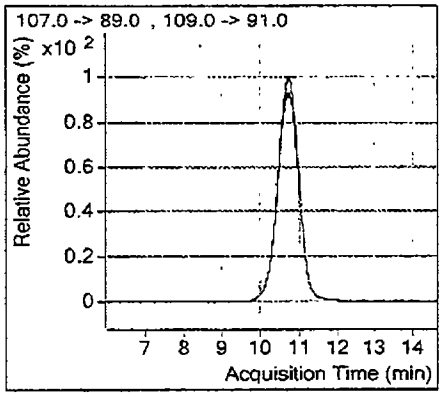
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 16:53
Analyst	lores
Data File	25MAY12-perc-005 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L1_00001 12LCMS0064, 0.15ng/mL
Sample Identification	Std001
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B2
Exp. Concentration	0.15
Injection Volume	50

Quantitation Results

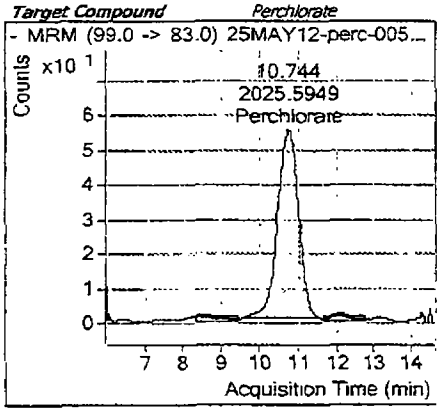
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.744	2026	99	83		0.19481	0.19481	1
Perchlorate-(35Cl18O4)	ISTD	10.726	153921	107	89				1

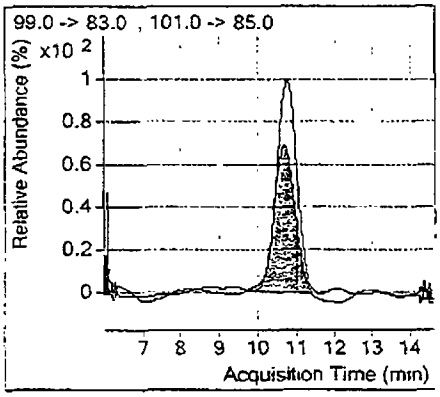
Ratio failed. not used.

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	490	101	85	4.14	2.30	3.80	High
Perchlorate-(35Cl18O4)	48367	109	91	3.18	2.30	3.80	In Control

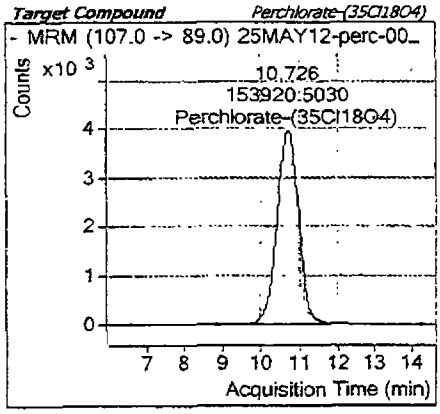
Compound Graphics

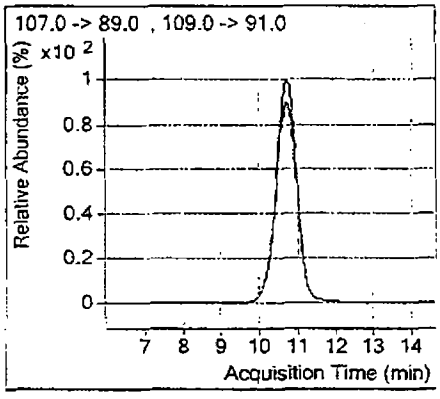
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/29/12

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17:10
Analyst	lores
Data File	25MAY12-perc-006.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L2_00001 12LCMS0065, 0 30ng/mL
Sample Identification	Std002
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B3
Exp. Concentration	0.30
Injection Volume	50

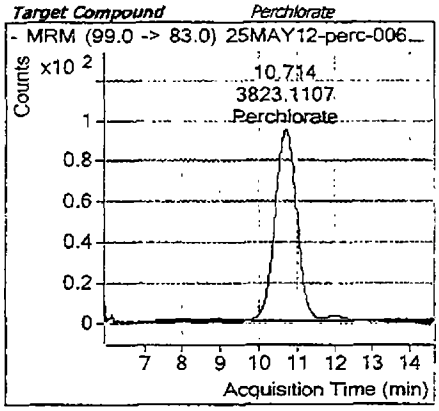
Quantitation Results

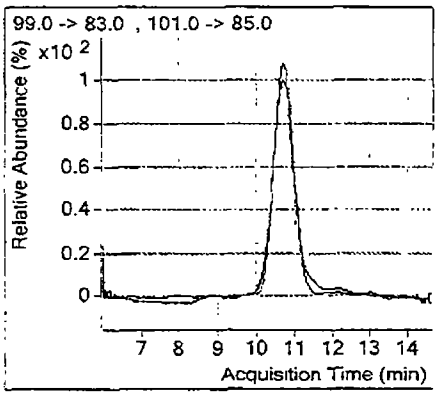
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.714	3823	99	83	0.32577	0.32577	1
Perchlorate-(35Cl18O4)	ISTD	10.719	158294	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1429	101	85	2.68	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	49706	109	91	3.18	2.30	3.80	In Control

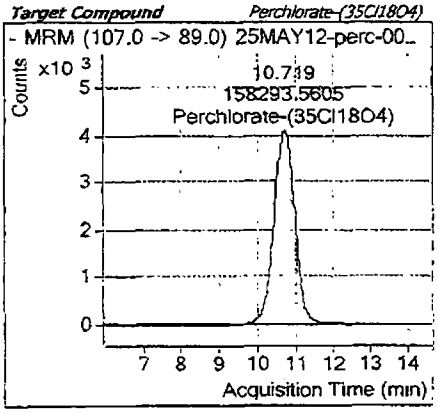
Compound Graphics

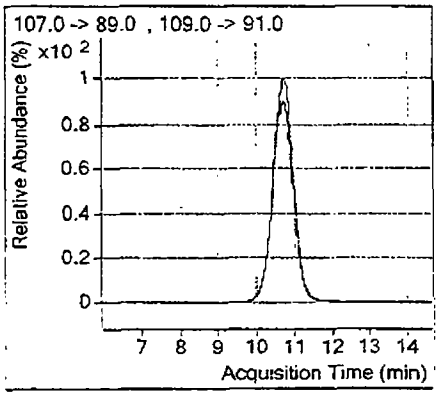
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MR 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17:26
Analyst	lores
Data File	25MAY12-perc-007.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	Std003
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B4
Exp. Concentration	0.50
Injection Volume	50

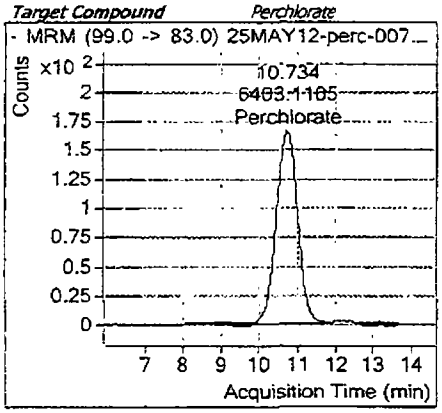
Quantitation Results

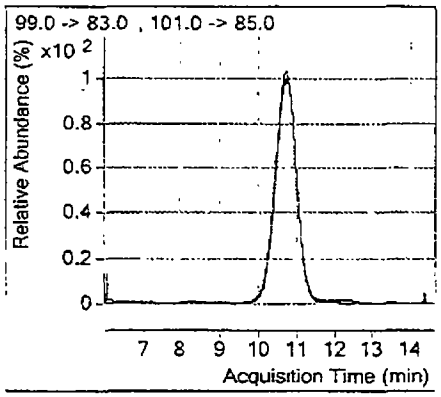
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.734	6403	99	83	0.49171	0.49171	1
Perchlorate-(35Cl18O4)	ISTD	10.712	168150	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2313	101	85	2.77	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	52058	109	91	3.23	2.30	3.80	In Control

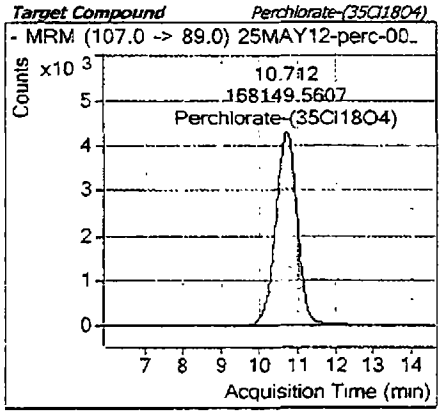
Compound Graphics

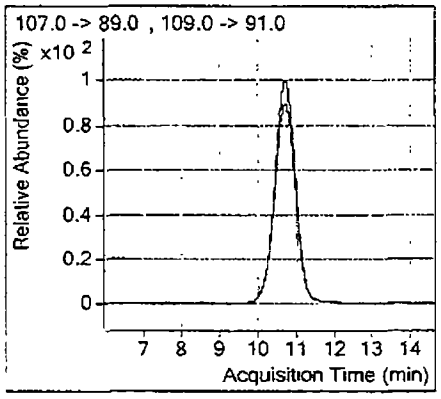
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/29/12

TestAmerica Inc.

Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17:42
Analyst	lores
Data File	25MAY12-perc-008 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L4_00001 12LCMS0067, 1.0ng/mL
Sample Identification	Std004
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B5
Exp. Concentration	1.00
Injection Volume	50

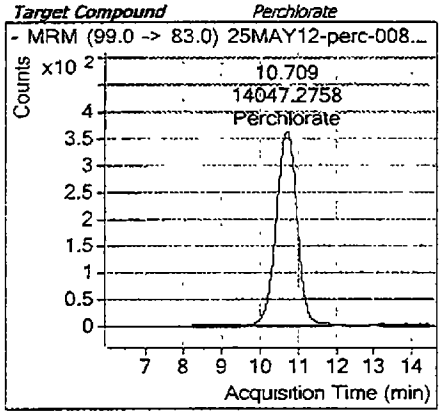
Quantitation Results

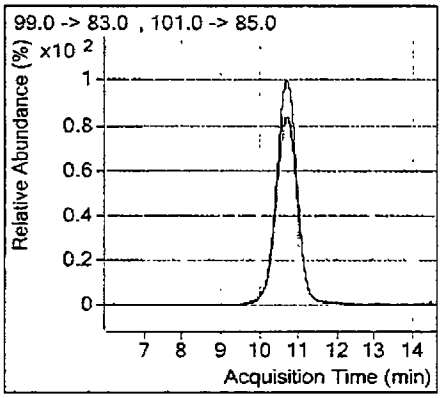
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.709	14047	99	83	1.01449	1.01449	1
Perchlorate-(35Cl18O4)	ISTD	10.702	171394	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	4226	101	85	3.32	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	53101	109	91	3.23	2.30	3.80	In Control

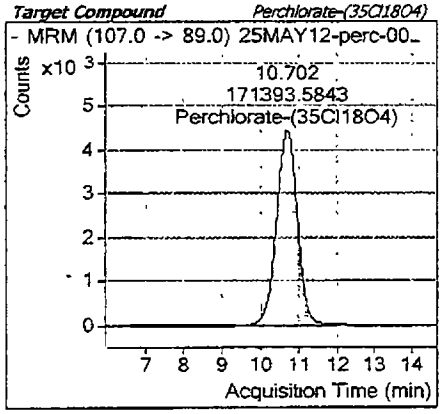
Compound Graphics

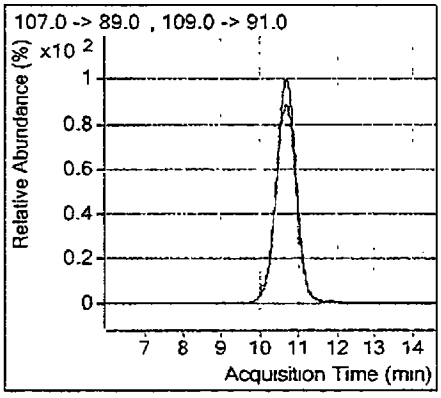
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17:58
Analyst	lores
Data File	25MAY12-perc-009.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	Std005
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B6
Exp. Concentration	2.00
Injection Volume	50

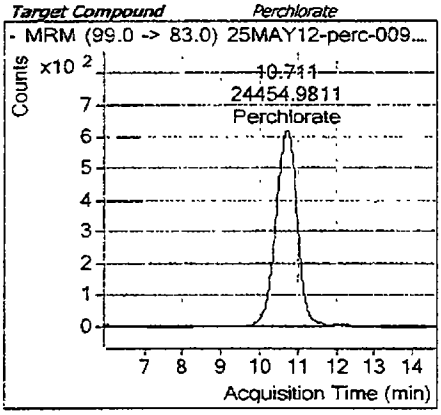
Quantitation Results

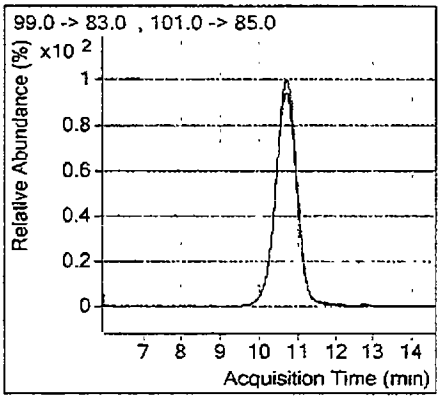
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.711	24455	99	83	1.90610	1.90610	1
Perchlorate-(35Cl18O4)	ISTD	10.698	155967	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8119	101	85	3.01	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	49426	109	91	3.16	2.30	3.80	In Control

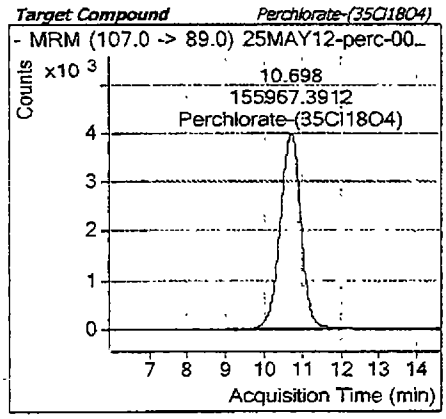
Compound Graphics

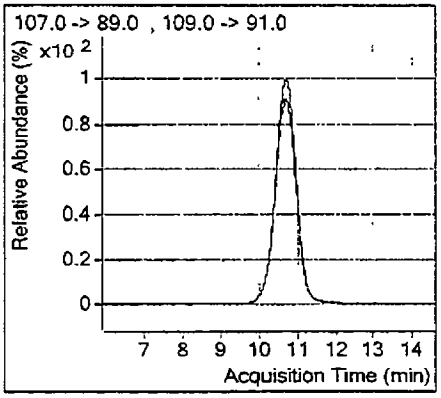
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 18:14
Analyst	lores
Data File	25MAY12-perc-010.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5.0ng/mL
Sample Identification	Std006
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B7
Exp. Concentration	5.00
Injection Volume	50

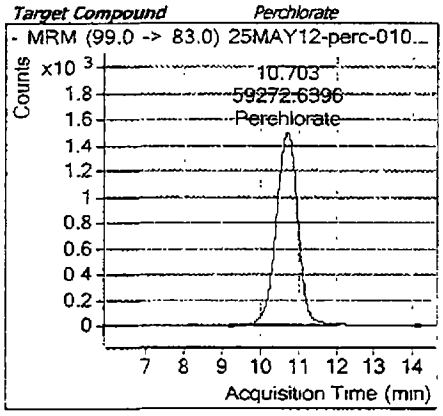
Quantitation Results

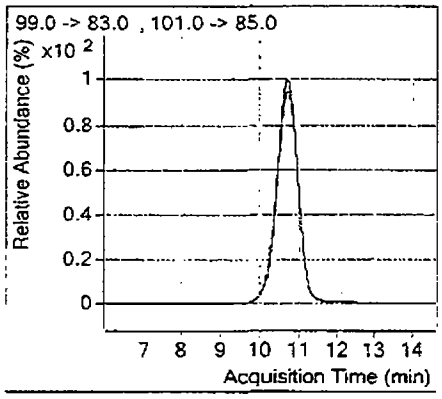
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.703	59273	99	83	4.84687	4.84687	1
Perchlorate-(35Cl18O4)	ISTD	10 692	146850	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19542	101	85	3.03	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	45952	109	91	3.20	2 30	3.80	In Control

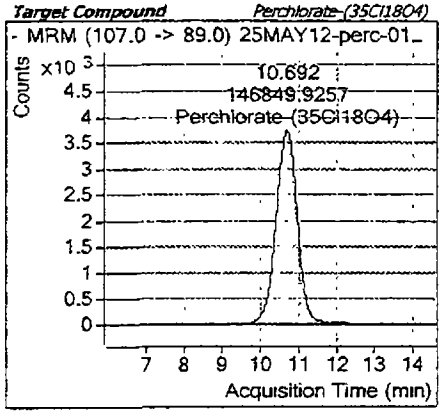
Compound Graphics

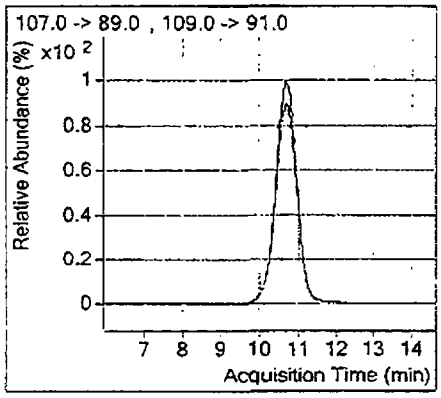
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 18:31
Analyst	lores
Data File	25MAY12-perc-011.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L7_00001 12LCMS0070, 10ng/mL
Sample Identification	Std007
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B8
Exp. Concentration	10.00
Injection Volume	50

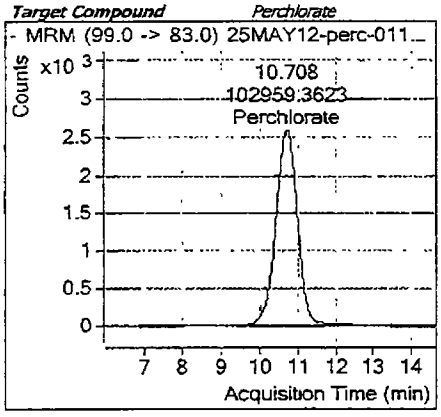
Quantitation Results

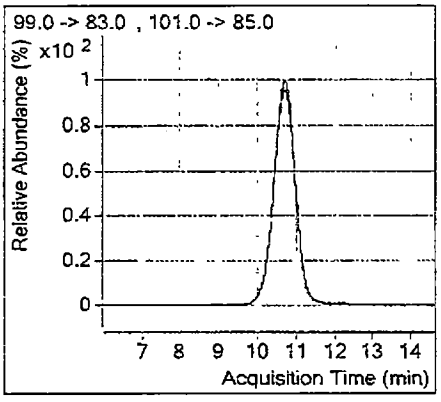
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.708	102959	99	83	9.65998	9.65998	1
Perchlorate-(35Cl18O4)	ISTD	10.697	127486	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	34363	101	85	3.00	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	40228	109	91	3.17	2.30	3.80	In Control

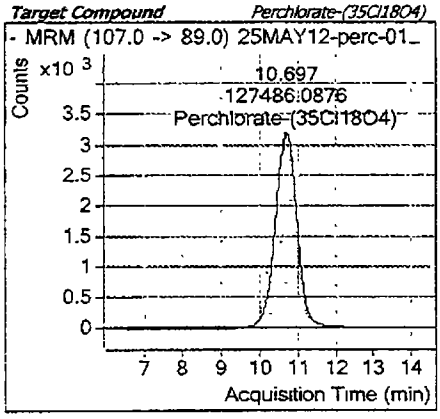
Compound Graphics

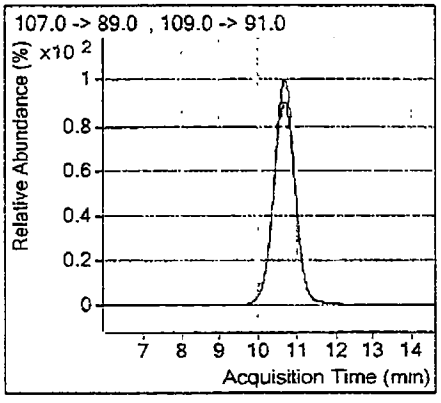
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 18:47
Analyst	lores
Data File	25MAY12-perc-012 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L8_00001 12LCMS0071, 20ng/mL
Sample Identification	Std008
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B9
Exp. Concentration	20.00
Injection Volume	50

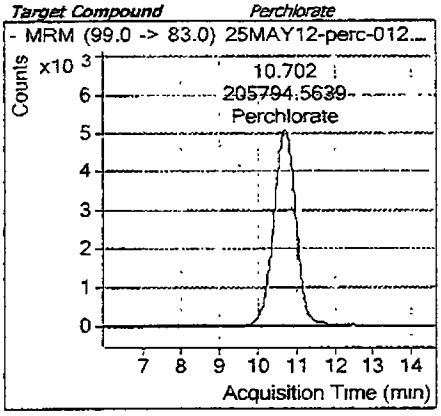
Quantitation Results

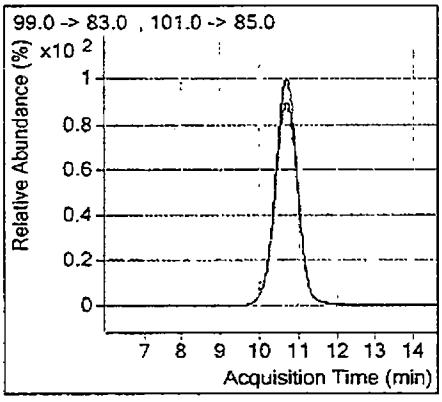
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.702	205795	99	83	20.55508	20.55508	1
Perchlorate-(35Cl18O4)	ISTD	10.694	119503	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	65190	101	85	3.16	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	39283	109	91	3.04	2.30	3.80	In Control

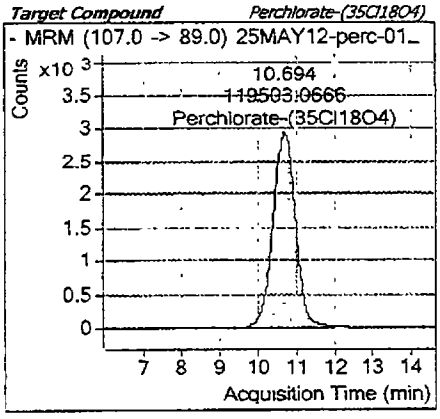
Compound Graphics

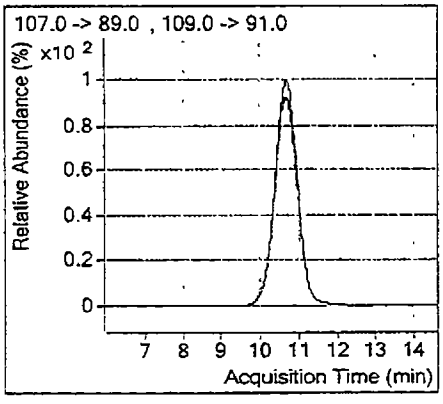
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 19:03
Analyst	lores
Data File	25MAY12-perc-013.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

Quantitation Results

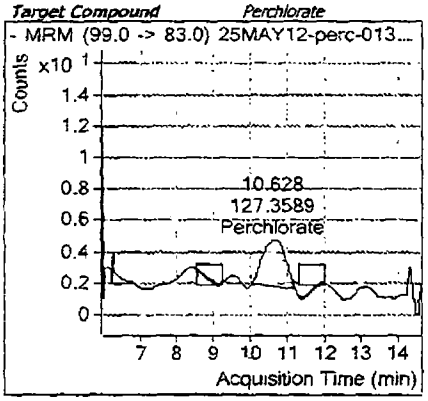
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.628	127	99	83	0.04789	0.04789	1
Perchlorate-(35Cl18O4)	ISTD	10.697	153753	107	89			1

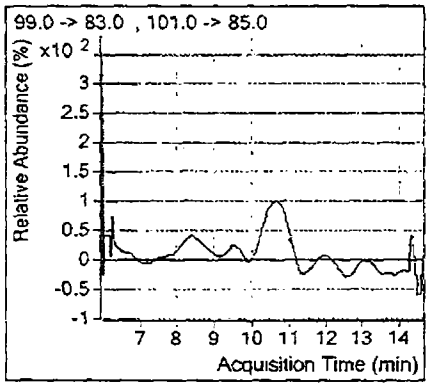
Result is < MDL => ND

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	49094	109	91	3.13	2.30	3.80	In Control

Compound Graphics

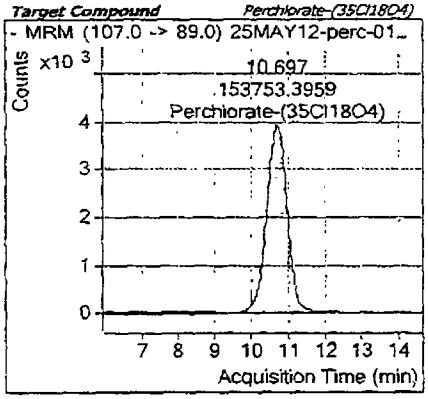
Target Compound *Perchlorate*

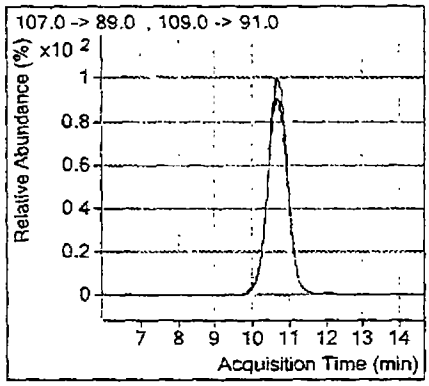




mr 5/29/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 19:19
Analyst	lores
Data File	25MAY12-perc-014.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850IC_00001 12LCMS0073, 5.0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5 00
Injection Volume	50

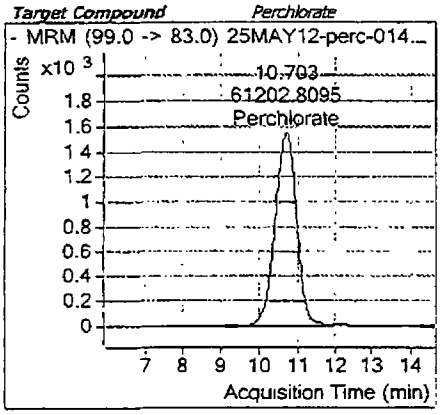
Quantitation Results

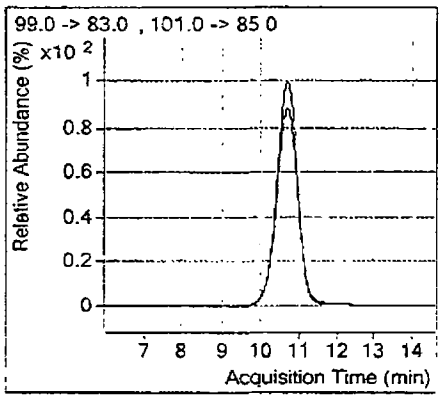
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10 703	61203	99	83	**5.01894**	**5.01894**	1
Perchlorate-(35Cl18O4)	ISTD	10.693	146394	107	89			1
							0.4 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	18751	101	85	3.26	2.30	3 80	In Control
Perchlorate-(35Cl18O4)	43991	109	91	3.33	2.30	3.80	In Control

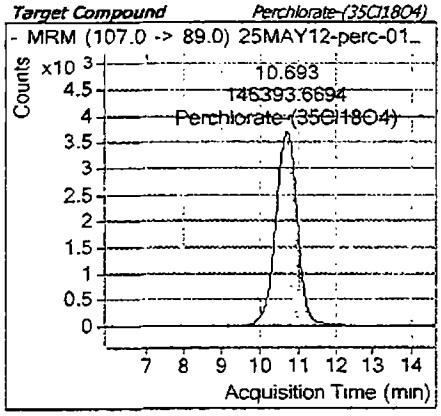
Compound Graphics

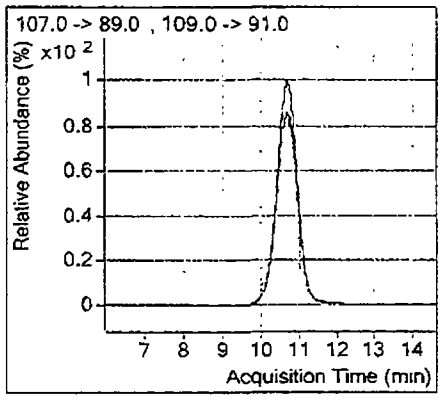
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MS 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

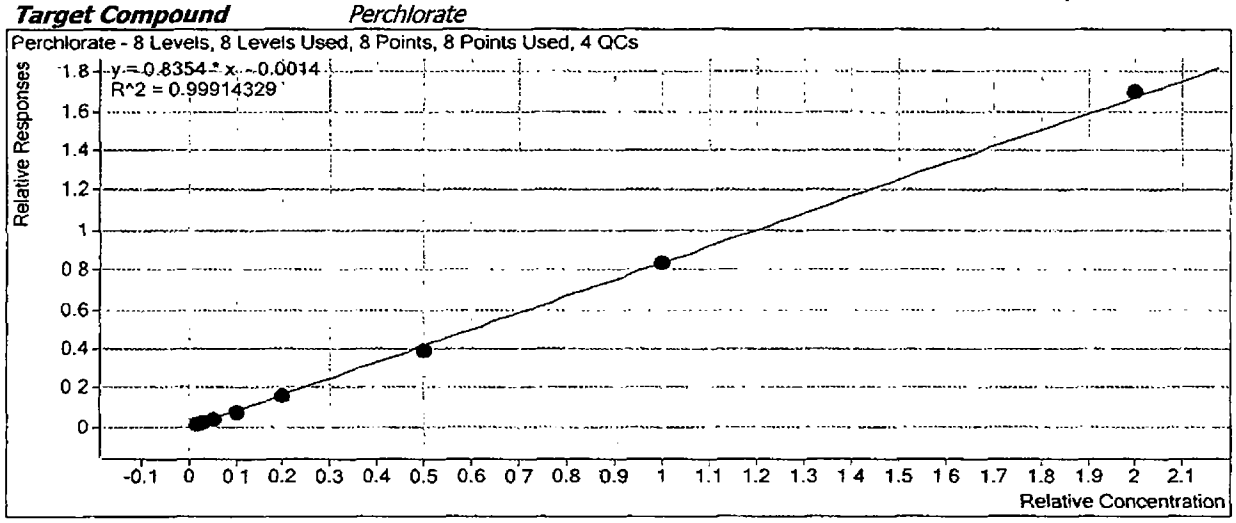
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml		
Analysis Time	5/30/2012 8:11 AM	**Analyst Name**	lores
Report Time	5/30/2012 8:12 AM	**Reporter Name**	lores
Last Calib Update	5/30/2012 8:11 AM	**Batch State**	Processed

Calibration Info **Linear fit, Origin ignored, 1/x weighting**

mr 5/30/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
29MAY12-perc-005.d	1	☑	2027	0.8191	0.1500
29MAY12-perc-006.d	2	☑	4017	0.7943	0.3000
29MAY12-perc-007.d	3	☑	7566	0.8199	0.5000
29MAY12-perc-008.d	4	☑	15315	0.7811	1.0000
29MAY12-perc-009.d	5	☑	26478	0.7992	2.0000
29MAY12-perc-010.d	6	☑	67336	0.7854	5.0000
29MAY12-perc-011.d	7	☑	124758	0.8332	10.0000
29MAY12-perc-012.d	8	☑	240084	0.8506	20.0000
29MAY12-perc-015.d	CCV3	☑	6617	0.7892	0.5000
29MAY12-perc-018.d	CCV3	☑	6520	0.7803	0.5000
29MAY12-perc-017.d	CCV4	☑	9803	0.7576	1.0000
29MAY12-perc-014.d	ICV	☑	67279	0.8219	5.0000

Target Compound	*Perchlorate-(35Cl18O4)*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
29MAY12-perc-005.d	1	☑	164963	16496.3386	10.0000
29MAY12-perc-006.d	2	☑	168577	16857.7165	10.0000
29MAY12-perc-007.d	3	☑	184537	18453.7445	10.0000
29MAY12-perc-008.d	4	☑	196073	19607.3021	10.0000
29MAY12-perc-009.d	5	☑	165658	16565.7650	10.0000
29MAY12-perc-010.d	6	☑	171477	17147.6766	10.0000
29MAY12-perc-011.d	7	☑	149730	14972.9907	10.0000
29MAY12-perc-012.d	8	☑	141122	14112.2098	10.0000
29MAY12-perc-015.d	CCV3	☑	167690	16769.0128	10.0000
29MAY12-perc-018.d	CCV3	☑	167116	16711.6180	10.0000
29MAY12-perc-017.d	CCV4	☑	129406	12940.5688	10.0000
29MAY12-perc-014.d	ICV	☑	163706	16370.6167	10.0000

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch xml

Analysis Information

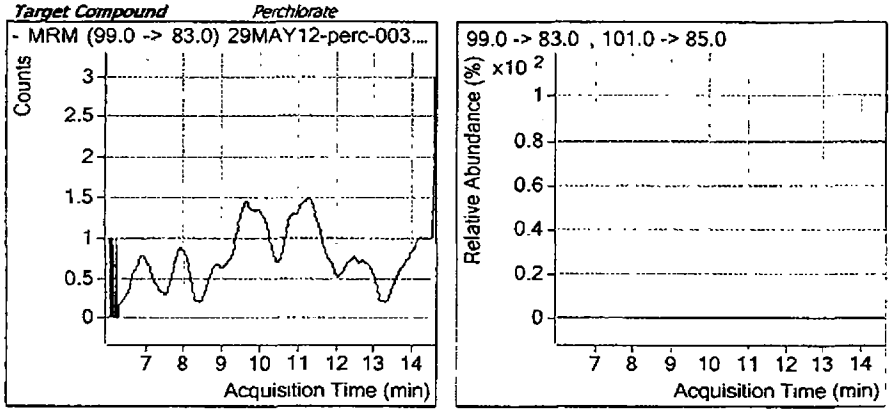
Acquisition Date - Time	5/29/2012 16:44
Analyst	lores
Data File	29MAY12-perc-003.d
Acquisition Method	PercMRM_2.m
Sample Name	Blank No IS
Sample Identification	BLANK
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coli=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-A5
Exp. Concentration	
Injection Volume	50

Perchlorate = ND

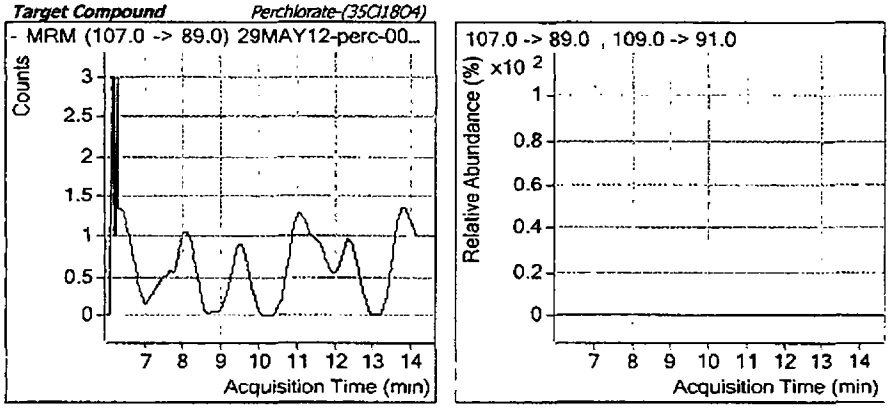
mr 5/30/12

Compound Graphics

Target Compound *Perchlorate*



Target Compound *Perchlorate-(35Cl18O4)*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 17:00
Analyst	lores
Data File	29MAY12-perc-004 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Colt=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

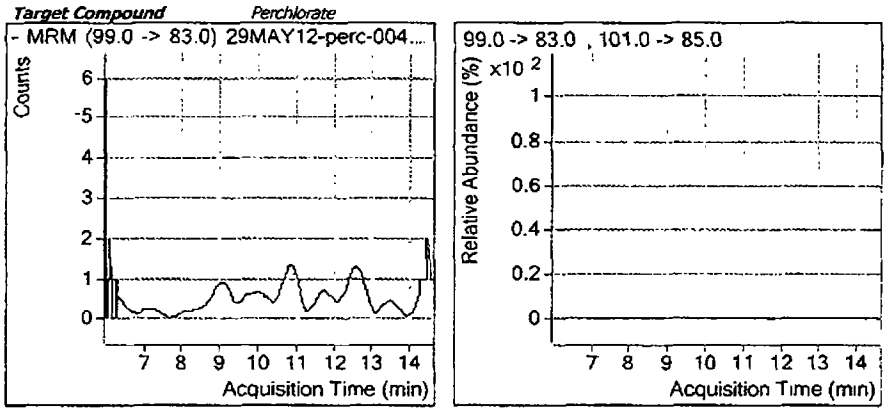
Quantitation Results

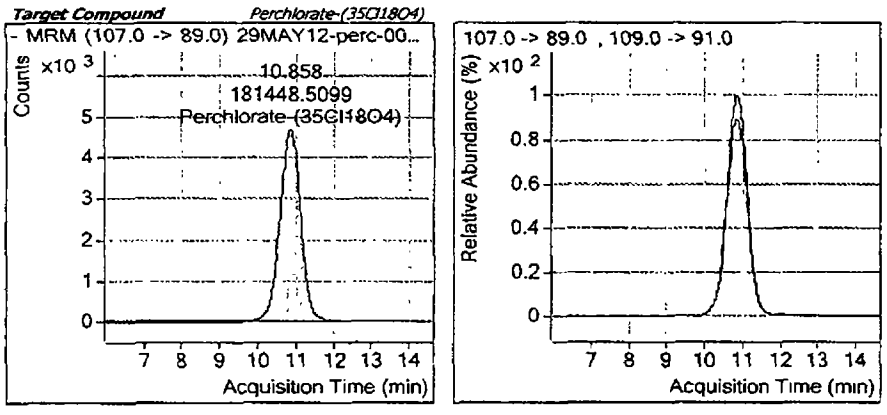
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.858	181449	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	56983	109	91	3.18	2.30	3.80	In Control

Compound Graphics

ND 5/30/12





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 17:16
Analyst	lores
Data File	29MAY12-perc-005.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L1_00001 12LCMS0064, 0.15ng/mL
Sample Identification	Std001
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B2
Exp. Concentration	0.15
Injection Volume	50

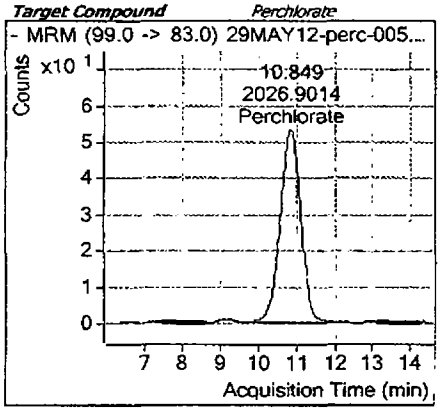
Quantitation Results

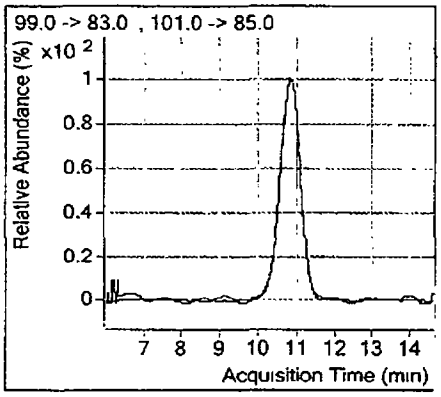
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.849	2027	99	83	**0.16438**	**0.16438**	1
Perchlorate-(35Cl18O4)	ISTD	10.844	164963	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	701	101	85	2.89	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	51794	109	91	3.18	2.30	3.80	In Control

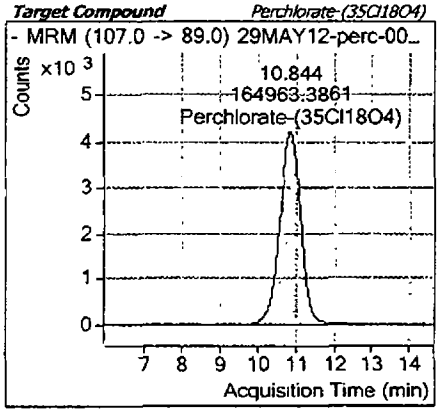
Compound Graphics

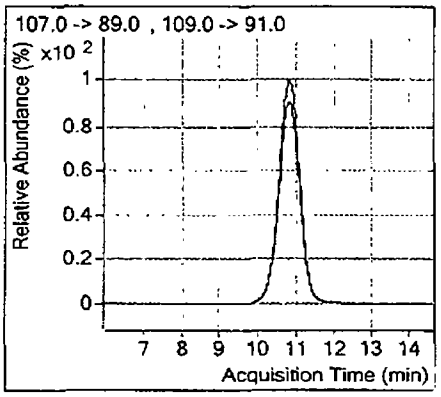
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





ms 5/30/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 17:32
Analyst	lores
Data File	29MAY12-perc-006.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L2_00001 12LCMS0065, 0 30ng/mL
Sample Identification	Std002
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B3
Exp. Concentration	0 30
Injection Volume	50

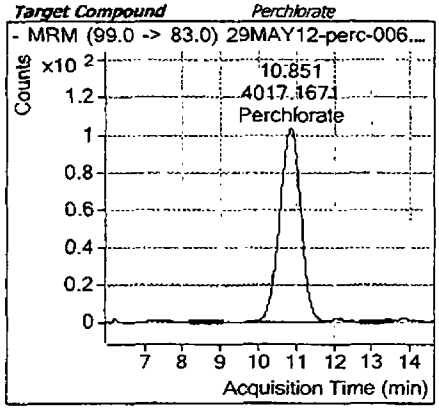
Quantitation Results

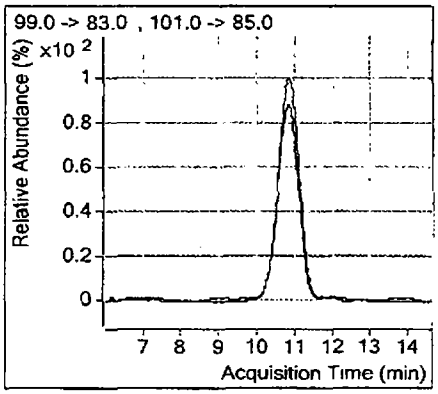
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.851	4017	99	83	0.30255	0.30255	1
Perchlorate-(35Cl18O4)	ISTD	10 838	168577	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1272	101	85	3.16	2.30	3 80	In Control
Perchlorate-(35Cl18O4)	52467	109	91	3 21	2 30	3.80	In Control

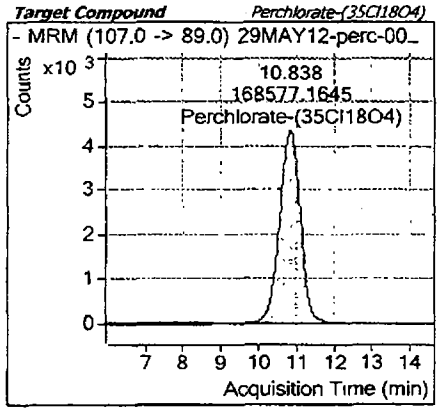
Compound Graphics

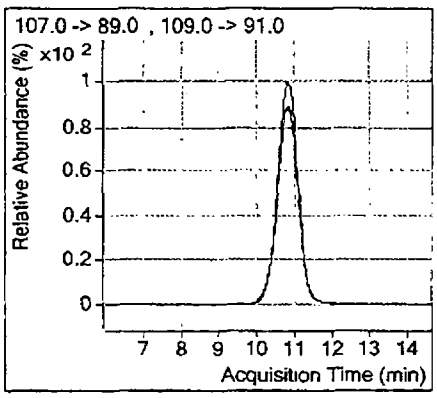
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/30/12

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 17:49
Analyst	lores
Data File	29MAY12-perc-007.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	Std003
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55- Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B4
Exp. Concentration	0.50
Injection Volume	50

Quantitation Results

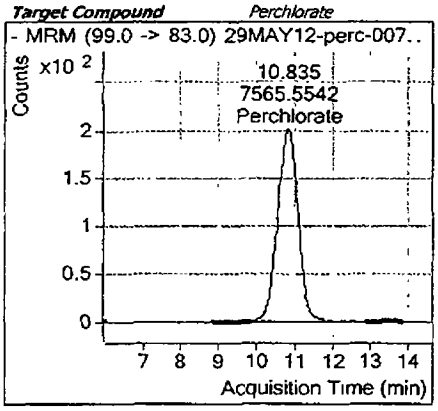
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.835	7566	99	83	0.50806	0.50806	1
Perchlorate-(35Cl18O4)	ISTD	10.829	184537	107	89			1

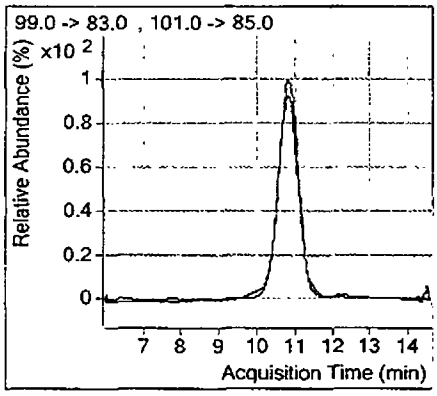
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2598	101	85	2.91	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	58582	109	91	3.15	2.30	3.80	In Control

Compound Graphics

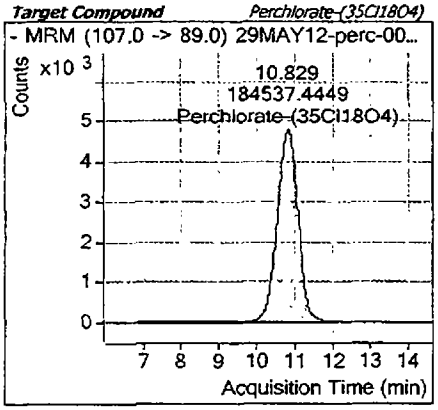
m 5/30/12

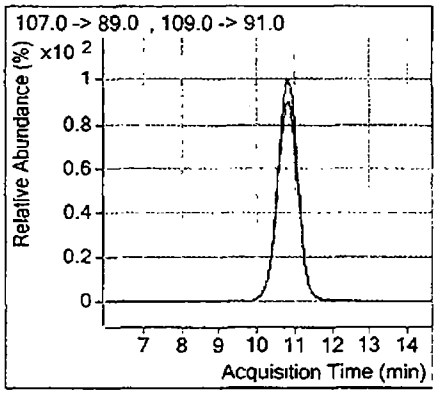
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 18:05
Analyst	lores
Data File	29MAY12-perc-008.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L4_00001 12LCMS0067, 1.0ng/mL
Sample Identification	Std004
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B5
Exp. Concentration	1.00
Injection Volume	50

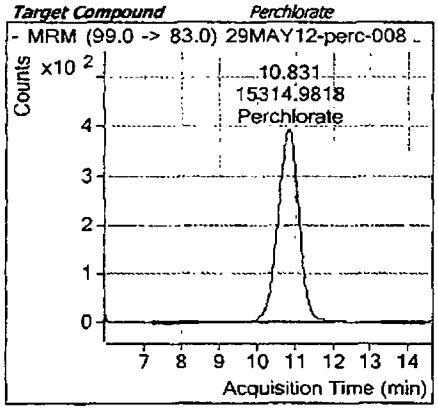
Quantitation Results

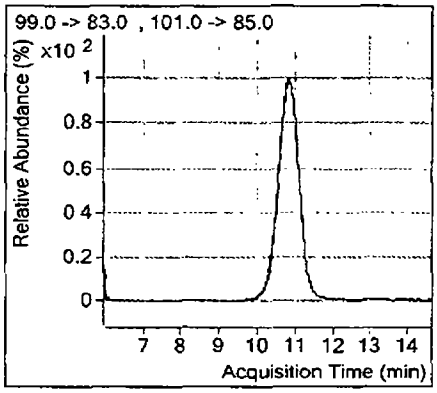
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.831	15315	99	83	0.95231	0.95231	1
Perchlorate-(35Cl18O4)	ISTD	10.824	196073	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	5142	101	85	2.98	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	61743	109	91	3.18	2.30	3.80	In Control

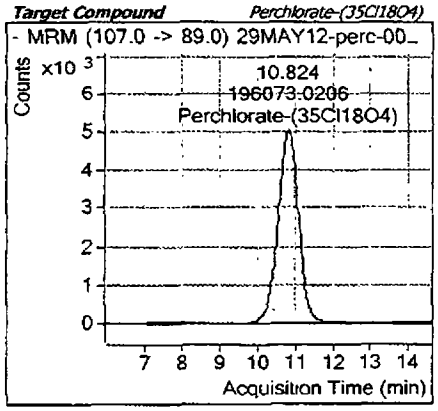
Compound Graphics

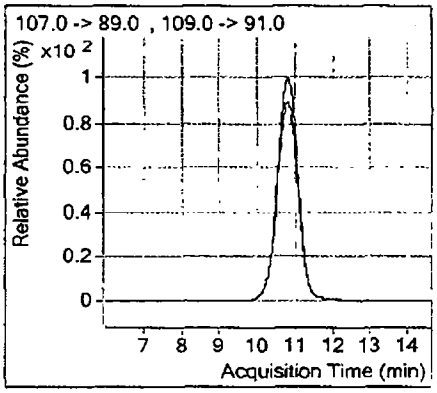
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/30/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 18:21
Analyst	lores
Data File	29MAY12-perc-009.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2.0ng/mL
Sample Identification	Std005
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B6
Exp. Concentration	2.00
Injection Volume	50

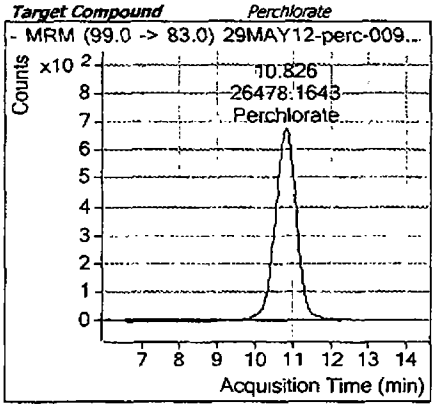
Quantitation Results

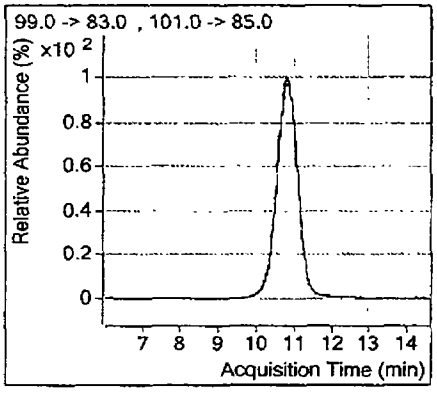
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.826	26478	99	83	**1.93065**	**1.93065**	1
Perchlorate-(35Cl18O4)	ISTD	10 815	165658	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8889	101	85	2.98	2 30	3 80	In Control
Perchlorate-(35Cl18O4)	51900	109	91	3 19	2.30	3 80	In Control

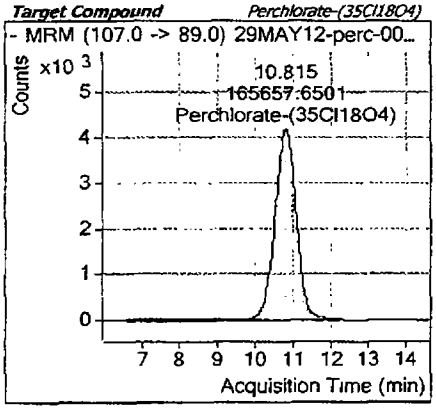
Compound Graphics

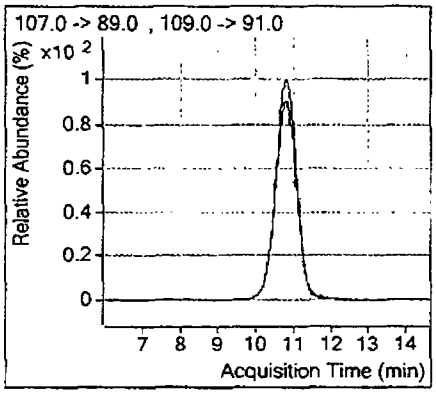
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/30/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 18:37
Analyst	lores
Data File	29MAY12-perc-010.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5.0ng/mL
Sample Identification	Std006
Sample Information	IC-Pak Anion HR 75x4 6mm T=40*C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B7
Exp. Concentration	5.00
Injection Volume	50

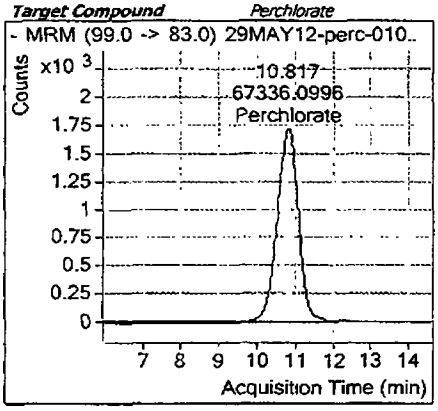
Quantitation Results

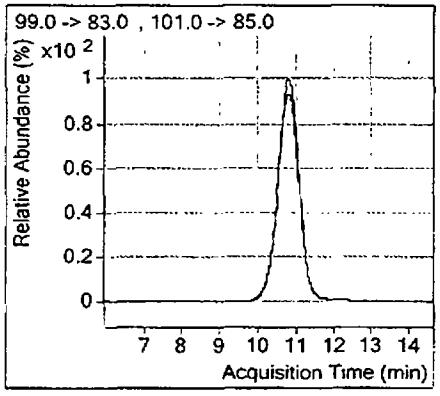
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.817	67336	99	83	4.71800	4.71800	1
Perchlorate-(35Cl18O4)	ISTD	10.808	171477	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	22120	101	85	3.04	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	53803	109	91	3.19	2.30	3.80	In Control

Compound Graphics

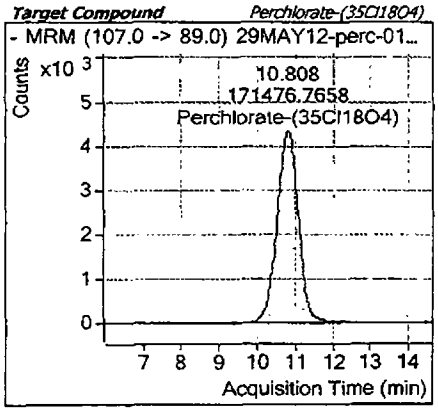
Target Compound *Perchlorate*

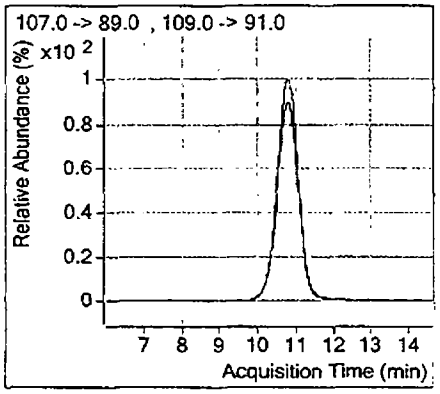




m 5/30/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 18:53
Analyst	lores
Data File	29MAY12-perc-011 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L7_00001 12LCMS0070, 10ng/mL
Sample Identification	Std007
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B8
Exp. Concentration	10 00
Injection Volume	50

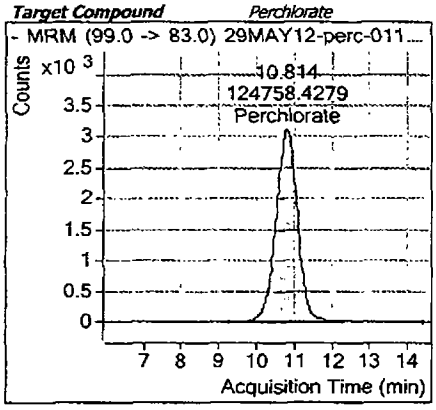
Quantitation Results

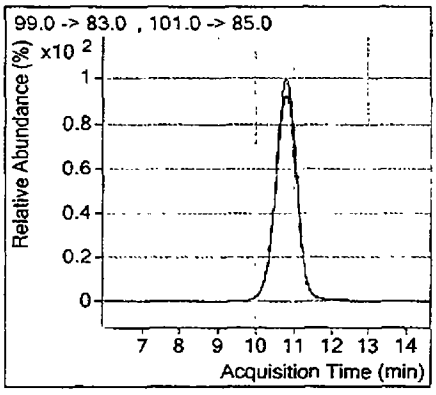
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.814	124758	99	83	**9.99157**	**9.99157**	1
Perchlorate-(35Cl18O4)	ISTD	10.803	149730	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	40080	101	85	3 11	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	47743	109	91	3.14	2.30	3 80	In Control

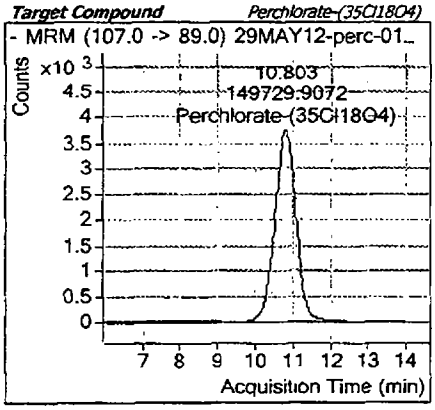
Compound Graphics

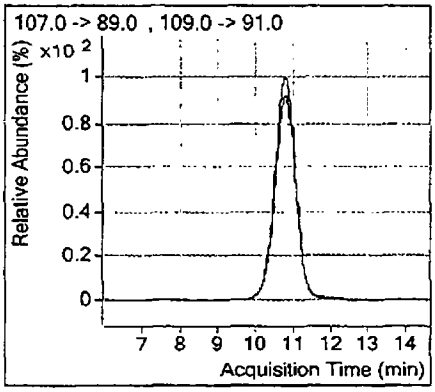
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/30/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 19:10
Analyst	lores
Data File	29MAY12-perc-012 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L8_00001 12LCMS0071, 20ng/mL
Sample Identification	Std008
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B9
Exp. Concentration	20.00
Injection Volume	50

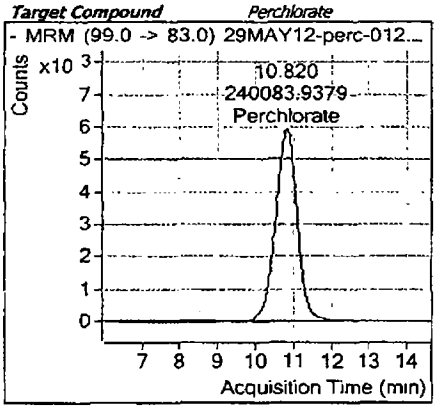
Quantitation Results

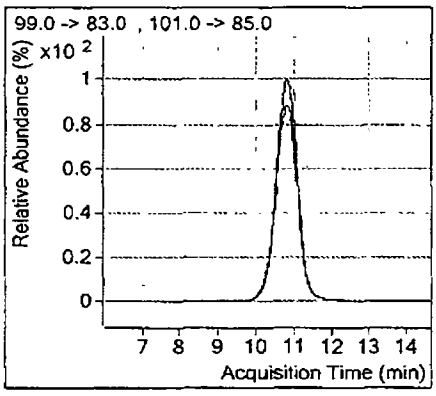
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.820	240084	99	83	**20.38248**	**20.38248**	1
Perchlorate-(35Cl18O4)	ISTD	10 808	141122	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	73999	101	85	3.24	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	43858	109	91	3 22	2 30	3.80	In Control

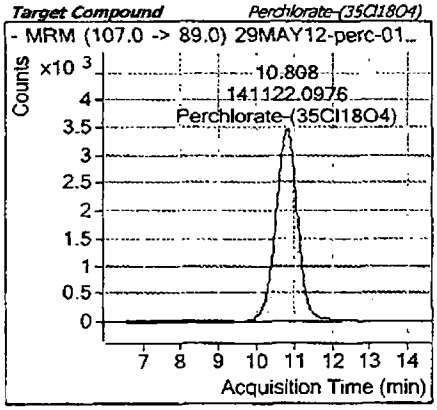
Compound Graphics

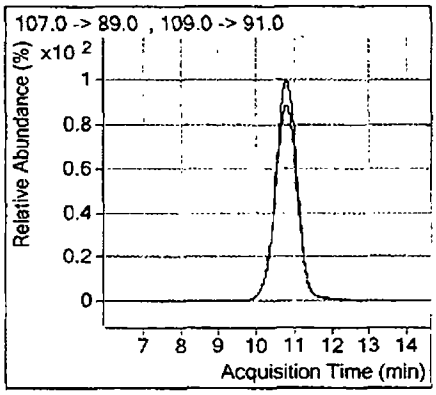
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/30/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 19:26
Analyst	lores
Data File	29MAY12-perc-013 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

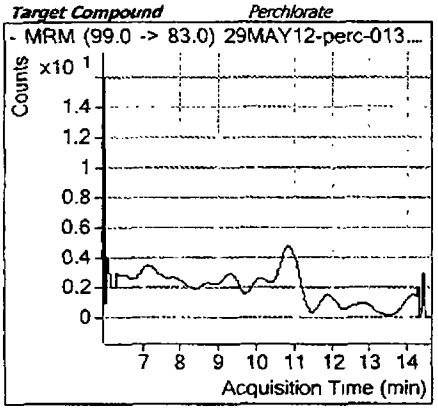
Quantitation Results

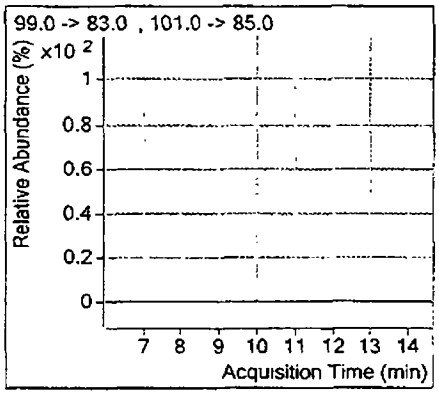
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.813	177763	107	89		Perchlorate = ND	1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	57702	109	91	3.08	2.30	3.80	In Control

Compound Graphics

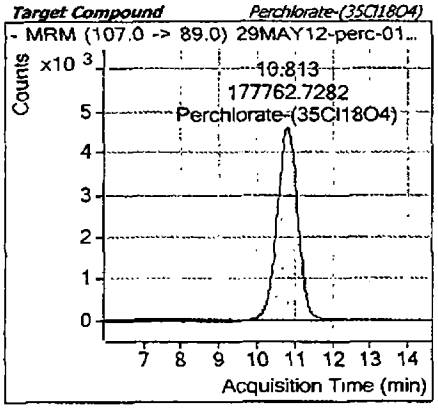
Target Compound *Perchlorate*

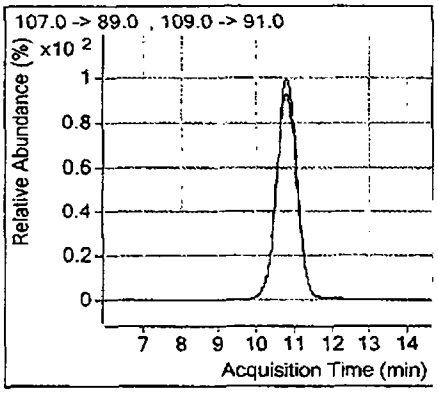




m 5/30/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D.\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 19.42
Analyst	lores
Data File	29MAY12-perc-014.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850IC_00001 12LCMS0073, 5 0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5.00
Injection Volume	50

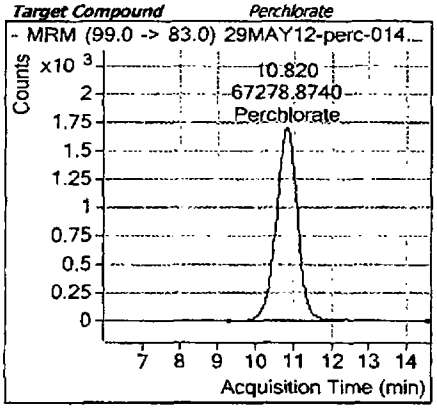
Quantitation Results

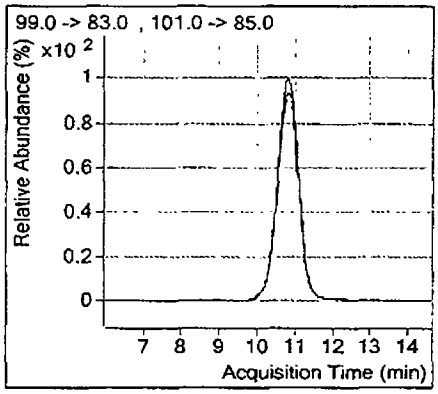
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.820	67279	99	83	**4.93694**	**4.93694**	1
Perchlorate-(35Cl18O4)	ISTD	10.812	163706	107	89			1
							-1.3 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	22055	101	85	3.05	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	49798	109	91	3 29	2.30	3 80	In Control

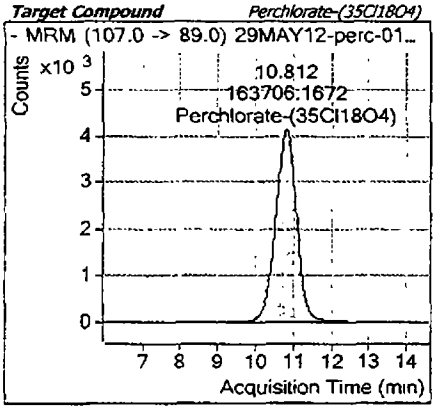
Compound Graphics

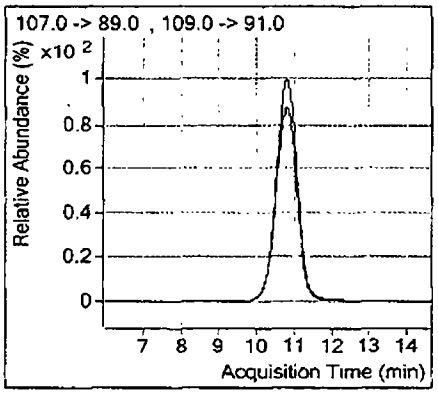
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





ND 5/30/12

CCAL Data

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 23:23
Analyst	lores
Data File	25MAY12-perc-029.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2.0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2.00
Injection Volume	50

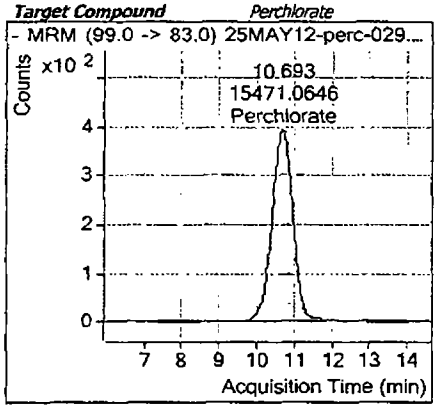
Quantitation Results

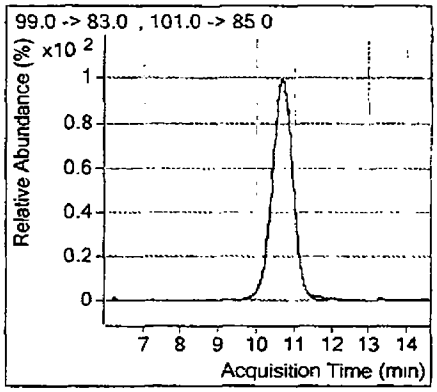
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.693	15471	99	83	1.83956	1.83956	1
Perchlorate-(35Cl18O4)	ISTD	10.684	102315	107	89			1
							-8.0 % Deviation	

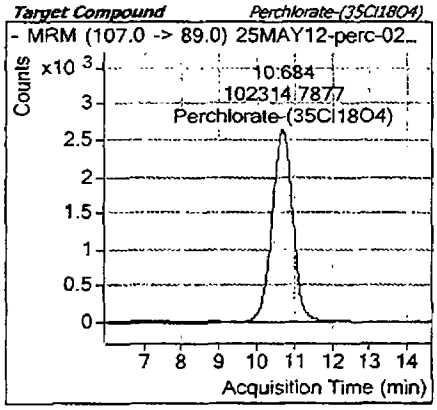
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	5296	101	85	2.92	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	32085	109	91	3.19	2.30	3.80	In Control

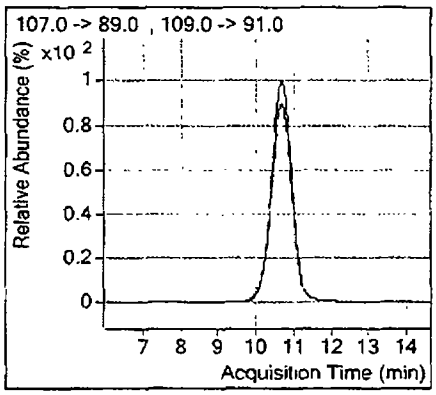
Compound Graphics

mr 5/29/12









TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 23:39
Analyst	lores
Data File	25MAY12-perc-030.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0 50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

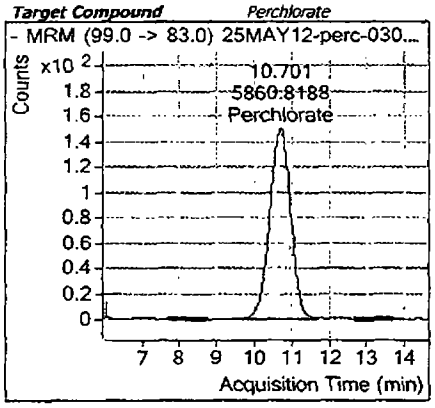
Quantitation Results

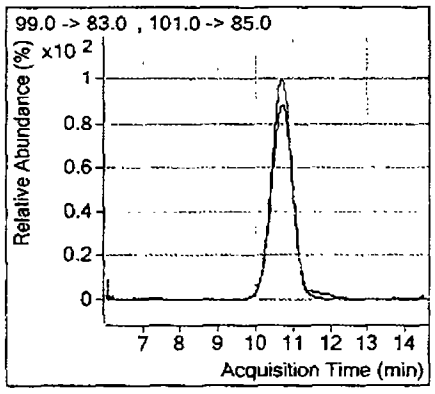
Name	Type	RT	Area	Precursor	Product	Final Conc:	Injection Conc.	Dilution
Perchlorate	Target	10 701	5861	99	83	0.52755	0.52755	1
Perchlorate-(35Cl18O4)	ISTD	10.700	142641	107	89			1
							5.5 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1901	101	85	3 08	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	44449	109	91	3.21	2.30	3 80	In Control

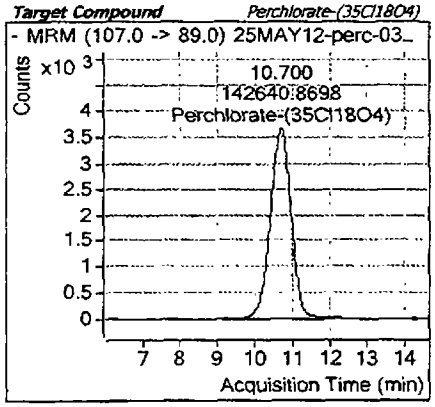
Compound Graphics

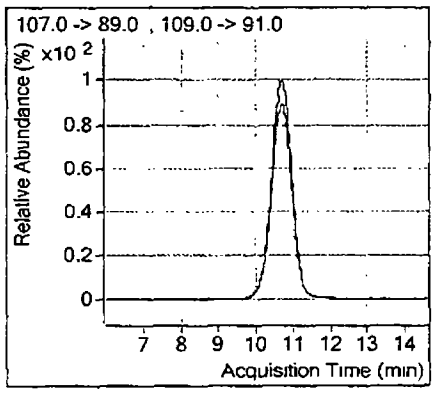
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM1030S1VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 23:55
Analyst	lores
Data File	25MAY12-perc-031.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L1_00001 12LCMS0064, 0 15ng/mL
Sample Identification	LODV
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C3
Exp. Concentration	0.15
Injection Volume	50

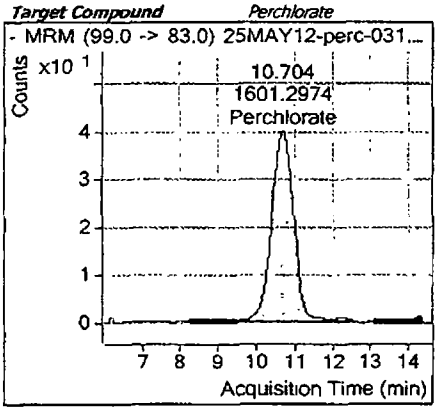
Quantitation Results

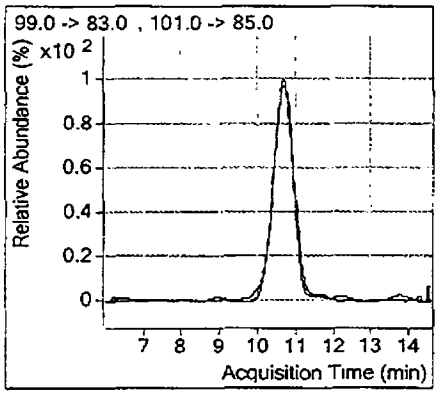
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.704	1601	99	83	0.17850	0.17850	1
Perchlorate-(35Cl18O4)	ISTD	10.696	135814	107	89			1
							19.0 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	506	101	85	3.16	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	42044	109	91	3.23	2.30	3.80	In Control

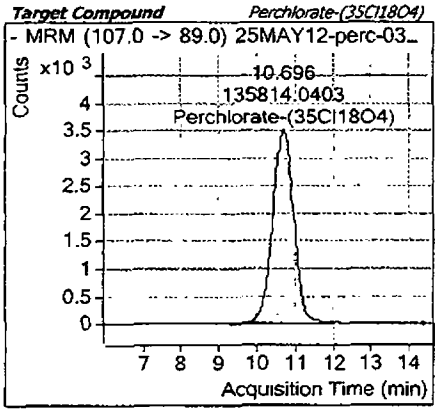
Compound Graphics

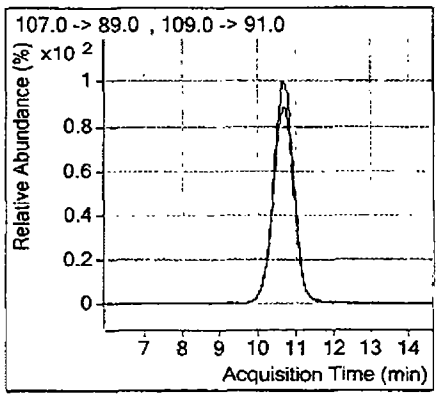
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





mr 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 00:11
Analyst	Jores
Data File	25MAY12-perc-032.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

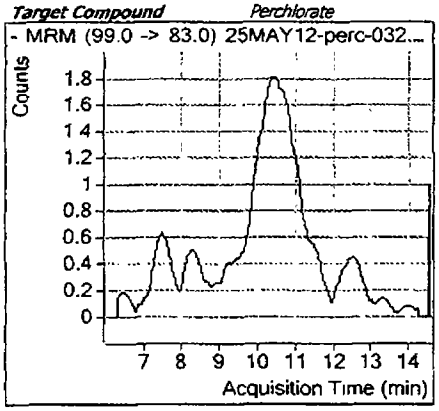
Quantitation Results

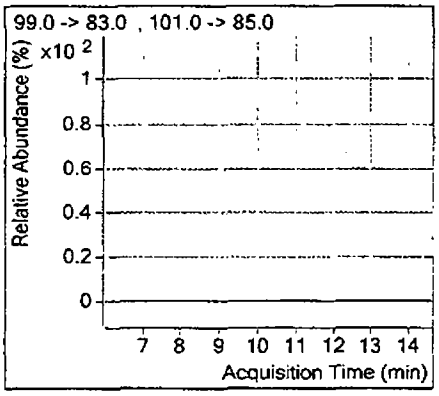
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.697	164616	107	89		Perchlorate = ND	1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	51711	109	91	3.18	2.30	3.80	In Control

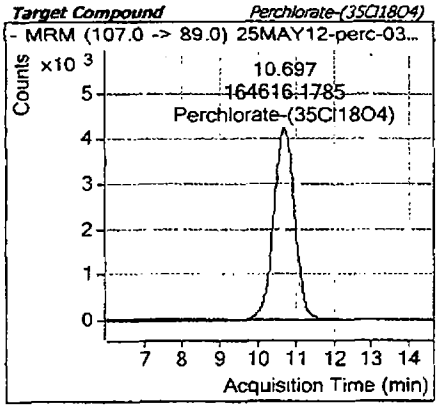
Compound Graphics

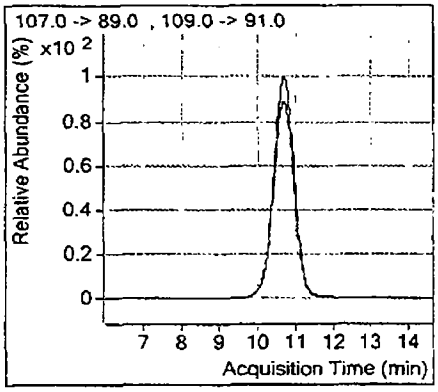
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 02:37
Analyst	lores
Data File	25MAY12-perc-041.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L6_00001 12LCMS0069, 5.0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5.00
Injection Volume	50

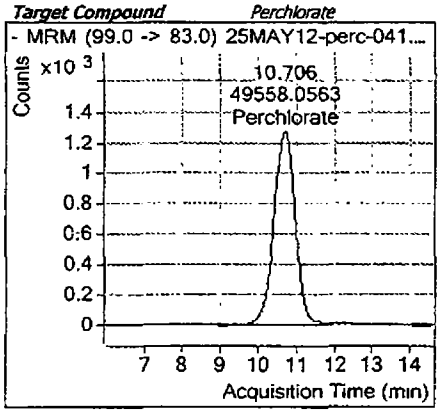
Quantitation Results

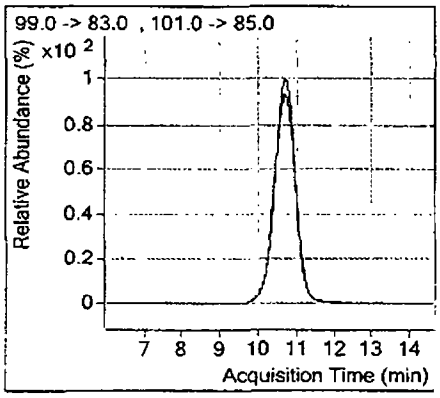
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.706	49558	99	83		4.80570	4.80570	1
Perchlorate-(35Cl18O4)	ISTD	10 693	123842	107	89				1
								-3.9 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	16110	101	85	3.08	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	38501	109	91	3 22	2.30	3.80	In Control

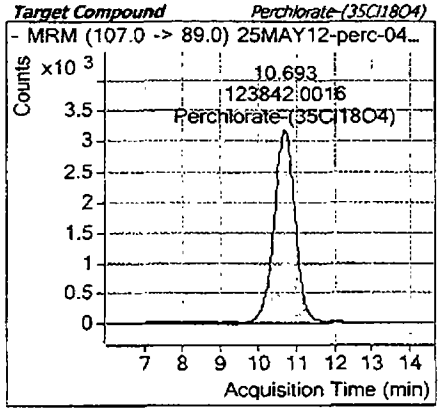
Compound Graphics

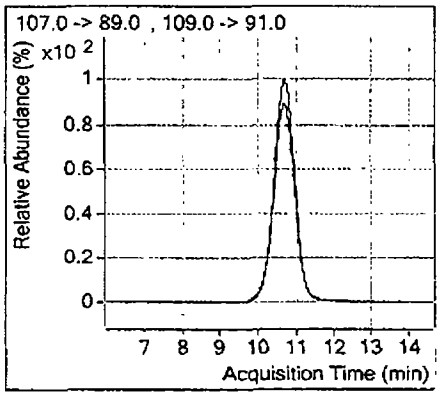
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 02:53
Analyst	lores
Data File	25MAY12-perc-042 d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

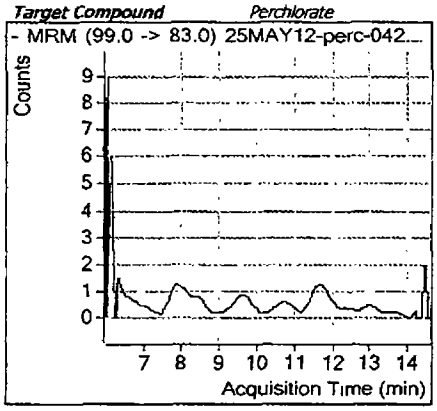
Quantitation Results

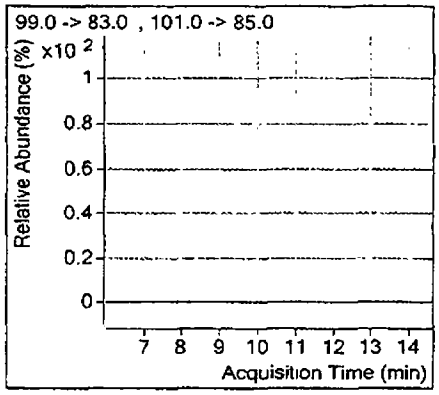
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.696	164223	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	51149	109	91	3.21	2.30	3.80	In Control

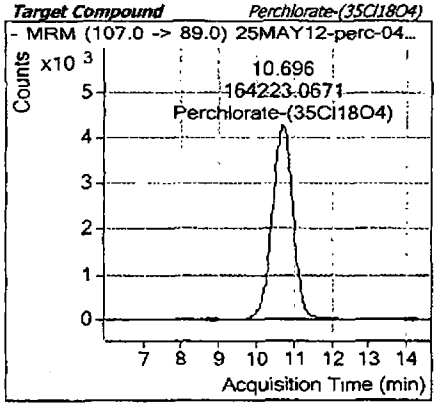
Compound Graphics

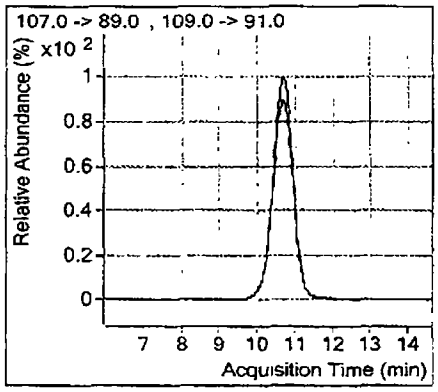
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 05:36
Analyst	lores
Data File	25MAY12-perc-052.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L4_00001 12LCMS0067, 1.0ng/mL
Sample Identification	CCV 4
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45.gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C5
Exp. Concentration	1.00
Injection Volume	50

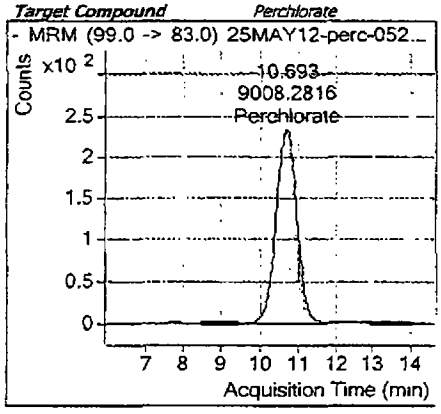
Quantitation Results

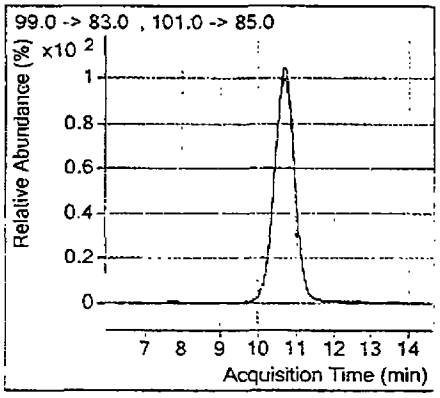
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.693	9008	99	83	0.94654	0.94654	1
Perchlorate-(35Cl18O4)	ISTD	10.687	118132	107	89			1
							-5.3 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	3216	101	85	2.80	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	37540	109	91	3.15	2.30	3.80	In Control

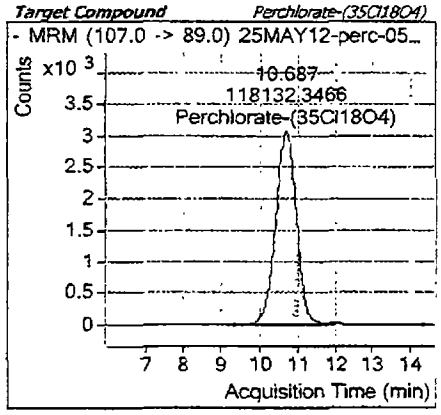
Compound Graphics

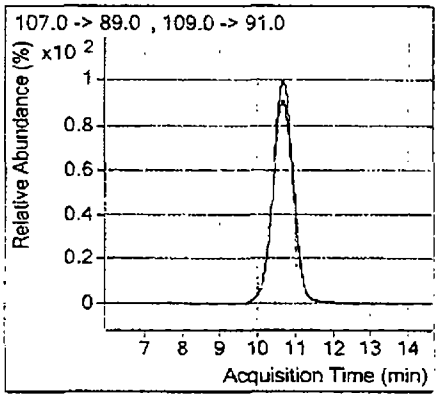
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 05:52
Analyst	lores
Data File	25MAY12-perc-053.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

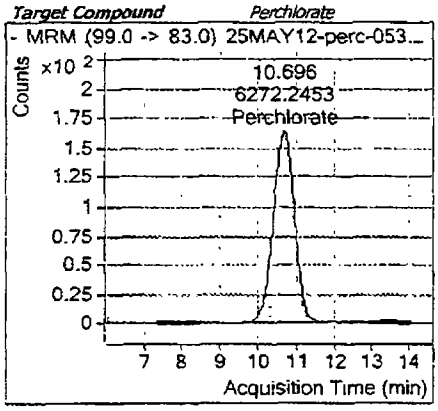
Quantitation Results

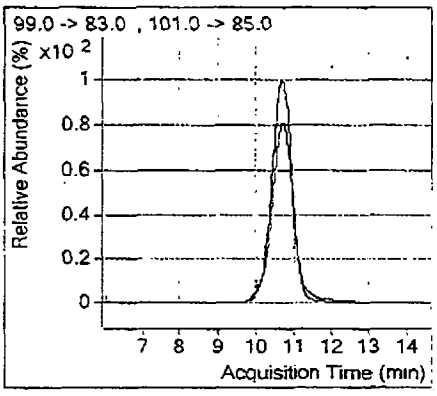
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.696	6272	99	83		0.50924	0.50924	1
Perchlorate-(35Cl18O4)	ISTD	10.690	158587	107	89				1
								1.8 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1875	101	85	3.35	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	50254	109	91	3.16	2.30	3.80	In Control

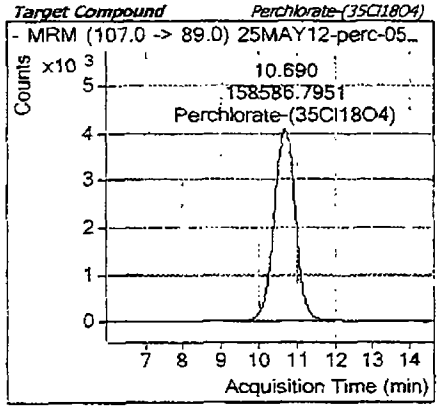
Compound Graphics

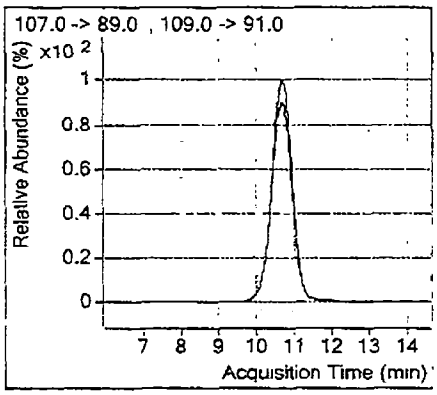
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 06:08
Analyst	lores
Data File	25MAY12-perc-054.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

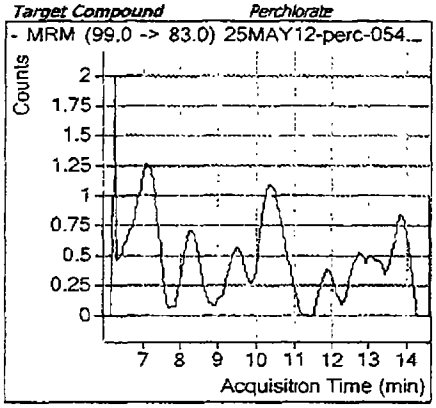
Quantitation Results

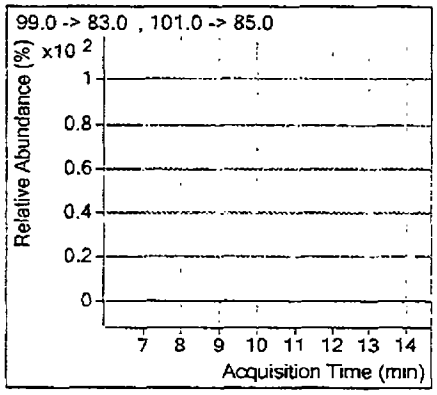
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.694	156225	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	48371	109	91	3.23	2.30	3.80	In Control

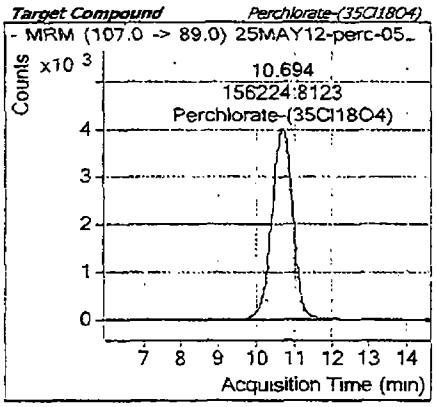
Compound Graphics

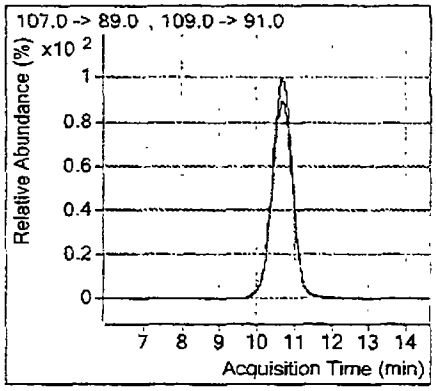
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 19:58
Analyst	lores
Data File	29MAY12-perc-015.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

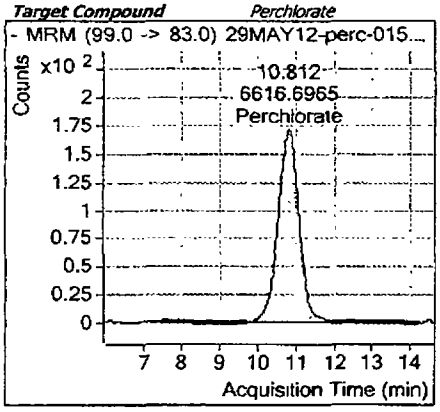
Quantitation Results

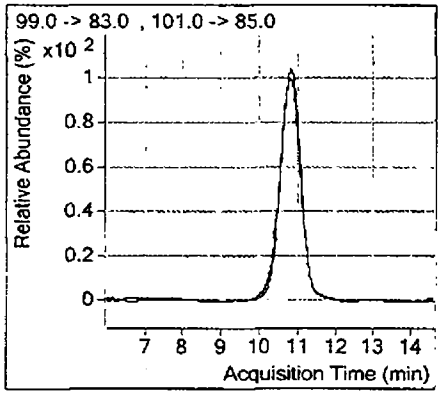
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.812	6617	99	83		**0.48963**	**0.48963**	1
Perchlorate-(35Cl18O4)	ISTD	10.804	167690	107	89				1
								-2.1 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2292	101	85	2.89	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	52251	109	91	3.21	2.30	3.80	In Control

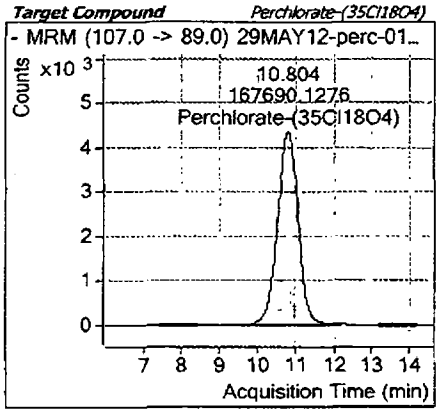
Compound Graphics

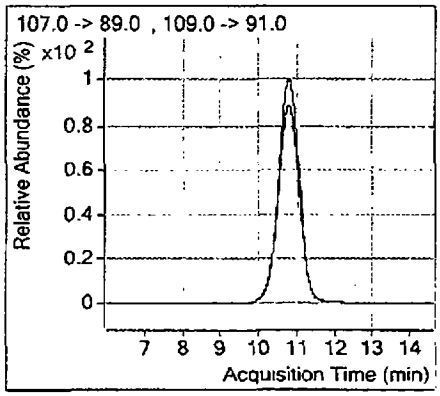
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/30/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D.\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 20:31
Analyst	lores
Data File	29MAY12-perc-017.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L4_00001 12LCMS0067, 1.0ng/mL
Sample Identification	CCV 4
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C5
Exp. Concentration	1.00
Injection Volume	50

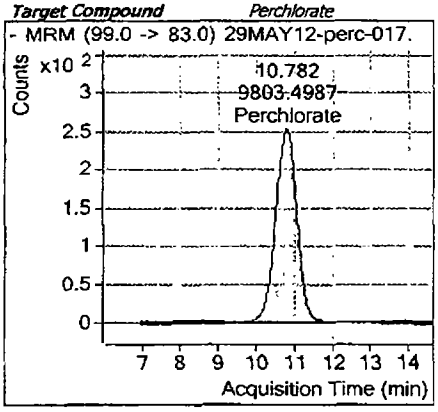
Quantitation Results

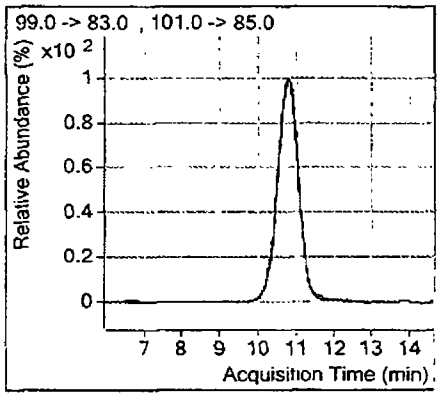
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.782	9803	99	83	0.92417	0.92417	1
Perchlorate-(35Cl18O4)	ISTD	10.785	129406	107	89			1
							-7.6 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	3428	101	85	2.86	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	40234	109	91	3.22	2.30	3.80	In Control

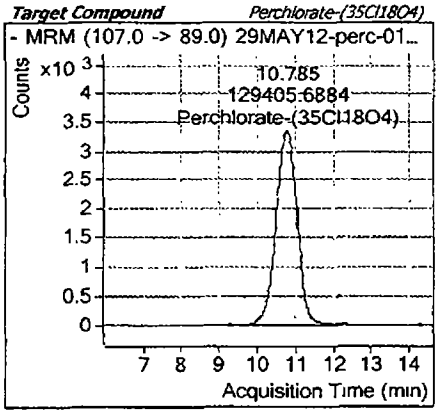
Compound Graphics

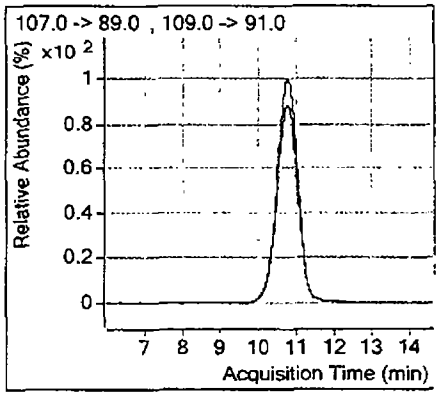
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/30/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 20:47
Analyst	lores
Data File	29MAY12-perc-018 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4 6mm T=40*C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

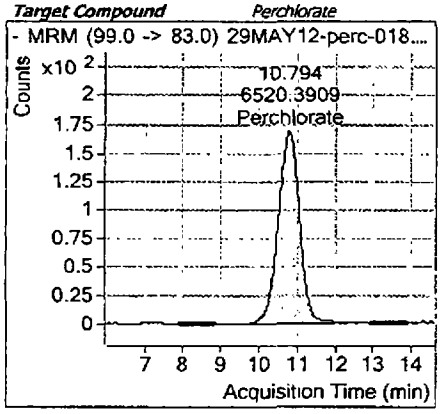
Quantitation Results

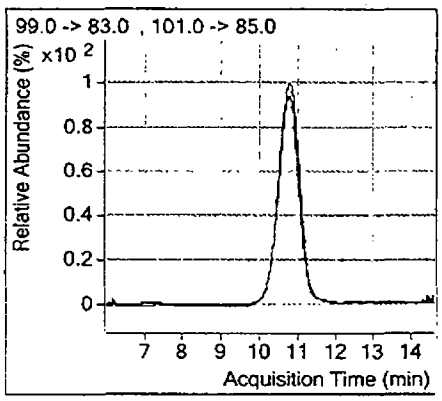
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.794	6520	99	83		0.48436	0.48436	1
Perchlorate-(35Cl18O4)	ISTD	10.782	167116	107	89				1
								-3.1 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2139	101	85	3.05	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	52461	109	91	3.19	2 30	3 80	In Control

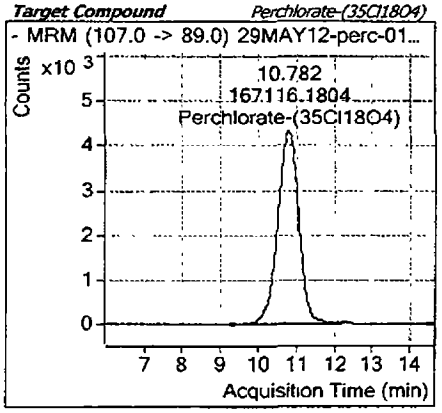
Compound Graphics

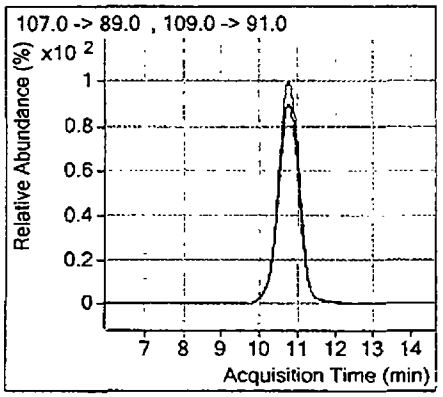
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\29MAY2012\QuantResults\29May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/29/2012 21:03
Analyst	lores
Data File	29MAY12-perc-019.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

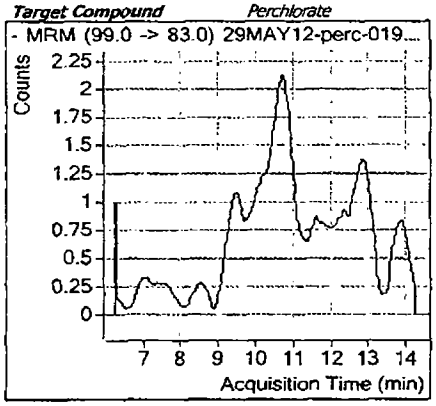
Quantitation Results

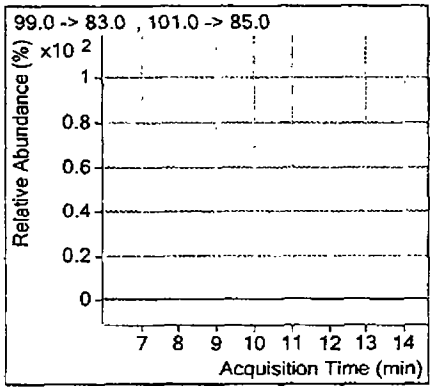
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.801	161525	107	89				1
								Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	49051	109	91	3.29	2.30	3.80	In Control

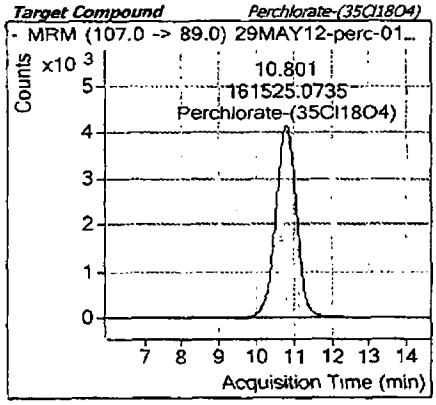
Compound Graphics

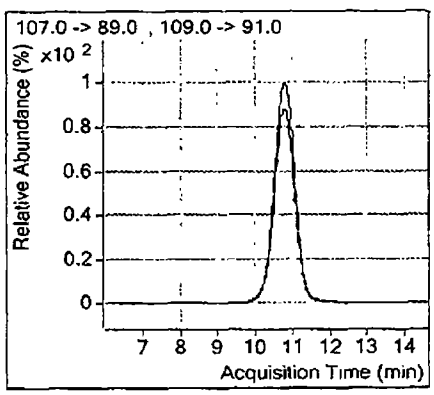
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/30/12

Tune Data

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-25 15:40		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.10	-0.01	Pass	0.70	0.70	0.10	0.00	Pass	86546	0	Pass
301.98	302.00	0.10	-0.02	Pass	0.70	0.70	0.10	0.00	Pass	392590	0	Pass
601.95	601.98	0.10	-0.03	Pass	0.67	0.70	0.10	-0.03	Pass	940251	0	Pass
1033.92	1033.99	0.10	-0.07	Pass	0.71	0.70	0.10	0.01	Pass	447346	0	Pass
1333.90	1333.97	0.10	-0.07	Pass	0.69	0.70	0.10	-0.01	Pass	722428	0	Pass
1633.89	1633.95	0.10	-0.06	Pass	0.71	0.70	0.10	0.01	Pass	619352	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.01	112.99	0.10	0.02	Pass	0.69	0.70	0.10	-0.01	Pass	282498	0	Pass
302.01	302.00	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	318694	0	Pass
602.00	601.98	0.10	0.02	Pass	0.69	0.70	0.10	-0.01	Pass	451104	0	Pass
1034.01	1033.99	0.10	0.02	Pass	0.70	0.70	0.10	0.00	Pass	223337	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	595245	0	Pass
1633.93	1633.95	0.10	-0.02	Pass	0.69	0.70	0.10	-0.01	Pass	421872	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.30	0.00	Pass	1.20	1.20	0.60	0.00	Pass	102684	0	Pass
301.94	302.00	0.30	-0.06	Pass	1.27	1.20	0.60	0.07	Pass	563519	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.31	1.20	0.60	0.11	Pass	1429537	0	Pass
1033.86	1033.99	0.30	-0.13	Pass	1.32	1.20	0.60	0.12	Pass	823222	0	Pass
1333.85	1333.97	0.30	-0.12	Pass	1.30	1.20	0.60	0.10	Pass	1607847	0	Pass
1633.86	1633.95	0.30	-0.09	Pass	1.22	1.20	0.60	0.02	Pass	1563189	0	Pass

Page 2263 of 2448
TestAmerica West Sacramento (916) 373-5600
06/01/2012 100 of 278

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.04	112.99	0.30	0.05	Pass	1.15	1.20	0.60	-0.05	Pass	364747	0	Pass
301.99	302.00	0.30	-0.01	Pass	1.22	1.20	0.60	0.02	Pass	464568	0	Pass
601.95	601.98	0.30	-0.03	Pass	1.25	1.20	0.60	0.05	Pass	722144	0	Pass
1033.94	1033.99	0.30	-0.05	Pass	1.25	1.20	0.60	0.05	Pass	421079	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.28	1.20	0.60	0.08	Pass	1047746	0	Pass
1633.92	1633.95	0.30	-0.03	Pass	1.26	1.20	0.60	0.06	Pass	860815	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.77	2.50	1.25	0.27	Pass	127753	0	Pass
301.88	302.00	0.50	-0.12	Pass	2.81	2.50	1.25	0.31	Pass	770025	0	Pass
601.87	601.98	0.50	-0.11	Pass	2.85	2.50	1.25	0.35	Pass	1800085	0	Pass
1033.87	1033.99	0.50	-0.12	Pass	2.84	2.50	1.25	0.34	Pass	1200008	0	Pass
1333.90	1333.97	0.50	-0.07	Pass	2.73	2.50	1.25	0.23	Pass	2482797	0	Pass
1633.93	1633.95	0.50	-0.02	Pass	2.63	2.50	1.25	0.13	Pass	2574122	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.91	112.99	0.50	-0.08	Pass	2.57	2.50	1.25	0.07	Pass	464950	0	Pass
301.94	302.00	0.50	-0.06	Pass	2.55	2.50	1.25	0.05	Pass	673492	0	Pass
601.93	601.98	0.50	-0.05	Pass	2.55	2.50	1.25	0.05	Pass	1215486	0	Pass
1034.00	1033.99	0.50	0.01	Pass	2.44	2.50	1.25	-0.06	Pass	857398	0	Pass
1333.94	1333.97	0.50	-0.03	Pass	2.49	2.50	1.25	-0.01	Pass	2175643	0	Pass
1634.01	1633.95	0.50	0.06	Pass	2.42	2.50	1.25	-0.08	Pass	2018742	0	Pass

' NOTE: 1) Actual abundances depend on many factors and are instrument specific.
To change the minimum abundance, edit the values on the "Options" sheet

TestAmerica West Sacramento (916) 373-5600
Page 2264 of 2448
06/01/2012 101 of 278

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-29 16:04		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.10	-0.01	Pass	0.69	0.70	0.10	-0.01	Pass	94921	0	Pass
301.96	302.00	0.10	-0.04	Pass	0.71	0.70	0.10	0.01	Pass	411007	0	Pass
601.93	601.98	0.10	-0.05	Pass	0.69	0.70	0.10	-0.01	Pass	998380	0	Pass
1033.93	1033.99	0.10	-0.06	Pass	0.70	0.70	0.10	0.00	Pass	476335	0	Pass
1333.91	1333.97	0.10	-0.06	Pass	0.69	0.70	0.10	-0.01	Pass	787778	0	Pass
1633.90	1633.95	0.10	-0.05	Pass	0.72	0.70	0.10	0.02	Pass	684669	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.00	112.99	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	292583	0	Pass
302.00	302.00	0.10	0.00	Pass	0.68	0.70	0.10	-0.02	Pass	338906	0	Pass
601.99	601.98	0.10	0.01	Pass	0.68	0.70	0.10	-0.02	Pass	480800	0	Pass
1034.00	1033.99	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	234623	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	622400	0	Pass
1633.94	1633.95	0.10	-0.01	Pass	0.67	0.70	0.10	-0.03	Pass	449867	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.30	-0.01	Pass	1.19	1.20	0.60	-0.01	Pass	111203	0	Pass
301.93	302.00	0.30	-0.07	Pass	1.30	1.20	0.60	0.10	Pass	576141	0	Pass
601.92	601.98	0.30	-0.06	Pass	1.32	1.20	0.60	0.12	Pass	1485129	0	Pass
1033.88	1033.99	0.30	-0.11	Pass	1.34	1.20	0.60	0.14	Pass	895962	0	Pass
1333.86	1333.97	0.30	-0.11	Pass	1.29	1.20	0.60	0.09	Pass	1787864	0	Pass
1633.87	1633.95	0.30	-0.08	Pass	1.24	1.20	0.60	0.04	Pass	1717920	0	Pass

TestAmerica West Sacramento (916) 373-5600

Page 2265 of 2448

06/01/2012 102 of 278

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.03	112.99	0.30	0.04	Pass	1.17	1.20	0.60	-0.03	Pass	382135	0	Pass
301.98	302.00	0.30	-0.02	Pass	1.23	1.20	0.60	0.03	Pass	489778	0	Pass
601.95	601.98	0.30	-0.03	Pass	1.24	1.20	0.60	0.04	Pass	757064	0	Pass
1033.93	1033.99	0.30	-0.06	Pass	1.26	1.20	0.60	0.06	Pass	443011	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.28	1.20	0.60	0.08	Pass	1117752	0	Pass
1633.91	1633.95	0.30	-0.04	Pass	1.25	1.20	0.60	0.05	Pass	900796	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.90	112.99	0.50	-0.09	Pass	2.80	2.50	1.25	0.30	Pass	139047	0	Pass
301.85	302.00	0.50	-0.15	Pass	2.84	2.50	1.25	0.34	Pass	786795	0	Pass
601.87	601.98	0.50	-0.11	Pass	2.88	2.50	1.25	0.38	Pass	1890421	0	Pass
1033.90	1033.99	0.50	-0.09	Pass	2.80	2.50	1.25	0.30	Pass	1317318	0	Pass
1333.93	1333.97	0.50	-0.04	Pass	2.75	2.50	1.25	0.25	Pass	2699991	0	Pass
1633.95	1633.95	0.50	0.00	Pass	2.61	2.50	1.25	0.11	Pass	2912679	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.52	2.50	1.25	0.02	Pass	484992	0	Pass
301.93	302.00	0.50	-0.07	Pass	2.57	2.50	1.25	0.07	Pass	701799	0	Pass
601.92	601.98	0.50	-0.06	Pass	2.55	2.50	1.25	0.05	Pass	1243339	0	Pass
1033.99	1033.99	0.50	0.00	Pass	2.44	2.50	1.25	-0.06	Pass	901648	0	Pass
1333.94	1333.97	0.50	-0.03	Pass	2.50	2.50	1.25	0.00	Pass	2303610	0	Pass
1634.02	1633.95	0.50	0.07	Pass	2.41	2.50	1.25	-0.09	Pass	2150115	0	Pass

[1] *NOTE: 1) Actual abundances depend on many factors and are instrument specific.*
To change the minimum abundance, edit the values on the "Options" sheet.

TestAmerica West Sacramento (916) 373-5600
Page 2266 of 2448
06/01/2012 103 of 278

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E120412 Work Order #...: MTMH41AA Matrix.....: WATER
MB Lot-Sample #: G2E170000-157

Prep Date.....: 05/21/12
Analysis Date..: 05/26/12 Prep Batch #...: 2138157
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E120412 Work Order #...: MTMH41AC Matrix.....: WATER
LCS Lot-Sample#: G2E170000-157
Prep Date.....: 05/21/12 Analysis Date..: 05/26/12
Prep Batch #...: 2138157
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	99	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E120412 Work Order #...: MTMH41AC Matrix.....: WATER
LCS Lot-Sample#: G2E170000-157
Prep Date.....: 05/21/12 Analysis Date..: 05/26/12
Prep Batch #...: 2138157
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.94	ug/L	99	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E120412 Work Order #...: MTMH41AD Matrix.....: WATER
LCS Lot-Sample#: G2E170000-157
Prep Date.....: 05/21/12 Analysis Date..: 05/26/12
Prep Batch #...: 2138157
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	94	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E120412 Work Order #...: MTMH41AD Matrix.....: WATER
LCS Lot-Sample#: G2E170000-157
Prep Date.....: 05/21/12 Analysis Date..: 05/26/12
Prep Batch #...: 2138157
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.71	ug/L	94	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E120412 Work Order #...: MTH881AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E120412-003 MTH881AD-MSD
Date Sampled...: 05/10/12 Date Received..: 05/12/12
Prep Date.....: 05/21/12 Analysis Date..: 05/26/12
Prep Batch #...: 2138157
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	98	(80 - 120)			SW846 6850
	98	(80 - 120)	0.34	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E120412 Work Order #...: MTH881AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E120412-003 MTH881AD-MSD
Date Sampled...: 05/10/12 Date Received..: 05/12/12
Prep Date.....: 05/21/12 Analysis Date..: 05/26/12
Prep Batch #...: 2138157
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.89	ug/L	98		SW846 6850
	ND	5.00	4.91	ug/L	98	0.34	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 1

Inst ID: LC10 Batch ID: 04192012C Eluents: Water: M0104 2012
Test: SOP WS-LC-0009 MeOH: K18618
Method: Method 8330 ACN: K43804
ICAL Date: See Calibration Report 50:50 H2O:MeOH+0.4% H3PO4 4457 - 37G

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
19-APR-2012	08:43	RN	1	8330 PRIMER	A-000001	--	--	--	
19-APR-2012	09:23	RN	1	8330 PRIMER	A-000002	--	--	--	
19-APR-2012	10:27	RN	2	8330 PRIMER	A-000003	--	--	--	
19-APR-2012	11:08	RN	81	BLANK	A-000004	--	--	--	
19-APR-2012	11:48	RN	11	STD 01 HP8330L1 00001 5ng/mL	A-000005	--	--	--	
19-APR-2012	12:28	RN	12	STD 02 HP8330L2 00001 10ng/mL	A-000006	--	--	--	
19-APR-2012	13:08	RN	13	STD 03 HP8330L3 00001 20ng/mL	A-000007	--	--	--	
19-APR-2012	13:48	RN	14	STD 04 HP8330L4 00001 50ng/mL	A-000008	--	--	--	
19-APR-2012	14:28	RN	15	STD 05 HP8330L5 00001 100ng/mL	A-000009	--	--	--	
19-APR-2012	15:09	RN	16	STD 06 HP8330L6 00001200ng/mL	A-000010	--	--	--	
19-APR-2012	15:49	RN	17	STD 07 HP8330L7 00001 500ng/mL	A-000011	--	--	--	
19-APR-2012	16:29	RN	18	STD 08 HP8330L8 00001 1000ng/m	A-000012	--	--	--	
19-APR-2012	17:09	RN	81	BLANK	A-000013	--	--	--	
19-APR-2012	17:49	RN	19	STD MRL 11GCSV0468 8330 5-50ng	A-000014	--	--	--	
19-APR-2012	18:30	RN	20	STD ICV HPEGDNIC 000001 200ng/	A-000015	--	--	--	
19-APR-2012	19:10	RN	21	STD ICV HP8330IC 00001 200ng/m	A-000016	--	--	--	
19-APR-2012	19:50	RN	22	EGDN LOD CHECK MB	A-000017	10 g	80 mL	1	
19-APR-2012	20:30	RN	23	EGDN LOD CHECK	A-000018	10 g	80 mL	1	
19-APR-2012	21:10	RN	31	MR0WQ1AA 2104025 MB	A-000019	10 g	80 mL	1	
19-APR-2012	21:50	RN	32	MR0WQ1AC 2104025 LCS	A-000020	10 g	80 mL	1	
19-APR-2012	22:30	RN	33	MRVL61AA 2104025 D060464-1	A-000021	9.94 g	80 mL	1	
19-APR-2012	23:10	RN	34	MRVL71AA 2104025 D060464-2	A-000022	10.3 g	80 mL	1	
19-APR-2012	23:51	RN	35	MRVL81AA 2104025 D060464-3	A-000023	9.84 g	80 mL	1	
20-APR-2012	00:31	RN	36	MRVL9 AA 2104025 D060464-4	A-000024	10.28 g	80 mL	1	
20-APR-2012	01:11	RN	37	MRVMA AA 2104025 D060464-5	A-000025	10.12 g	80 mL	1	
20-APR-2012	01:51	RN	38	MRVMC AA 2104025 D060464-6	A-000026	9.9 g	80 mL	1	
20-APR-2012	02:31	RN	3	STD 05 HP8330L5 00001 100ng/mL	A-000027	--	--	--	
20-APR-2012	03:11	RN	39	MRVMD AA 2104025 D060464-7	A-000028	10.19 g	80 mL	1	
20-APR-2012	03:52	RN	40	MRVME1AA 2104025 D060464-8	A-000029	10.05 g	80 mL	1	
20-APR-2012	04:32	RN	41	MRVMF AA 2104025 D060464-9	A-000030	10.29 g	80 mL	1	
20-APR-2012	05:12	RN	42	MRVMG AA 2104025 D060464-10	A-000031	9.91 g	80 mL	1	
20-APR-2012	05:52	RN	43	MRVMH AA 2104025 D060464-11	A-000032	9.95 g	80 mL	1	

GC-LC Log 2011-12-14 ERS Sequence Checked: 4-20-12

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 20

Inst ID: LC10 Batch ID: 05192012
Test: SOP WS-LC-0009
Method: Method 8330
ICAL Date: See Calibration Report

Eluents: Water: M0405201 2
MeOH: K18E18
ACN: K133804
50:50 H2O:MeOH+0.4% H3PO4 4457-41E

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
19-MAY-2012	15:08	VN	1	8330 PRIMER	A-000001	--	--	--	
19-MAY-2012	15:48	VN	1	8330 PRIMER	A-000002	--	--	--	
19-MAY-2012	16:28	VN	2	STD 04 HP8330L4 00001 50ng/mL	A-000003	--	--	--	
19-MAY-2012	17:08	VN	11	MTJEN1AA 2135048 MB	A-000004	1000 mL	20 mL	1	
19-MAY-2012	17:48	VN	12	MTJEN1AC 2135048 LCS	A-000005	1000 mL	20 mL	1	
19-MAY-2012	18:28	VN	13	MTF1X1A4 2135048 E090406-1	A-000006	933.51 mL	20 mL	1	
19-MAY-2012	19:08	VN	14	MTF111A4 2135048 E090406-2	A-000007	839.01 mL	20 mL	1	E'RDX
19-MAY-2012	19:48	VN	15	MTGTA1AA 2131051 MB	A-000008	10 g	80 mL	1	
19-MAY-2012	20:28	VN	16	MTGTA1AC 2131051 LCS	A-000009	10 g	80 mL	1	
19-MAY-2012	21:08	VN	17	MTEA01AD 2131051 E040501-1	A-000010	10.33 g	80 mL	1	
19-MAY-2012	21:49	VN	18	MTEA01AH 2131051 E040501-1S	A-000011	9.97 g	80 mL	1	
19-MAY-2012	22:29	VN	19	MTEA01AJ 2131051 E040501-1D	A-000012	10.03 g	80 mL	1	
19-MAY-2012	23:09	VN	20	MTF011AA 2130043 MB	A-000013	1000 mL	20 mL	1	
19-MAY-2012	23:49	VN	3	STD 05 HP8330L5 00001 100ng/mL	A-000014	--	--	--	
20-MAY-2012	00:29	VN	21	MTF011AC 2130043 LCS	A-000015	1000 mL	20 mL	1	
20-MAY-2012	01:09	VN	22	MTEEL1AA 2130043 E050414-1	A-000016	922.83 mL	20 mL	1	
20-MAY-2012	01:49	VN	23	MTKT81AA 2137044-7042 MB	A-000017	1000 mL	20 mL	1	also MTKTL01AA
20-MAY-2012	02:29	VN	24	MTKT81AC 2137044-7042 LCS	A-000018	1000 mL	20 mL	1	also MTKTL01AC
20-MAY-2012	03:10	VN	25	MTH291AA 2137044 E110475-1	A-000019	1001.95 mL	20 mL	1	
20-MAY-2012	03:50	VN	26	MTH9L1AA 2137044 E120415-1	A-000020	996.45 mL	20 mL	1	VMN 5/23/12
20-MAY-2012	04:30	VN	27	MTH9M1AA 2137044 E120416-1	A-000021	995.9 mL	20 mL	1	
20-MAY-2012	05:11	VN	28	MTH861AC 2137042 E120412-1	A-000022	984.85 mL	20 mL	1	
20-MAY-2012	05:51	VN	29	MTH9E1AC 2137042 E120413-2	A-000023	991.05 mL	20 mL	1	
20-MAY-2012	06:31	VN	30	MTH9J1AC 2137042 E120413-6	A-000024	984.57 mL	20 mL	1	
20-MAY-2012	07:12	VN	4	STD 05 HP8330L5 00001 100ng/mL	A-000025	--	--	--	
20-MAY-2012	07:52	VN	31	MTE6V1AA 2129029 MB	A-000026	1000 mL	20 mL	1	
20-MAY-2012	08:32	VN	32	MTE6V1AC 2129029 LCS	A-000027	1000 mL	20 mL	1	
20-MAY-2012	09:12	VN	33	MTDJG1AA 2129029 E030453-1	A-000028	983.46 mL	20 mL	1	
20-MAY-2012	09:53	VN	34	MTDN91AA 2129029 E030474-1	A-000029	10 mL	20 mL	1	
20-MAY-2012	10:33	VN	35	MTEA71AA 2129029 E040503-1	A-000030	983.67 mL	20 mL	1	
20-MAY-2012	11:13	VN	36	MTEGX1AA 2129029 E050429-1	A-000031	1004.61 mL	20 mL	1	
20-MAY-2012	11:53	VN	5	STD 05 HP8330L5 00001 100ng/mL	A-000032	--	--	--	

GC-LC Log 2011-12-14 ERS

Sequence Checked: TBM 5/24/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

GC/HPLC ICAL Checklist

Instrument ID: LC10 ICAL ID: 04192012C Method: 8330A/B

Analytes Included in curve (with dates): 8330 All + NG, PETN, 3,5DNA + EGDN

A. Included Sections of ICAL	Analyst	Reviewer	N/A
1. ICAL Summary included (for both columns if applicable).	✓	✓	
2. ICAL Runlog included.	✓	✓	
3. ICAL's are in chronological order.	✓	✓	
4. PEM meets requirements and is included for 8081.			✓
5. Alkane Marker included for 8015 TPH.			✓
6. ICAL Raw Data included for all analytes.	✓	✓	
B. ICAL Summary			
1. All analytes meet %RSD or linear regression requirements.	✓	✓	
2. ICAL meets requirements stated in SOP.	✓	✓	
2. Any levels dropped are reviewed and appropriate.			✓
3. All analytes in ICAL are in the ICAL summary.	✓	✓	
4. RFs are calculated correctly. Perform Manual calculation.	✓	✓	
C. ICAL Analysis			
1. Manual Integrations reviewed and appropriate.			✓
2. All peaks correctly identified.	✓	✓	
3. No analytes have saturated peaks.	✓	✓	
4. RT windows set correctly (8015 TPH).			✓
5. ICV meets requirements and is run after the ICAL.	✓	✓	
6. Standards used in ICAL are current.	✓	✓	
7. ICAL is copied to source method.	✓	✓	

Curve Valid for:	Yes	No	Criteria
Standard SOP	✓		RSD ≤20%, r≥ 0.995 (intercept <1/2RL for 8081,8082, NQ, 8310) and (<RL for 8330) and r>0.990 (intercept <RL for 8015), ICV≤15%, PEM ≤15%
DOD QSM V3	✓		RSD ≤20%, r≥ 0.995, ICV≤20%, PEM ≤15%
AFCEE 3.1	✓		RSD ≤20%, r≥ 0.995, ICV≤15%, PEM ≤15%
AFCEE 4.0	✓		RSD ≤20%, r≥ 0.995, ICV≤20% (8081, 8082, 8015) and ICV≤25% (8330,8310), PEM ≤15%

Analyst: [signature] Date: 4/20/12

Reviewer: [signature] Date: 4/23/12

Comments:
MRL for EGDN was analyzed after samples had already been analyzed. As MRLs were passing + S/N was greater than 5:1 on ICAL and on RL level analyzed after samples there is no further action.

TestAmerica West Sacramento

INITIAL CALIBRATION DATA

Start Cal Date : 19-APR-2012 11:48
End Cal Date : 19-APR-2012 16:29
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\terastation\share\GCdata\LC10.I\04192012C.B\8330AB.M
Last Edit : 20-Apr-2012 11:10 tap
Curve Type : Average

Calibration File Names:
Level 1: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000005.d
Level 2: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000006.d
Level 3: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000007.d
Level 4: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000008.d
Level 5: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000009.d
Level 6: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000010.d
Level 7: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000011.d
Level 8: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000012.d

Compound	5.000 Level 1	10.000 Level 2	20.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD
	500.000 Level 7	1000.000 Level 8						
2 HMX	126	128	127	127	130	128		
	121	106					124	6.361
3 RDX	114	103	95.55000	91.70000	92.85000	87.82000		
	79.85000	64.39000					91.13250	16.312
4 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
	[illegible]	[illegible]						
5 Picric Acid	100	89.35000	88.50000	87.00000	95.61000	90.92600		
	82.43200	68.57300					89.18637	11.173
6 1,3,5-Trinitrobenzene	178	172	168	167	171	167		
	157	136					164	7.806
7 1,3-Dinitrobenzene	177	177	172	171	176	171		
	159	136					167	8.317
8 3,5-Dinitroaniline	121	116	114	113	114	112		
	105	89.54500					111	8.747
9 TETRYL	103	104	100	99	102	102		
	99	95.04200					101	2.796

METHOD BLANK REPORT

HPLC

Client Lot #...: G2E120412 **Work Order #...:** MTKT61AA **Matrix.....:** WATER
MB Lot-Sample #: G2E160000-042

Prep Date.....: 05/16/12
Analysis Date..: 05/20/12 **Prep Batch #...:** 2137042
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
RDX	ND	0.10	ug/L	SW846 8330/8330A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	99	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: G2E120412 **Work Order #...:** MTKT61AC **Matrix.....:** WATER
LCS Lot-Sample#: G2E160000-042
Prep Date.....: 05/16/12 **Analysis Date..:** 05/20/12
Prep Batch #...: 2137042
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
RDX	**116**	**(68 - 122)**	**SW846 8330/8330A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	103	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: G2E120412 Work Order #...: MTKT61AC Matrix.....: WATER
LCS Lot-Sample#: G2E160000-042
Prep Date.....: 05/16/12 Analysis Date..: 05/20/12
Prep Batch #...: 2137042
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
RDX	1.00	1.16	ug/L	116	SW846 8330/8330A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	103	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: G2E120412 **Work Order #...:** MTKT61AC **Matrix.....:** WATER
LCS Lot-Sample#: G2E160000-042
Prep Date.....: 05/16/12 **Analysis Date..:** 05/20/12
Prep Batch #...: 2137042
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
RDX	**116**	**(68 - 122)**	**SW846 8330/8330A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	103	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: G2E120412 **Work Order #...:** MTKT61AC **Matrix.....:** WATER
LCS Lot-Sample#: G2E160000-042
Prep Date.....: 05/16/12 **Analysis Date..:** 05/20/12
Prep Batch #...: 2137042
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
RDX	**1.00**	**1.16**	**ug/L**	**116**	**SW846 8330/83**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	103	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TestAmerica West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_ICV HP8330IC_00001 200ng/mL Instrument: LC10
Analyzed : 19-APR-2012 19:10 File ID: 04192012C.B/A-000016.d
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

			Side A					Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	200	5.203	0.000	26867	216.7	8.4					
2	RDX	200	7.427	0.000	18249	200.2	0.10					
3	Picric ACID	500	8.427	0.000	45768	513.2	2.6	8.427	0.000	67817	490.0	-2.0
4	1,3,5-Trinitrobenz	200	9.667	0.000	34032	207.0	3.5					
5	1,3-Dinitrobenzene	200	12.197	0.000	33740	201.6	0.80					
6	3,5-Dinitroaniline	200	12.903	0.000	23692	214.1	7.1					
7	TETRYL	200	13.197	0.000	21422	212.9	6.5					
8	Nitrobenzene	200	13.840	0.000	15980	209.0	4.5					
9	2,4,6-Trinitrotolu	200	15.233	0.000	21337	209.9	5.0					
10	4-AM-2,6-DNT	200	15.723	0.000	16240	199.6	-0.20					
11	3,4-Dinitrotoluene	200	not spiked									
12	2-AM-4,6-DNT	200	16.673	0.000	18187	201.8	0.90					
13	2,6-Dinitrotoluene	200	18.147	0.000	13083	204.1	2.1					
14	2,4-Dinitrotoluene	200	18.783	0.000	21617	205.0	2.5					
15	2-Nitrotoluene	200	21.863	0.000	9463	201.4	0.70					
16	4-Nitrotoluene	200	23.417	0.000	11656	204.5	2.3					
17	3-Nitrotoluene	200	25.130	0.000	11587	206.4	3.2					
18	PETN	200						26.993	0.000	8623	219.9	10
19	Nitroglycerin	200						14.360	0.000	14437	217.6	8.8
20	EGDN	200										

ICV passes ±15%.
RM 4/20/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/20/2012 10:24

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_03 HP8330L3_00001 20ng/mL Instrument: LC10
Analyzed : 20-APR-2012 10:35 File ID: 04192012C.B/A-000039.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

			Side A					Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	20.0 NA	5.204	0.000	2056	16.58	-17					
2	RDX	20.0	7.428	0.000	1630	17.89	-11					
3	Picric ACID	50.0	8.494	0.000	3725	41.77	-16	8.494	0.000	5642	40.77	-18
4	1,3,5-Trinitrobenz	20.0	9.671	0.000	2816	17.13	-14					
5	1,3-Dinitrobenzene	20.0	12.201	0.000	2870	17.14	-14					
6	3,5-Dinitroaniline	20.0	12.911	0.000	1925	17.39	-13					
7	TETRYL	20.0	13.191	0.000	1645	16.35	-18					
8	Nitrobenzene	20.0	13.844	0.000	1237	16.18	-19					
9	2,4,6-Trinitrotolu	20.0	15.238	0.000	1692	16.65	-17					
10	4-AM-2,6-DNT	20.0	15.744	0.000	1374	16.89	-16					
11	3,4-Dinitrotoluene	20.0	16.171	0.000	949	16.15	-19	16.171	0.000	1828	16.74	-16
12	2-AM-4,6-DNT	20.0	16.678	0.000	1521	16.88	-16					
13	2,6-Dinitrotoluene	20.0	18.134	0.000	1074	16.75	-16					
14	2,4-Dinitrotoluene	20.0	18.781	0.000	1763	16.72	-16					
15	2-Nitrotoluene	20.0	21.844	0.000	743	15.81	-21					
16	4-Nitrotoluene	20.0	23.421	0.000	900	15.79	-21					
17	3-Nitrotoluene	20.0	25.121	0.000	870	15.50	-23					
18	PETN	20.0					NA	27.014	0.000	441	11.25	-44
19	Nitroglycerin	20.0						14.351	0.000	1120	16.88	-16
20	EGDN	20.0						8.094	0.000	1445	15.34	-23

MRL for EGDN only
passes S/$N > 5:1
TAN 4/20/12

DualCalc.Mac Rev 1 02 11/27/2011 ERS Printed : 04/20/2012 11:10

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 19-MAY-2012 23:49 File ID: 05192012.B/A-000014.D
Operator : VN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.197	0.000	12967	104.6	4.6					
2	RDX	100	7.431	0.000	9294	102.0	2.0					
3	Picric ACID	200	8.477	0.000	19468	218.3	9.2	8.477	0.000	28869	208.5	4.3
4	1,3,5-Trinitrobenz	100	9.661	0.000	17104	104.0	4.0					
5	1,3-Dinitrobenzene	100	12.194	0.000	17626	105.3	5.3					
6	3,5-Dinitroaniline	100	12.894	0.000	11391	102.9	2.9					
7	TETRYL	100	13.187	0.000	10252	101.9	1.9					
8	Nitrobenzene	100	13.834	0.000	8094	105.8	5.8					
9	2,4,6-Trinitrotolu	100	15.207	0.000	10505	103.4	3.4					
10	4-AM-2,6-DNT	100	15.707	0.000	8290	101.9	1.9					
11	3,4-Dinitrotoluene	100	16.164	0.000	6081	103.5	3.5	16.164	0.000	10932	100.1	0.10
12	2-AM-4,6-DNT	100	16.651	0.000	9179	101.8	1.8					
13	2,6-Dinitrotoluene	100	18.117	0.000	6609	103.1	3.1					
14	2,4-Dinitrotoluene	100	18.751	0.000	10785	102.3	2.3					
15	2-Nitrotoluene	100	21.814	0.000	4747	101.0	1.0					
16	4-Nitrotoluene	100	23.387	0.000	5764	101.1	1.1					
17	3-Nitrotoluene	100	25.107	0.000	5737	102.2	2.2					
18	PETN	100						26.937	0.000	3910	99.72	-0.28
19	Nitroglycerin	100						14.347	0.000	6701	101.0	1.0
20	EGDN	100						8.090	0.000	10900	115.8	16 NA

5/21/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 05/20/2012 00:24

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 20-MAY-2012 07:12 File ID: 05192012.B/A-000025.D
Operator : VN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A					Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.195	0.000	12942	104.4	4.4					
2	RDX	100	7.425	0.000	9251	101.5	1.5					
3	Picric ACID	200	8.469	0.000	19587	219.6	9.8	8.469	0.000	28813	208.2	4.1
4	1,3,5-Trinitrobenz	100	9.655	0.000	17099	104.0	4.0					
5	1,3-Dinitrobenzene	100	12.182	0.000	17638	105.4	5.4					
6	3,5-Dinitroaniline	100	12.882	0.000	11386	102.9	2.9					
7	TETRYL	100	13.175	0.000	10233	101.7	1.7					
8	Nitrobenzene	100	13.822	0.000	8052	105.3	5.3					
9	2,4,6-Trinitrotolu	100	15.202	0.000	10435	102.7	2.7					
10	4-AM-2,6-DNT	100	15.695	0.000	8266	101.6	1.6					
11	3,4-Dinitrotoluene	100	16.152	0.000	6070	103.3	3.3	16.152	0.000	11528	105.5	5.5
12	2-AM-4,6-DNT	100	16.635	0.000	9100	101.0	1.0					
13	2,6-Dinitrotoluene	100	18.109	0.000	6563	102.4	2.4					
14	2,4-Dinitrotoluene	100	18.742	0.000	10764	102.1	2.1					
15	2-Nitrotoluene	100	21.805	0.000	4744	101.0	1.0					
16	4-Nitrotoluene	100	23.372	0.000	5799	101.7	1.7					
17	3-Nitrotoluene	100	25.092	0.000	5737	102.2	2.2					
18	PETN	100						26.962	0.000	3985	101.6	1.6
19	Nitroglycerin	100						14.335	0.000	7498	113.0	13
20	EGDN	100						8.085	0.000	10863	115.6	16

5/21/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 05/20/2012 07:47

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: SIMON Method: 300.0

Start Date: 05/09/2012 16:59 End Date: 05/09/2012 20:32

Lab Sample ID	D / F	Type	Time	Analytes
ZZZZZZ			16:59	
ZZZZZZ			17:15	
STD1 240-43460/3 IC			17:31	
STD2 240-43460/4 IC			17:48	
STD3 240-43460/5 IC			18:04	
STD4 240-43460/6 IC			18:21	
STD5 240-43460/7 ICRT			18:37	
STD6 240-43460/8 IC			18:53	
STD7 240-43460/9 IC			19:10	
STD8 240-43460/10 IC			19:26	
STD9 240-43460/11 IC			19:43	
ZZZZZZ			19:59	
ICV 240-43460/13	1		20:15	
ICB 240-43460/14			20:32	

Prep Types

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: SIMON Method: 300.0

Start Date: 05/09/2012 16:59 End Date: 05/09/2012 20:32

Lab Sample ID	D / F	Type	Time	Analytes
ZZZZZZ			16:59	
ZZZZZZ			17:15	
STD1 240-43461/3 IC			17:31	
STD2 240-43461/4 IC			17:48	
STD3 240-43461/5 IC			18:04	
STD4 240-43461/6 IC			18:21	
STD5 240-43461/7 ICRT			18:37	
STD6 240-43461/8 IC			18:53	
STD7 240-43461/9 IC			19:10	
STD8 240-43461/10 IC			19:26	
STD9 240-43461/11 IC			19:43	
ZZZZZZ			19:59	
ICV 240-43461/13	1		20:15	
ICB 240-43461/14			20:32	

Prep Types

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Analyst: LG Batch Start Date: 05/09/2012

Reporting Units: mg/L Analytical Batch No.: 43460

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	20:15	Chloride	52.9	50.0	106	90-110		WCICLCS_00090
			Sulfate	49.4	50.0	99	90-110		WCICLCS_00090

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Analyst: LG Batch Start Date: 05/09/2012

Reporting Units: mg/L Analytical Batch No.: 43461

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
13	ICV	20:15	Nitrite as N	2.48	2.50	99	90-110		WCICLCS_00090
			Nitrate as N	2.41	2.50	96	90-110		WCICLCS_00090
			Orthophosphate	2.54	2.50	102	90-110		WCICLCS_00090

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: SIMON Method: 300.0

Start Date: 05/11/2012 07:22 End Date: 05/11/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																						
				CL-	SO4																					
ZZZZZZ			07:22																							
ZZZZZZ			07:38																							
CCV 240-43652/3	1		07:54	X	X																					
CCB 240-43652/4	1		08:12	X	X																					
MB 240-43652/5	1	T	08:28	X	X																					
LCS 240-43652/6	1	T	08:45	X	X																					
ZZZZZZ			09:01																							
ZZZZZZ			09:17																							
ZZZZZZ			09:34																							
ZZZZZZ			09:50																							
ZZZZZZ			10:07																							
ZZZZZZ			10:23																							
ZZZZZZ			10:39																							
CCV 240-43652/14	1		10:56	X	X																					
CCB 240-43652/15	1		11:12	X	X																					
ZZZZZZ			16:30																							
ZZZZZZ			16:47																							
ZZZZZZ			17:03																							
240-11217-2	10	T	17:20	X																						
ZZZZZZ			17:36																							
240-11217-5	10	T	17:52	X	X																					
CCV 240-43652/25	1		18:09	X	X																					
CCB 240-43652/26	1		18:25	X	X																					
ZZZZZZ			18:42																							
240-11221-K-2 MS	1	T	18:58	X	X																					
ZZZZZZ			19:14																							
ZZZZZZ			19:31																							
ZZZZZZ			19:47																							
ZZZZZZ			20:04																							
ZZZZZZ			20:20																							
ZZZZZZ			20:36																							
ZZZZZZ			20:53																							
CCV 240-43652/36	1		21:09	X	X																					
CCB 240-43652/37	1		21:26	X	X																					

Prep Types

T = Total/NA

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Analyst: LG Batch Start Date: 05/11/2012

Reporting Units: mg/L Analytical Batch No.: 43652

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	07:54	Chloride	53.4	50.0	107	90-110		WCICCCV_00142
			Sulfate	49.9	50.0	100	90-110		WCICCCV_00142
4	CCB	08:12	Chloride	1.0				U	
			Sulfate	1.0				U	
14	CCV	10:56	Chloride	53.8	50.0	108	90-110		WCICCCV_00142
			Sulfate	50.3	50.0	101	90-110		WCICCCV_00142
15	CCB	11:12	Chloride	0.332				J	
			Sulfate	1.0				U	
25	CCV	18:09	Chloride	54.6	50.0	109	90-110		WCICCCV_00142
			Sulfate	50.6	50.0	101	90-110		WCICCCV_00142
26	CCB	18:25	Chloride	1.0				U	
			Sulfate	1.0				U	
36	CCV	21:09	Chloride	54.3	50.0	109	90-110		WCICCCV_00142
			Sulfate	51.0	50.0	102	90-110		WCICCCV_00142
37	CCB	21:26	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: SIMON Method: 300.0

Start Date: 05/11/2012 07:22 End Date: 05/11/2012 21:26

Lab Sample ID	D / F	Type	Time	Analytes																						
				N-No2	NO3	PO4																				
ZZZZZZ			07:22																							
ZZZZZZ			07:38																							
CCV 240-43653/3	1		07:54	X	X	X																				
CCB 240-43653/4	1		08:12	X	X	X																				
MB 240-43653/5	1	T	08:28	X	X	X																				
LCS 240-43653/6	1	T	08:45	X	X	X																				
ZZZZZZ			09:01																							
ZZZZZZ			09:17																							
ZZZZZZ			09:34																							
240-11168-O-7 MS	1	T	09:50	X	X	X																				
ZZZZZZ			10:07																							
ZZZZZZ			10:23																							
ZZZZZZ			10:39																							
CCV 240-43653/14	1		10:56	X	X	X																				
CCB 240-43653/15	1		11:12	X	X	X																				
ZZZZZZ			15:41																							
240-11142-J-1 MS	1	T	15:57	X	X	X																				
240-11142-J-1 MSD	1	T	16:14	X	X	X																				
ZZZZZZ			16:30																							
ZZZZZZ			16:47																							
240-11217-2	1	T	17:03		X	X																				
240-11217-2	10	T	17:20	X																						
240-11217-5	1	T	17:36	X	X	X																				
ZZZZZZ			17:52																							
CCV 240-43653/25	1		18:09	X	X	X																				
CCB 240-43653/26	1		18:25	X	X	X																				
ZZZZZZ			18:42																							
ZZZZZZ			18:58																							
ZZZZZZ			19:14																							
ZZZZZZ			19:31																							
ZZZZZZ			19:47																							
ZZZZZZ			20:04																							
ZZZZZZ			20:20																							
ZZZZZZ			20:36																							
ZZZZZZ			20:53																							
CCV 240-43653/36			21:09																							
CCB 240-43653/37			21:26																							

Prep Types

T = Total/NA

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Analyst: LG Batch Start Date: 05/11/2012

Reporting Units: mg/L Analytical Batch No.: 43653

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	07:54	Nitrite as N	2.53	2.50	101	90-110		WCICCCV_00142
			Nitrate as N	2.54	2.50	102	90-110		WCICCCV_00142
			Orthophosphate	2.42	2.50	97	90-110		WCICCCV_00142
4	CCB	08:12	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate	0.50				U	
14	CCV	10:56	Nitrite as N	2.50	2.50	100	90-110		WCICCCV_00142
			Nitrate as N	2.50	2.50	100	90-110		WCICCCV_00142
			Orthophosphate	2.56	2.50	102	90-110		WCICCCV_00142
15	CCB	11:12	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate	0.50				U	
25	CCV	18:09	Nitrite as N	2.53	2.50	101	90-110		WCICCCV_00142
			Nitrate as N	2.51	2.50	100	90-110		WCICCCV_00142
			Orthophosphate	2.50	2.50	100	90-110		WCICCCV_00142
26	CCB	18:25	Nitrite as N	0.10				U	
			Nitrate as N	0.10				U	
			Orthophosphate	0.50				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: SIMON Method: 300.0

Start Date: 05/21/2012 12:57 End Date: 05/22/2012 02:37

Lab Sample ID	D / F	Type	Time	Analytes																					
				CL-1	SO4																				
ZZZZZZ			12:57																						
ZZZZZZ			13:13																						
CCV 240-44755/3	1		13:29	X	X																				
CCB 240-44755/4	1		13:46	X	X																				
MB 240-44755/5	1	T	14:02	X	X																				
LCS 240-44755/6	1	T	14:19	X	X																				
ZZZZZZ			14:35																						
ZZZZZZ			14:51																						
ZZZZZZ			15:08																						
ZZZZZZ			15:24																						
ZZZZZZ			15:41																						
ZZZZZZ			15:57																						
ZZZZZZ			16:13																						
CCV 240-44755/14	1		16:30	X	X																				
CCB 240-44755/15	1		16:46	X	X																				
ZZZZZZ			17:03																						
240-11214-F-5 MS	1	T	17:19	X	X																				
240-11217-2	20	T	17:35		X																				
ZZZZZZ			17:52																						
ZZZZZZ			18:08																						
ZZZZZZ			18:25																						
ZZZZZZ			18:41																						
ZZZZZZ			18:58																						
ZZZZZZ			19:14																						
ZZZZZZ			19:30																						
CCV 240-44755/26	1		19:47	X	X																				
CCB 240-44755/27	1		20:03	X	X																				
ZZZZZZ			20:20																						
ZZZZZZ			20:36																						
ZZZZZZ			20:52																						
ZZZZZZ			21:09																						
ZZZZZZ			21:25																						
ZZZZZZ			21:42																						
ZZZZZZ			21:58																						
ZZZZZZ			22:14																						
ZZZZZZ			22:31																						
ZZZZZZ			22:47																						
CCV 240-44755/38			23:04																						
CCB 240-44755/39			23:20																						
ZZZZZZ			23:36																						
ZZZZZZ			23:53																						
ZZZZZZ			00:09																						

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: SIMON Method: 300.0

Start Date: 05/21/2012 12:57 End Date: 05/22/2012 02:37

Lab Sample ID	D / F	Type	Time	Analytes																				
				CL-	SO4																			
ZZZZZZ			00:26																					
ZZZZZZ			00:42																					
ZZZZZZ			00:59																					
ZZZZZZ			01:15																					
ZZZZZZ			01:31																					
ZZZZZZ			01:48																					
ZZZZZZ			02:04																					
CCV 240-44755/50			02:21																					
CCB 240-44755/51			02:37																					

Prep Types
T = Total/NA

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Analyst: LG Batch Start Date: 05/21/2012

Reporting Units: mg/L Analytical Batch No.: 44755

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
3	CCV	13:29	Chloride	50.3	50.0	101	90-110		WCICCCV_00146
			Sulfate	46.8	50.0	94	90-110		WCICCCV_00146
4	CCB	13:46	Chloride	1.0				U	
			Sulfate	1.0				U	
14	CCV	16:30	Chloride	52.4	50.0	105	90-110		WCICCCV_00146
			Sulfate	49.0	50.0	98	90-110		WCICCCV_00146
15	CCB	16:46	Chloride	1.0				U	
			Sulfate	1.0				U	
26	CCV	19:47	Chloride	52.5	50.0	105	90-110		WCICCCV_00146
			Sulfate	49.0	50.0	98	90-110		WCICCCV_00146
27	CCB	20:03	Chloride	1.0				U	
			Sulfate	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: DAVE Method: 350.3

Start Date: 05/22/2012 08:09 End Date: 05/22/2012 11:12

Lab Sample ID	D / F	Type	Time	Analytes: NH3																						
IC 240-44893/1			08:09	X																						
IC 240-44893/2			08:09	X																						
IC 240-44893/3			08:09	X																						
IC 240-44893/4			08:09	X																						
ICV 240-44893/5	5		08:09	X																						
ICB 240-44893/6	1		08:23	X																						
MB 240-44893/7	1	T	08:25	X																						
LCS 240-44893/8	5	T	08:30	X																						
ZZZZZZ			08:34																							
ZZZZZZ			08:42																							
ZZZZZZ			08:47																							
240-11215-I-2 MS	1	T	08:59	X																						
240-11215-I-2 MSD	1	T	09:03	X																						
ZZZZZZ			09:15																							
ZZZZZZ			09:25																							
240-11217-2	10	T	09:30	X																						
CCV 240-44893/17	1		09:33	X																						
CCB 240-44893/18	1		09:40	X																						
240-11217-5	2	T	09:51	X																						
ZZZZZZ			09:55																							
ZZZZZZ			10:01																							
ZZZZZZ			10:06																							
ZZZZZZ			10:10																							
ZZZZZZ			10:14																							
ZZZZZZ			10:18																							
ZZZZZZ			10:30																							
ZZZZZZ			10:34																							
ZZZZZZ			10:39																							
CCV 240-44893/29	1		10:42	X																						
CCB 240-44893/30	1		10:48	X																						
ZZZZZZ			10:52																							
ZZZZZZ			10:56																							
ZZZZZZ			10:58																							
ZZZZZZ			11:01																							
CCV 240-44893/35			11:03																							
CCB 240-44893/36			11:12																							

Prep Types

T = Total/NA

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Analyst: LG Batch Start Date: 05/22/2012

Reporting Units: mg/L Analytical Batch No.: 44893

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
5	ICV	08:09	Ammonia (as N)	6.92	6.86	101	90-110		WCSIMPNUTRNT_00013
6	ICB	08:23	Ammonia (as N)	0.20				U	
17	CCV	09:33	Ammonia (as N)	2.55	2.50	102	90-110		WCNH31000PPM_00004
18	CCB	09:40	Ammonia (as N)	0.0408				J	
29	CCV	10:42	Ammonia (as N)	2.45	2.50	98	90-110		WCNH31000PPM_00004
30	CCB	10:48	Ammonia (as N)	0.0600				J	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: SPARKY Method: 9060

Start Date: 05/29/2012 08:57 End Date: 05/29/2012 17:17

Lab Sample ID	D / F	Type	Time	Analytes																				
				DOC																				
CCV 240-45603/1	1		08:57	X																				
CCB 240-45603/2	1		09:08	X																				
MB 240-45603/3	1	D	09:19	X																				
LCS 240-45603/4	2	D	09:29	X																				
ZZZZZZ			09:40																					
240-11313-J-7 MS	2	D	10:22	X																				
240-11217-2	1	D	10:32	X																				
240-11217-5	1	D	11:14	X																				
ZZZZZZ			11:55																					
ZZZZZZ			12:36																					
ZZZZZZ			13:18																					
ZZZZZZ			13:59																					
CCV 240-45603/13	1		14:40	X																				
CCB 240-45603/14	1		14:51	X																				
ZZZZZZ			15:02																					
ZZZZZZ			15:43																					
ZZZZZZ			16:25																					
CCV 240-45603/18			17:06																					
CCB 240-45603/19			17:17																					

Prep Types

D = Dissolved

2-IN
CALIBRATION QUALITY CONTROL
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Analyst: TH Batch Start Date: 05/29/2012

Reporting Units: mg/L Analytical Batch No.: 45603

Sample Number	QC Type	Time	Analyte	Result	Spike Amount	(%) Recovery	Limits	Qual	Reagent
1	CCV	08:57	Dissolved Organic Carbon	24.7	25.0	99	90-110		WC TOC CCV_00077
2	CCB	09:08	Dissolved Organic Carbon	1.0				U	
13	CCV	14:40	Dissolved Organic Carbon	25.2	25.0	101	90-110		WC TOC CCV_00077
14	CCB	14:51	Dissolved Organic Carbon	1.0				U	

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM II-IN

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: STEVE Method: 310.1

Start Date: 05/15/2012 09:55 End Date: 05/15/2012 22:32

Lab Sample ID	D / F	Type	Time	Analytes: Alk																				
ZZZZZZ			09:55																					
RINSE 240-44227/2			10:04																					
ZZZZZZ			10:16																					
ZZZZZZ			10:25																					
ZZZZZZ			10:32																					
ZZZZZZ			10:48																					
RINSE 240-44227/7			10:54																					
ZZZZZZ			11:08																					
ZZZZZZ			11:24																					
ZZZZZZ			11:45																					
ZZZZZZ			12:06																					
ZZZZZZ			12:20																					
ZZZZZZ			12:29																					
ZZZZZZ			12:32																					
ZZZZZZ			12:41																					
ZZZZZZ			13:15																					
ZZZZZZ			13:34																					
ZZZZZZ			13:46																					
ZZZZZZ			14:02																					
ZZZZZZ			14:13																					
ZZZZZZ			14:25																					
ZZZZZZ			14:36																					
ZZZZZZ			14:48																					
ZZZZZZ			15:02																					
ZZZZZZ			15:06																					
ZZZZZZ			15:21																					
ZZZZZZ			15:30																					
ZZZZZZ			15:44																					
ZZZZZZ			15:52																					
ZZZZZZ			16:00																					
ZZZZZZ			16:15																					
ZZZZZZ			16:27																					
ZZZZZZ			16:41																					
ZZZZZZ			16:44																					
LCS 240-44227/35	1	T	17:26	X																				
MB 240-44227/36	1	T	17:33	X																				
ZZZZZZ			17:45																					
ZZZZZZ			17:59																					
ZZZZZZ			18:14																					
240-11215-H-2 MS	1	T	18:37	X																				
240-11215-H-2 MSD	1	T	19:00	X																				
ZZZZZZ			19:09																					

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: STEVE Method: 310.1

Start Date: 05/15/2012 09:55 End Date: 05/15/2012 22:32

Lab Sample ID	D / F	Type	Time	Analytes																				
				Alk																				
ZZZZZZ			19:23																					
ZZZZZZ			19:28																					
ZZZZZZ			19:31																					
ZZZZZZ			19:37																					
ZZZZZZ			19:41																					
240-11217-2	1	T	19:52	X																				
240-11217-5	1	T	19:58	X																				
240-11217-5 DU	1	T	20:03	X																				
ZZZZZZ			20:15																					
ZZZZZZ			20:21																					
ZZZZZZ			20:32																					
ZZZZZZ			20:50																					
ZZZZZZ			21:01																					
ZZZZZZ			21:04																					
ZZZZZZ			21:16																					
ZZZZZZ			21:28																					
ZZZZZZ			21:39																					
ZZZZZZ			21:52																					
ZZZZZZ			22:04																					
ZZZZZZ			22:17																					
ZZZZZZ			22:29																					
ZZZZZZ			22:32																					

Prep Types
T = Total/NA

13-IN
ANALYSIS RUN LOG
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: NOEQUIP Method: 160.1

Start Date: 05/17/2012 09:08 End Date: 05/17/2012 09:22

Lab Sample ID	D / F	Type	Time	Analytes																				
				TDS																				
MB 240-44375/1	1	T	09:08	X																				
LCS 240-44375/2	1	T	09:08	X																				
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
240-11266-H-2 DU	1	T	09:08	X																				
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
ZZZZZZ			09:08																					
240-11217-2	4	T	09:08	X																				
ZZZZZZ			09:08																					
240-11217-5	2	T	09:08	X																				
ZZZZZZ			09:22																					
ZZZZZZ			09:22																					
ZZZZZZ			09:22																					
ZZZZZZ			09:22																					
ZZZZZZ			09:22																					
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ZZZZZZ			09:22																					
ZZZZZZ			09:22																					
ZZZZZZ			09:22																					

Prep Types

T = Total/NA

3-IN
METHOD BLANK
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Method	Lab Sample ID	Analyte	Result	Qual	Units	RL	Dil
Batch ID: 44375	Date: 05/17/2012 09:08						
160.1	MB 240-44375/1	Total Dissolved Solids	10	U	mg/L	10	1
Batch ID: 43652	Date: 05/11/2012 08:28						
300.0	MB 240-43652/5	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-43652/5	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 43653	Date: 05/11/2012 08:28						
300.0	MB 240-43653/5	Nitrite as N	0.10	U	mg/L	0.10	1
300.0	MB 240-43653/5	Nitrate as N	0.10	U	mg/L	0.10	1
300.0	MB 240-43653/5	Orthophosphate	0.50	U	mg/L	0.50	1
Batch ID: 44755	Date: 05/21/2012 14:02						
300.0	MB 240-44755/5	Chloride	1.0	U	mg/L	1.0	1
300.0	MB 240-44755/5	Sulfate	1.0	U	mg/L	1.0	1
Batch ID: 44227	Date: 05/15/2012 17:33						
310.1	MB 240-44227/36	Alkalinity	2.90	J	mg/L	5.0	1
Batch ID: 44893	Date: 05/22/2012 08:25						
350.3	MB 240-44893/7	Ammonia (as N)	0.20	U	mg/L	0.20	1
Batch ID: 45603	Date: 05/29/2012 09:19						
9060	MB 240-45603/3	Dissolved Organic Carbon	1.0	U	mg/L	1.0	1

5-IN
MATRIX SPIKE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 43653 Date: 05/11/2012 09:50											
300.0	240-11168-O-7	Nitrite as N	0.10	U	mg/L						
300.0	240-11168-O-7 MS	Nitrite as N	2.94		mg/L	2.50	118	80-120			
300.0	240-11168-O-7	Nitrate as N	0.10	U	mg/L						
300.0	240-11168-O-7 MS	Nitrate as N	2.49		mg/L	2.50	100	80-120			
300.0	240-11168-O-7	Orthophosphate	0.50	U	mg/L						
300.0	240-11168-O-7 MS	Orthophosphate	2.13		mg/L	2.50	85	80-120			
Batch ID: 43653 Date: 05/11/2012 15:57											
300.0	240-11142-J-1	Nitrite as N	0.10	U	mg/L						
300.0	240-11142-J-1 MS	Nitrite as N	2.80		mg/L	2.50	112	80-120			
300.0	240-11142-J-1	Nitrate as N	0.23		mg/L						
300.0	240-11142-J-1 MS	Nitrate as N	2.96		mg/L	2.50	109	80-120			
300.0	240-11142-J-1	Orthophosphate	0.50	U	mg/L						
300.0	240-11142-J-1 MS	Orthophosphate	6.01		mg/L	2.50	240	80-120			F
Batch ID: 43652 Date: 05/11/2012 18:58											
300.0	240-11221-K-2	Chloride	2.1		mg/L						
300.0	240-11221-K-2 MS	Chloride	58.1		mg/L	50.0	112	80-120			
300.0	240-11221-K-2	Sulfate	0.16	J	mg/L						
300.0	240-11221-K-2 MS	Sulfate	51.7		mg/L	50.0	103	80-120			
Batch ID: 44755 Date: 05/21/2012 17:19											
300.0	240-11214-F-5	Chloride	0.91	J	mg/L						
300.0	240-11214-F-5 MS	Chloride	56.3		mg/L	50.0	111	80-120			
300.0	240-11214-F-5	Sulfate	18		mg/L						
300.0	240-11214-F-5 MS	Sulfate	72.7		mg/L	50.0	110	80-120			
Batch ID: 44227 Date: 05/15/2012 18:37											
310.1	240-11215-H-2	Alkalinity	480		mg/L						B
310.1	240-11215-H-2 MS	Alkalinity	930		mg/L	500	90	10-160			
Batch ID: 44893 Date: 05/22/2012 08:59											
350.3	240-11215-I-2	Ammonia (as N)	1.7		mg/L						
350.3	240-11215-I-2 MS	Ammonia (as N)	4.34		mg/L	2.50	106	75-125			
Batch ID: 45603 Date: 05/29/2012 10:22											
9060	240-11313-J-7	Dissolved Organic Carbon	1.5		mg/L						
9060	240-11313-J-7 MS	Dissolved Organic Carbon	29.0		mg/L	25.0	110	72-136			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

5-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 43653 Date: 05/11/2012 16:14											
300.0	240-11142-J-1 MSD	Nitrite as N	2.72		mg/L	2.50	109	80-120	3	20	
300.0	240-11142-J-1 MSD	Nitrate as N	2.83		mg/L	2.50	104	80-120	4	20	
300.0	240-11142-J-1 MSD	Orthophosphate	5.80		mg/L	2.50	232	80-120	4	20	F
Batch ID: 44227 Date: 05/15/2012 19:00											
310.1	240-11215-H-2 MSD	Alkalinity	928		mg/L	500	90	10-160	0	24	
Batch ID: 44893 Date: 05/22/2012 09:03											
350.3	240-11215-I-2 MSD	Ammonia (as N)	4.18		mg/L	2.50	100	75-125	4	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM V-IN

6-IN
DUPLICATE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water

Method	Client Sample ID	Lab Sample ID	Analyte	Result	Unit	RPD	RPD Limit	Qual
Batch ID: 44375	Date: 05/17/2012 09:08							
160.1		240-11266-H-2	Total Dissolved Solids	610	mg/L			
160.1		240-11266-H-2 DU	Total Dissolved Solids	604	mg/L	1	20	
Batch ID: 44227	Date: 05/15/2012 20:03							
310.1	MW18I-051012	240-11217-5	Alkalinity	32	mg/L			
310.1	MW18I-051012	240-11217-5 DU	Alkalinity	31.0	mg/L	3	20	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water

Method	Lab Sample ID	Analyte	Result	C	Unit	Spike Amount	Pct. Rec.	Limits	RPD	RPD Limit	Q
Batch ID: 44375	Date: 05/17/2012 09:08										
						LCS Source: WCMINERALS_00031					
160.1	LCS 240-44375/2	Total Dissolved Solids	153		mg/L	168	91	88-110			
Batch ID: 43652	Date: 05/11/2012 08:45										
						LCS Source: WCICLCS_00090					
300.0	LCS 240-43652/6	Chloride	52.2		mg/L	50.0	104	90-110			
300.0	LCS 240-43652/6	Sulfate	48.1		mg/L	50.0	96	90-110			
Batch ID: 43653	Date: 05/11/2012 08:45										
						LCS Source: WCICLCS_00090					
300.0	LCS 240-43653/6	Nitrite as N	2.43		mg/L	2.50	97	90-110			
300.0	LCS 240-43653/6	Nitrate as N	2.37		mg/L	2.50	95	90-110			
300.0	LCS 240-43653/6	Orthophosphate	2.41		mg/L	2.50	96	90-110			
Batch ID: 44755	Date: 05/21/2012 14:19										
						LCS Source: WCICLCS_00092					
300.0	LCS 240-44755/6	Chloride	50.2		mg/L	50.0	100	90-110			
300.0	LCS 240-44755/6	Sulfate	46.9		mg/L	50.0	94	90-110			
Batch ID: 44227	Date: 05/15/2012 17:26										
						LCS Source: WCMINERALS_00031					
310.1	LCS 240-44227/35	Alkalinity	73.3		mg/L	67.5	109	90-127			
Batch ID: 44893	Date: 05/22/2012 08:30										
						LCS Source: WCSIMPNUTRNT_00013					
350.3	LCS 240-44893/8	Ammonia (as N)	5.87		mg/L	6.86	86	85-114			
Batch ID: 45603	Date: 05/29/2012 09:29										
						LCS Source: WC LCS_00001					
9060	LCS 240-45603/4	Dissolved Organic Carbon	66.5		mg/L	65.5	102	88-115			

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA-IN

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 MDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Alkalinity		5	2.7

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: STEVE

Method: 310.1 XMDL Date: 01/27/2010 17:29

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Alkalinity		5	2.7

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 MDL Date: 01/28/2010 09:50

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: NOEQUIP

Method: 160.1 XMDL Date: 01/28/2010 09:51

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Total Dissolved Solids		10	7.4

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 MDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate		0.5	0.044
Sulfate		1	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: SIMON

Method: 300.0 XMDL Date: 01/27/2010 17:40

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Chloride		1	0.1
Nitrate as N		0.1	0.023
Nitrite as N		0.1	0.012
Orthophosphate		0.5	0.044
Sulfate		1	0.12

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 MDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: DAVE

Method: 350.3 XMDL Date: 01/27/2010 17:09

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Ammonia (as N)		0.2	0.035

9-IN
DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 MDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	RL (mg/L)	MDL (mg/L)
Dissolved Organic Carbon		1	0.24

9-IN
CALIBRATION BLANK DETECTION LIMITS
GENERAL CHEMISTRY - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: SPARKY

Method: 9060 XMDL Date: 01/27/2010 15:20

Analyte	Wavelength/ Mass	XRL (mg/L)	XMDL (mg/L)
Dissolved Organic Carbon		1	0.24

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/17/2012 06:14 End Date: 05/17/2012 13:15

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-44506/1			06:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-44506/2 IC	1		06:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-44506/3 IC	1		06:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-44506/4 IC	1		06:34	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-44506/5	1		06:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-44506/6	1		06:47	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-44506/7	1		06:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-44506/8	1		06:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-44506/9	1		07:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44506/10			07:12																				
CCB 240-44506/11			07:19																				
CCV 240-44506/12	1		07:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44506/13	1		07:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
MB 240-44254/1-A	1	R	07:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-44254/2-A	1	R	07:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			07:50																				
240-11266-I-2-A SD ^5	5	D	07:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11266-I-2-B MS	1	D	08:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11266-I-2-C MSD	1	D	08:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:17																				
ZZZZZZ			08:24																				
ZZZZZZ			08:29																				
ZZZZZZ			08:35																				
CCV 240-44506/24	1		08:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44506/25	1		08:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			08:54																				
ZZZZZZ			08:59																				
ZZZZZZ			09:05																				
ZZZZZZ			09:11																				
240-11217-2	1	R	09:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-2	1	D	09:22	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-3	1	R	09:28	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-3	1	D	09:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-5	1	R	09:39	X	X		X	X	X	X	X	X	X			X		X		X			
240-11217-5	1	D	09:45	X	X		X	X	X	X	X	X	X			X		X		X			
CCV 240-44506/36	1		09:50	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44506/37	1		09:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-6	1	R	10:03	X	X		X	X	X	X	X	X	X			X		X		X			
240-11217-6	1	D	10:09	X	X		X	X	X	X	X	X	X			X		X		X			
240-11217-7	1	R	10:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-7	1	D	10:20	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:26																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/17/2012 06:14 End Date: 05/17/2012 13:15

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			10:31																			
ZZZZZZ			10:37																			
ZZZZZZ			10:44																			
ZZZZZZ			10:50																			
CCV 240-44506/47	1		10:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44506/48	1		11:03	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			11:09																			
ZZZZZZ			11:16																			
ZZZZZZ			11:24																			
ZZZZZZ			11:29																			
ZZZZZZ			11:35																			
ZZZZZZ			11:41																			
ZZZZZZ			11:46																			
ZZZZZZ			11:52																			
ZZZZZZ			11:58																			
ZZZZZZ			12:03																			
CCV 240-44506/59	1		12:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44506/60	1		12:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			12:22																			
ZZZZZZ			12:28																			
ZZZZZZ			12:33																			
240-11217-5	10	R	12:39			X								X	X		X		X			
240-11217-5	5	D	12:45			X								X	X		X		X			
240-11217-6	5	R	12:50			X								X	X		X		X			
240-11217-6	5	D	12:56			X								X	X		X		X			
ZZZZZZ			13:02																			
CCV 240-44506/69	1		13:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44506/70	1		13:15	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			

Prep Types

D = Dissolved

R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	ICV 240-44506/5 05/17/2012 06:40				CCV 240-44506/12 05/17/2012 07:25				CCV 240-44506/24 05/17/2012 08:41			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	83.4		80.0	104	101		100	101	101		100	101
Arsenic	81.0		80.0	101	100		100	100	101		100	101
Barium	80.7		80.0	101	100		100	100	101		100	101
Beryllium	79.4		80.0	99	100		100	100	97.9		100	98
Cadmium	82.4		80.0	103	102		100	102	103		100	103
Chromium	80.8		80.0	101	99.7		100	100	100		100	100
Cobalt	81.1		80.0	101	100		100	100	102		100	102
Copper	82.6		80.0	103	101		100	101	102		100	102
Lead	84.8		80.0	106	106		100	106	106		100	106
Molybdenum	83.3		80.0	104	103		100	103	103		100	103
Nickel	82.6		80.0	103	102		100	102	103		100	103
Selenium	81.3		80.0	102	99.9		100	100	102		100	102
Silver	83.5		80.0	104	102		100	102	104		100	104
Thallium	85.0		80.0	106	106		100	106	107		100	107
Tungsten	81.3		80.0	102	102		100	102	103		100	103
Vanadium	80.9		80.0	101	98.7		100	99	99.6		100	100
Zinc	83.2		80.0	104	102		100	102	102		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	CCV 240-44506/36 05/17/2012 09:50				CCV 240-44506/47 05/17/2012 10:56				CCV 240-44506/59 05/17/2012 12:09			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	101		100	101	101		100	101	101		100	101
Arsenic	101		100	101	99.7		100	100	101		100	101
Barium	99.6		100	100	101		100	101	101		100	101
Beryllium	106		100	106	99.7		100	100	99.2		100	99
Cadmium	103		100	103	102		100	102	102		100	102
Chromium	101		100	101	99.7		100	100	101		100	101
Cobalt	101		100	101	99.9		100	100	102		100	102
Copper	103		100	103	101		100	101	103		100	103
Lead	106		100	106	107		100	107	106		100	106
Molybdenum	104		100	104	102		100	102	104		100	104
Nickel	101		100	101	100		100	100	102		100	102
Selenium	101		100	101	101		100	101	101		100	101
Silver	104		100	104	103		100	103	103		100	103
Thallium	106		100	106	108		100	108	107		100	107
Tungsten	103		100	103	103		100	103	103		100	103
Vanadium	99.6		100	100	98.3		100	98	100		100	100
Zinc	103		100	103	103		100	103	103		100	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00040

Analyte	CCV 240-44506/69 05/17/2012 13:07											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	100		100	100								
Arsenic	101		100	101								
Barium	101		100	101								
Beryllium	99.4		100	99								
Cadmium	103		100	103								
Chromium	101		100	101								
Cobalt	101		100	101								
Copper	104		100	104								
Lead	106		100	106								
Molybdenum	104		100	104								
Nickel	102		100	102								
Selenium	101		100	101								
Silver	103		100	103								
Thallium	108		100	108								
Tungsten	103		100	103								
Vanadium	99.5		100	99								
Zinc	104		100	104								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44506/6 05/17/2012 06:47		CCB 240-44506/13 05/17/2012 07:32		CCB 240-44506/25 05/17/2012 08:48		CCB 240-44506/37 05/17/2012 09:57	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.316	J	0.850	J	0.300	J	0.267	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.233	J	0.324	J	0.276	J	0.221	J
Tungsten	10	0.372	J	0.396	J	10	U	10	U
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-44506/48 05/17/2012 11:03		CCB 240-44506/60 05/17/2012 12:16		CCB 240-44506/70 05/17/2012 13:15			
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U		
Arsenic	5.0	5.0	U	5.0	U	5.0	U		
Barium	5.0	5.0	U	5.0	U	5.0	U		
Beryllium	1.0	1.0	U	1.0	U	1.0	U		
Cadmium	1.0	1.0	U	1.0	U	1.0	U		
Chromium	2.0	2.0	U	2.0	U	2.0	U		
Cobalt	1.0	0.0580	J	0.0800	J	1.0	U		
Copper	2.0	2.0	U	2.0	U	2.0	U		
Lead	1.0	1.0	U	1.0	U	1.0	U		
Molybdenum	10	0.293	J	0.299	J	0.205	J		
Nickel	2.0	2.0	U	2.0	U	2.0	U		
Selenium	5.0	5.0	U	5.0	U	5.0	U		
Silver	1.0	1.0	U	1.0	U	1.0	U		
Thallium	2.0	0.236	J	0.211	J	0.179	J		
Tungsten	10	10	U	10	U	10	U		
Vanadium	20	20	U	20	U	20	U		
Zinc	20	20	U	20	U	20	U		

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-44805/1			08:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-44805/2 IC	1		08:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-44805/3 IC	1		08:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-44805/4 IC	1		08:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-44805/5	1		08:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-44805/6	1		09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-44805/7	1		09:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-44805/8	1		09:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-44805/9	1		09:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44805/10			09:29																				
CCB 240-44805/11			09:36																				
ZZZZZZ			09:42																				
ZZZZZZ			09:47																				
ZZZZZZ			09:55																				
ZZZZZZ			10:00																				
ZZZZZZ			10:08																				
ZZZZZZ			10:15																				
ZZZZZZ			10:21																				
ZZZZZZ			10:26																				
ZZZZZZ			10:32																				
ZZZZZZ			10:38																				
CCV 240-44805/22	1		10:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44805/23	1		10:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:57																				
ZZZZZZ			11:02																				
ZZZZZZ			11:08																				
ZZZZZZ			11:14																				
ZZZZZZ			11:19																				
ZZZZZZ			11:25																				
ZZZZZZ			11:30																				
ZZZZZZ			11:36																				
MB 240-44621/1-A	1	R	11:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-44621/2-A	1	R	11:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44805/34	1		11:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44805/35	1		12:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4	1	R	12:08	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4 SD	5	R	12:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4 DU	1	R	12:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4 MS	1	R	12:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			12:33																				
ZZZZZZ			12:38																				
ZZZZZZ			12:44																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			12:50																			
ZZZZZZ			12:55																			
ZZZZZZ			13:01																			
CCV 240-44805/46	1		13:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-44805/47	1		13:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
ZZZZZZ			13:19																			
ZZZZZZ			13:25																			
ZZZZZZ			13:31																			
ZZZZZZ			13:36																			
ZZZZZZ			13:42																			
ZZZZZZ			13:48																			
ZZZZZZ			13:53																			
ZZZZZZ			13:59																			
ZZZZZZ			14:05																			
ZZZZZZ			14:10																			
CCV 240-44805/58			14:16																			
CCB 240-44805/59			14:23																			
ZZZZZZ			14:29																			
ZZZZZZ			14:35																			
ZZZZZZ			14:40																			
ZZZZZZ			14:46																			
ZZZZZZ			14:51																			
ZZZZZZ			14:59																			
ZZZZZZ			15:04																			
ZZZZZZ			15:10																			
ZZZZZZ			15:18																			
ZZZZZZ			15:25																			
CCV 240-44805/70			15:31																			
CCB 240-44805/71			15:38																			
ZZZZZZ			15:44																			
ZZZZZZ			15:49																			
ZZZZZZ			15:55																			
ZZZZZZ			16:01																			
ZZZZZZ			16:06																			
ZZZZZZ			16:12																			
ZZZZZZ			16:18																			
ZZZZZZ			16:23																			
ZZZZZZ			16:31																			
ZZZZZZ			16:36																			
CCV 240-44805/82			16:42																			
CCB 240-44805/83			16:49																			
ZZZZZZ			16:55																			

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			17:02																				
ZZZZZZ			17:10																				
ZZZZZZ			17:15																				
ZZZZZZ			17:21																				
ZZZZZZ			17:27																				
ZZZZZZ			17:33																				
ZZZZZZ			17:38																				
ZZZZZZ			17:44																				
ZZZZZZ			17:50																				
CCV 240-44805/94			17:55																				
CCB 240-44805/95			18:03																				
ZZZZZZ			18:08																				
ZZZZZZ			18:14																				
ZZZZZZ			18:20																				
ZZZZZZ			18:25																				
ZZZZZZ			18:31																				
ZZZZZZ			18:37																				
ZZZZZZ			18:42																				
ZZZZZZ			18:48																				
ZZZZZZ			18:54																				
ZZZZZZ			18:59																				
CCV 240-44805/106			19:05																				
CCB 240-44805/107			19:12																				
ZZZZZZ			19:18																				
ZZZZZZ			19:24																				
ZZZZZZ			19:29																				
ZZZZZZ			19:37																				
ZZZZZZ			19:42																				
ZZZZZZ			19:48																				
ZZZZZZ			19:56																				
ZZZZZZ			20:03																				
ZZZZZZ			20:09																				
ZZZZZZ			20:14																				
CCV 240-44805/118			20:20																				
CCB 240-44805/119			20:27																				
ICSA 240-44805/120			20:33																				
ICSAB 240-44805/121			20:39																				
CCV 240-44805/122			20:46																				
CCB 240-44805/123			20:54																				
ZZZZZZ			20:59																				
ZZZZZZ			21:05																				
ZZZZZZ			21:11																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			21:16																				
ZZZZZZ			21:22																				
ZZZZZZ			21:28																				
ZZZZZZ			21:33																				
ZZZZZZ			21:39																				
ZZZZZZ			21:46																				
ZZZZZZ			21:52																				
CCV 240-44805/134			21:58																				
CCB 240-44805/135			22:05																				
ZZZZZZ			22:11																				
ZZZZZZ			22:18																				
ZZZZZZ			22:26																				
ZZZZZZ			22:31																				
ZZZZZZ			22:37																				
ZZZZZZ			22:43																				
ZZZZZZ			22:48																				
ZZZZZZ			22:54																				
ZZZZZZ			23:00																				
ZZZZZZ			23:05																				
CCV 240-44805/146			23:11																				
CCB 240-44805/147			23:18																				
ZZZZZZ			23:24																				
ZZZZZZ			23:30																				
ZZZZZZ			23:36																				
ZZZZZZ			23:41																				
ZZZZZZ			23:47																				
ZZZZZZ			23:53																				
ZZZZZZ			23:58																				
ZZZZZZ			00:04																				
ZZZZZZ			00:10																				
ZZZZZZ			00:16																				
CCV 240-44805/158			00:21																				
CCB 240-44805/159			00:27																				
ZZZZZZ			00:33																				
ZZZZZZ			00:39																				
CCV 240-44805/162			00:44																				
CCB 240-44805/163			00:51																				

Prep Types

D = Dissolved

R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	ICV 240-44805/5 05/21/2012 08:57				CCV 240-44805/22 05/21/2012 10:44				CCV 240-44805/34 05/21/2012 11:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	81.7		80.0	102	98.5		100	99	99.4		100	99
Arsenic	80.6		80.0	101	102		100	102	100		100	100
Barium	80.0		80.0	100	100		100	100	101		100	101
Beryllium	84.1		80.0	105	105		100	105	105		100	105
Cadmium	80.7		80.0	101	101		100	101	102		100	102
Chromium	80.2		80.0	100	101		100	101	101		100	101
Cobalt	81.3		80.0	102	101		100	101	100		100	100
Copper	82.9		80.0	104	102		100	102	102		100	102
Lead	86.5		80.0	108	107		100	107	108		100	108
Molybdenum	81.5		80.0	102	103		100	103	103		100	103
Nickel	82.2		80.0	103	103		100	103	101		100	101
Selenium	81.8		80.0	102	104		100	104	102		100	102
Silver	82.3		80.0	103	103		100	103	103		100	103
Thallium	87.9		80.0	110	108		100	108	108		100	108
Tungsten	79.5		80.0	99	99.6		100	100	100		100	100
Vanadium	80.1		80.0	100	99.6		100	100	99.3		100	99
Zinc	82.3		80.0	103	103		100	103	103		100	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	CCV 240-44805/46 05/21/2012 13:06											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	98.8		100	99								
Arsenic	100		100	100								
Barium	100		100	100								
Beryllium	106		100	106								
Cadmium	101		100	101								
Chromium	99.6		100	100								
Cobalt	100		100	100								
Copper	102		100	102								
Lead	107		100	107								
Molybdenum	102		100	102								
Nickel	102		100	102								
Selenium	101		100	101								
Silver	103		100	103								
Thallium	108		100	108								
Tungsten	99.8		100	100								
Vanadium	99.1		100	99								
Zinc	103		100	103								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44805/6 05/21/2012 09:04		CCB 240-44805/23 05/21/2012 10:51		CCB 240-44805/35 05/21/2012 12:02		CCB 240-44805/47 05/21/2012 13:14	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.258	J	0.309	J	0.467	J	0.206	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	2.0	U	2.0	U	0.173	J	2.0	U
Tungsten	10	10	U	10	U	0.479	J	10	U
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/22/2012 06:27 End Date: 05/22/2012 14:16

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-44964/1			06:27	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-44964/2 IC	1		06:33	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-44964/3 IC	1		06:39	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-44964/4 IC	1		06:46	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD5 240-44964/5 IC	1		06:53	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-44964/6	1		06:59	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-44964/7	1		07:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-44964/8	1		07:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-44964/9	1		07:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-44964/10	1		07:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44964/11			07:31																				
CCB 240-44964/12			07:38																				
CCV 240-44964/13	1		07:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44964/14	1		07:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			07:56																				
ZZZZZZ			08:02																				
ZZZZZZ			08:09																				
ZZZZZZ			08:15																				
ZZZZZZ			08:21																				
ZZZZZZ			08:28																				
MB 240-44713/1-A	1	R	08:35	X	X			X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-44713/2-A	1	R	08:41	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4	1	D	08:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4 SD	5	D	08:54	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44964/25	1		09:00	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44964/26	1		09:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4 DU	1	D	09:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-4 MS	1	D	09:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			09:26																				
ZZZZZZ			09:31																				
ZZZZZZ			09:37																				
ZZZZZZ			09:43																				
ZZZZZZ			09:48																				
ZZZZZZ			09:54																				
ZZZZZZ			10:00																				
ZZZZZZ			10:05																				
CCV 240-44964/37	1		10:11	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44964/38	1		10:18	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:24																				
ZZZZZZ			10:29																				
ZZZZZZ			10:35																				
ZZZZZZ			10:41																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/22/2012 06:27 End Date: 05/22/2012 14:16

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			10:46																				
ZZZZZZ			10:52																				
ZZZZZZ			10:58																				
ZZZZZZ			11:03																				
ZZZZZZ			11:11																				
ZZZZZZ			11:16																				
CCV 240-44964/49			11:22																				
CCB 240-44964/50			11:30																				
ZZZZZZ			11:35																				
ZZZZZZ			11:43																				
ZZZZZZ			11:50																				
ZZZZZZ			11:56																				
ZZZZZZ			12:01																				
ZZZZZZ			12:07																				
ZZZZZZ			12:13																				
ZZZZZZ			12:18																				
ZZZZZZ			12:24																				
ZZZZZZ			12:29																				
CCV 240-44964/61			12:35																				
CCB 240-44964/62			12:42																				
ZZZZZZ			12:48																				
ZZZZZZ			12:54																				
ZZZZZZ			12:59																				
ZZZZZZ			13:05																				
ZZZZZZ			13:11																				
ZZZZZZ			13:16																				
ZZZZZZ			13:22																				
ZZZZZZ			13:28																				
ZZZZZZ			13:33																				
ZZZZZZ			13:39																				
CCV 240-44964/73	1		13:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-44964/74	1		13:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
MB 240-44713/1-A	1	R	13:57			X	X																
ZZZZZZ			14:03																				
CCV 240-44964/77	1		14:09	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		
CCB 240-44964/78	1		14:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X		

Prep Types

D = Dissolved

R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	ICV 240-44964/6 05/22/2012 06:59				CCV 240-44964/13 05/22/2012 07:44				CCV 240-44964/25 05/22/2012 09:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	82.6		80.0	103	101		100	101	101		100	101
Arsenic	80.5		80.0	101	101		100	101	101		100	101
Barium	80.9		80.0	101	101		100	101	100		100	100
Beryllium	78.9		80.0	99	100		100	100	99.0		100	99
Cadmium	81.8		80.0	102	103		100	103	103		100	103
Chromium	80.6		80.0	101	100		100	100	101		100	101
Cobalt	80.7		80.0	101	102		100	102	101		100	101
Copper	82.9		80.0	104	103		100	103	103		100	103
Lead	82.8		80.0	103	103		100	103	103		100	103
Molybdenum	81.3		80.0	102	104		100	104	103		100	103
Nickel	82.6		80.0	103	103		100	103	101		100	101
Selenium	81.7		80.0	102	101		100	101	103		100	103
Silver	83.1		80.0	104	103		100	103	103		100	103
Thallium	84.7		80.0	106	106		100	106	106		100	106
Tungsten	80.3		80.0	100	102		100	102	102		100	102
Vanadium	80.6		80.0	101	99.4		100	99	99.5		100	99
Zinc	81.3		80.0	102	104		100	104	105		100	105

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	CCV 240-44964/37 05/22/2012 10:11				CCV 240-44964/73 05/22/2012 13:45				CCV 240-44964/77 05/22/2012 14:09			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	99.8		100	100	98.1		100	98	98.3		100	98
Arsenic	100		100	100	98.6		100	99	99.9		100	100
Barium	99.0		100	99	99.0		100	99	99.2		100	99
Beryllium	97.3		100	97	101		100	101	96.3		100	96
Cadmium	102		100	102	101		100	101	101		100	101
Chromium	100		100	100	100		100	100	100		100	100
Cobalt	100		100	100	99.7		100	100	101		100	101
Copper	102		100	102	101		100	101	103		100	103
Lead	103		100	103	104		100	104	102		100	102
Molybdenum	102		100	102	101		100	101	101		100	101
Nickel	101		100	101	99.6		100	100	101		100	101
Selenium	103		100	103	104		100	104	103		100	103
Silver	102		100	102	100		100	100	101		100	101
Thallium	107		100	107	110		100	110	109		100	109
Tungsten	101		100	101	101		100	101	100		100	100
Vanadium	98.8		100	99	98.3		100	98	99.1		100	99
Zinc	105		100	105	106		100	106	104		100	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-44506/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyzed 5/17

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.95	J	98	50-150
Arsenic	2.00	1.94	J	97	50-150
Barium	1.00	0.948	J	95	50-150
Beryllium	1.00	0.882	J	88	50-150
Cadmium	0.500	0.495	J	99	50-150
Chromium	2.00	2.07		103	50-150
Cobalt	1.00	0.966	J	97	50-150
Copper	2.00	1.93	J	96	50-150
Lead	1.00	1.26		126	50-150
Molybdenum	10.0	9.52	J	95	50-150
Nickel	2.00	2.12		106	50-150
Selenium	2.00	1.99	J	99	50-150
Silver	0.500	0.501	J	100	50-150
Thallium	1.00	1.05	J	105	50-150
Vanadium	5.00	4.60	J	92	50-150
Tungsten	10.0	9.12	J	91	50-150
Zinc	10.0	9.88	J	99	50-150

Lab Sample ID: CRI 240-44805/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyzed 5/21

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.93	J	97	50-150
Arsenic	2.00	2.05	J	102	50-150
Barium	1.00	1.05	J	105	50-150
Beryllium	1.00	1.07		107	50-150
Cadmium	0.500	0.529	J	106	50-150
Chromium	2.00	2.09		105	50-150
Cobalt	1.00	0.963	J	96	50-150
Copper	2.00	2.05		103	50-150
Lead	1.00	1.31		131	50-150
Molybdenum	10.0	9.71	J	97	50-150
Nickel	2.00	2.19		110	50-150
Selenium	2.00	1.90	J	95	50-150
Silver	0.500	0.500	J	100	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-44805/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Thallium	1.00	0.952	J	95	50-150
Vanadium	5.00	5.01	J	100	50-150
Tungsten	10.0	9.21	J	92	50-150
Zinc	10.0	9.39	J	94	50-150

Lab Sample ID: CRI 240-44964/8 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyzed 5/22

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	2.02		101	50-150
Arsenic	2.00	1.99	J	100	50-150
Barium	1.00	1.03	J	103	50-150
Beryllium	1.00	1.01		101	50-150
Cadmium	0.500	0.538	J	108	50-150
Chromium	2.00	1.99	J	100	50-150
Cobalt	1.00	1.01		101	50-150
Copper	2.00	2.15		107	50-150
Lead	1.00	1.07		107	50-150
Molybdenum	10.0	9.96	J	100	50-150
Nickel	2.00	2.13		107	50-150
Selenium	2.00	2.09	J	104	50-150
Silver	0.500	0.539	J	108	50-150
Thallium	1.00	1.28	J	128	50-150
Vanadium	5.00	5.19	J	104	50-150
Tungsten	10.0	9.50	J	95	50-150
Zinc	10.0	10.4	J	104	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44964/7 05/22/2012 07:06		CCB 240-44964/14 05/22/2012 07:51		CCB 240-44964/26 05/22/2012 09:07		CCB 240-44964/38 05/22/2012 10:18	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	0.131	J	0.174	J	0.139	J	0.143	J
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	0.0710	J	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.391	J	0.851	J	0.478	J	0.458	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.412	J	0.491	J	0.420	J	0.390	J
Tungsten	10	0.659	J	0.697	J	0.638	J	0.611	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-44964/74 05/22/2012 13:52		CCB 240-44964/78 05/22/2012 14:16					
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U				
Arsenic	5.0	5.0	U	5.0	U				
Barium	5.0	5.0	U	5.0	U				
Beryllium	1.0	1.0	U	1.0	U				
Cadmium	1.0	1.0	U	1.0	U				
Chromium	2.0	2.0	U	2.0	U				
Cobalt	1.0	1.0	U	1.0	U				
Copper	2.0	2.0	U	2.0	U				
Lead	1.0	1.0	U	1.0	U				
Molybdenum	10	0.439	J	0.406	J				
Nickel	2.0	2.0	U	2.0	U				
Selenium	5.0	5.0	U	5.0	U				
Silver	1.0	1.0	U	1.0	U				
Thallium	2.0	0.367	J	0.400	J				
Tungsten	10	0.543	J	0.573	J				
Vanadium	20	20	U	20	U				
Zinc	20	20	U	20	U				

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I9 Method: 6010C

Start Date: 05/21/2012 11:27 End Date: 05/21/2012 22:16

Lab Sample ID	D / F	Type	Time	Analytes																						
				Ca	Fe	K	Mg	Mn	Na	SiO2																
ICIS 240-44817/1	1		11:27	X	X	X	X	X	X	X																
CALSTD 240-44817/2 IC			11:31	X	X	X	X	X	X	X																
CALSTD 240-44817/3 IC			11:35	X	X	X	X	X	X	X																
ICV 240-44817/4	1		11:38	X	X	X	X	X	X	X																
ICB 240-44817/5	1		11:42	X	X	X	X	X	X	X																
CRI 240-44817/6	1		11:46							X																
ZZZZZZ			11:50																							
ICSA 240-44817/8	1		11:53	X	X	X	X	X	X																	
ICSAB 240-44817/9	1		11:57	X	X	X	X	X	X																	
CCV 240-44817/10			12:01																							
CCB 240-44817/11			12:05																							
ZZZZZZ			12:09																							
CCV 240-44817/13			12:13																							
CCB 240-44817/14			12:17																							
ZZZZZZ			12:20																							
ZZZZZZ			12:24																							
ZZZZZZ			12:28																							
ZZZZZZ			12:32																							
ZZZZZZ			12:36																							
ZZZZZZ			12:40																							
ZZZZZZ			12:43																							
CCV 240-44817/22			12:47																							
CCB 240-44817/23			12:51																							
ZZZZZZ			12:55																							
ZZZZZZ			12:59																							
ZZZZZZ			13:02																							
ZZZZZZ			13:06																							
ZZZZZZ			13:10																							
ZZZZZZ			13:14																							
ZZZZZZ			13:17																							
ZZZZZZ			13:21																							
ZZZZZZ			13:25																							
ZZZZZZ			13:29																							
CCV 240-44817/34	1		13:32	X	X	X	X	X	X	X																
CCB 240-44817/35	1		13:36	X	X	X	X	X	X	X																
ZZZZZZ			13:40																							
CRI 240-44817/37	1		13:44	X	X	X	X	X	X																	
MB 240-44236/1-A	1	R	13:48	X	X	X	X	X	X	X																
LCS 240-44236/2-A	1	R	13:51	X	X	X	X	X	X	X																
ZZZZZZ			13:55																							
240-11218-A-20-B SD ^5	5	R	13:59	X	X	X	X	X	X	X																

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I9 Method: 6010C

Start Date: 05/21/2012 11:27 End Date: 05/21/2012 22:16

Lab Sample ID	D/F	Type	Time	Analytes																				
				Ca	Fe	K	Mg	Mn	Na	SiO2														
ZZZZZZ			14:03																					
240-11218-A-20-C MS	1	R	14:06	X	X	X	X	X	X	X														
240-11218-A-20-D MSD	1	R	14:10	X	X	X	X	X	X	X														
ZZZZZZ			14:14																					
CCV 240-44817/46	1		14:17	X	X	X	X	X	X	X														
CCB 240-44817/47	1		14:21	X	X	X	X	X	X	X														
ZZZZZZ			14:25																					
ZZZZZZ			14:29																					
ZZZZZZ			14:33																					
ZZZZZZ			14:36																					
ZZZZZZ			14:40																					
ZZZZZZ			14:44																					
240-11217-2	1	R	14:48	X	X	X	X	X		X														
ZZZZZZ			14:52																					
ZZZZZZ			14:56																					
CRI 240-44817/57			15:00																					
CCV 240-44817/58	1		15:04	X	X	X	X	X	X	X														
CCB 240-44817/59	1		15:08	X	X	X	X	X	X	X														
CRI 240-44817/60			15:12																					
ZZZZZZ			15:15																					
ZZZZZZ			15:19																					
ZZZZZZ			15:23																					
ZZZZZZ			15:27																					
ZZZZZZ			15:31																					
ZZZZZZ			15:34																					
ZZZZZZ			15:38																					
ZZZZZZ			15:42																					
ZZZZZZ			15:46																					
CCV 240-44817/70			15:50																					
CCB 240-44817/71			15:54																					
ZZZZZZ			15:58																					
ZZZZZZ			16:02																					
ZZZZZZ			16:05																					
ZZZZZZ			16:09																					
ZZZZZZ			16:13																					
ZZZZZZ			16:17																					
ZZZZZZ			16:20																					
ZZZZZZ			16:24																					
ZZZZZZ			16:28																					
ZZZZZZ			16:32																					
CCV 240-44817/82			16:35																					
CCB 240-44817/83			16:39																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I9 Method: 6010C

Start Date: 05/21/2012 11:27 End Date: 05/21/2012 22:16

Lab Sample ID	D/F	Type	Time	Analytes																				
				Ca	Fe	K	Mg	Mn	Na	SiO2														
ZZZZZZ			16:43																					
ZZZZZZ			16:47																					
ZZZZZZ			16:51																					
ZZZZZZ			16:54																					
ZZZZZZ			16:58																					
ZZZZZZ			17:02																					
ZZZZZZ			17:06																					
ZZZZZZ			17:10																					
ZZZZZZ			17:14																					
ZZZZZZ			17:17																					
CCV 240-44817/94			17:21																					
CCB 240-44817/95			17:25																					
ZZZZZZ			17:29																					
ZZZZZZ			17:33																					
ZZZZZZ			17:37																					
ZZZZZZ			17:41																					
ZZZZZZ			17:45																					
ZZZZZZ			17:48																					
ZZZZZZ			17:52																					
ZZZZZZ			17:56																					
ZZZZZZ			18:00																					
ZZZZZZ			18:04																					
CCV 240-44817/106			18:08																					
CCB 240-44817/107			18:12																					
ZZZZZZ			18:16																					
ZZZZZZ			18:19																					
ZZZZZZ			18:23																					
ZZZZZZ			18:27																					
ZZZZZZ			18:31																					
ZZZZZZ			18:35																					
ZZZZZZ			18:39																					
ZZZZZZ			18:42																					
ZZZZZZ			18:46																					
ZZZZZZ			18:50																					
CCV 240-44817/118			18:54																					
CCB 240-44817/119			18:58																					
ZZZZZZ			19:02																					
ZZZZZZ			19:06																					
ZZZZZZ			19:10																					
ZZZZZZ			19:14																					
ZZZZZZ			19:18																					
ZZZZZZ			19:21																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I9 Method: 6010C

Start Date: 05/21/2012 11:27 End Date: 05/21/2012 22:16

Lab Sample ID	D / F	Type	Time	Analytes																				
				Ca	Fe	K	Mg	Mn	Na	SiO2														
ZZZZZZ			19:25																					
ZZZZZZ			19:29																					
ZZZZZZ			19:33																					
ZZZZZZ			19:37																					
CCV 240-44817/130			19:41																					
CCB 240-44817/131			19:45																					
ZZZZZZ			19:48																					
ZZZZZZ			19:52																					
ZZZZZZ			19:56																					
ZZZZZZ			20:00																					
ZZZZZZ			20:04																					
ZZZZZZ			20:08																					
ZZZZZZ			20:12																					
ZZZZZZ			20:16																					
ZZZZZZ			20:20																					
ZZZZZZ			20:24																					
CCV 240-44817/142			20:28																					
CCB 240-44817/143			20:31																					
ZZZZZZ			20:35																					
ZZZZZZ			20:39																					
ZZZZZZ			20:43																					
ZZZZZZ			20:46																					
ZZZZZZ			20:50																					
ZZZZZZ			20:54																					
ZZZZZZ			20:58																					
ZZZZZZ			21:02																					
ZZZZZZ			21:05																					
ZZZZZZ			21:10																					
CCV 240-44817/154	1		21:14	X	X	X	X	X	X	X														
CCB 240-44817/155	1		21:18	X	X	X	X	X	X	X														
ZZZZZZ			21:21																					
ZZZZZZ			21:25																					
ZZZZZZ			21:30																					
ZZZZZZ			21:34																					
ZZZZZZ			21:38																					
ZZZZZZ			21:42																					
240-11217-2	5	R	21:45						X															
240-11217-5	5	R	21:49	X	X	X	X	X	X	X														
ZZZZZZ			21:53																					
CRI 240-44817/165	1		21:57							X														
CCV 240-44817/166	1		22:00	X	X	X	X	X	X	X														
CCB 240-44817/167	1		22:04	X	X	X	X	X	X	X														

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: I9 Method: 6010C

Start Date: 05/21/2012 11:27 End Date: 05/21/2012 22:16

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ca	Fe	K	Mg	Mn	Na	SiO2													
CRI 240-44817/168	1		22:08	X	X	X	X	X	X														
CCV 240-44817/169			22:12																				
CCB 240-44817/170			22:16																				

Prep Types

R = Total Recoverable

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MT6500ICV_00005 Concentration Units: ug/L

CCV Source: MT6500CCV_00009

Analyte	ICV 240-44817/4 05/21/2012 11:38				CCV 240-44817/34 05/21/2012 13:32				CCV 240-44817/46 05/21/2012 14:17			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	25700		25000	103	50600		50000	101	50700		50000	101
Iron	12400		12500	99	25000		25000	100	24900		25000	100
Magnesium	25100		25000	101	50400		50000	101	50500		50000	101
Manganese	1520		1500	101	1930		2000	96	1910		2000	95
Potassium	24800		25000	99	49300		50000	99	49600		50000	99
SiO2, Silica	6500		6420	101	10600		10700	99	10500		10700	98
Sodium	24800		25000	99	48800		50000	98	48700		50000	97

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MT6500ICV_00005 Concentration Units: ug/L

CCV Source: MT6500CCV_00009

Analyte	CCV 240-44817/58 05/21/2012 15:04				CCV 240-44817/154 05/21/2012 21:14				CCV 240-44817/166 05/21/2012 22:00			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Calcium	51300		50000	103	51400		50000	103	50900		50000	102
Iron	25000		25000	100	24700		25000	99	24600		25000	98
Magnesium	50600		50000	101	51600		50000	103	51300		50000	103
Manganese	1900		2000	95	1870		2000	94	1860		2000	93
Potassium	50000		50000	100	50800		50000	102	50400		50000	101
SiO2, Silica	10500		10700	98	10300		10700	96	10300		10700	96
Sodium	49200		50000	98	48100		50000	96	47700		50000	95

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Method: 6010C Instrument ID: I9

Lab Sample ID: CRI 240-44817/6 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00005

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1070	J	100	70-130

Lab Sample ID: CRI 240-44817/37 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00006

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	4920	J	98	70-130
Iron	200	193	J	97	70-130
Potassium	5000	4980	J	100	70-130
Magnesium	5000	5140		103	70-130
Manganese	15.0	14.8	J	99	70-130
Sodium	5000	4930	J	99	70-130

Lab Sample ID: CRI 240-44817/165 Concentration Units: ug/L

CRQL Check Standard Source: MT6500CRIW_00005

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
SiO2, Silica	1070	1080	J	101	70-130

Lab Sample ID: CRI 240-44817/168 Concentration Units: ug/L

CRQL Check Standard Source: MTTRCRIC_00006

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Calcium	5000	4920	J	98	70-130
Iron	200	191	J	95	70-130
Potassium	5000	5190		104	70-130
Magnesium	5000	5190		104	70-130
Manganese	15.0	14.0	J	94	70-130
Sodium	5000	5010		100	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44817/5 05/21/2012 11:42		CCB 240-44817/35 05/21/2012 13:36		CCB 240-44817/47 05/21/2012 14:21		CCB 240-44817/59 05/21/2012 15:08	
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U	5000	U	5000	U
Iron	200	200	U	200	U	200	U	200	U
Magnesium	5000	5000	U	5000	U	5000	U	5000	U
Manganese	15	15	U	15	U	15	U	15	U
Potassium	5000	89.1	J	240	J	307	J	240	J
SiO2, Silica	1100	1100	U	31.7	J	17.2	J	24.6	J
Sodium	5000	5000	U	5000	U	5000	U	5000	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-44817/155 05/21/2012 21:18		CCB 240-44817/167 05/21/2012 22:04					
		Found	C	Found	C	Found	C	Found	C
Calcium	5000	5000	U	5000	U				
Iron	200	200	U	200	U				
Magnesium	5000	5000	U	5000	U				
Manganese	15	15	U	15	U				
Potassium	5000	414	J	335	J				
SiO2, Silica	1100	33.3	J	53.2	J				
Sodium	5000	5000	U	5000	U				

Italicized analytes were not requested for this sequence.

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-44403/1-A			13:31	X																				
IC 240-44403/2-A			13:33	X																				
IC 240-44403/3-A			13:35	X																				
IC 240-44403/4-A			13:38	X																				
IC 240-44403/5-A			13:40	X																				
IC 240-44403/6-A			13:42	X																				
ICV 240-44403/7-A	1		13:44	X																				
ICB 240-44403/8-A	1		13:45	X																				
CRA 240-44403/9-A	1		13:47	X																				
CCVL 240-44403/10-A	1		13:49	X																				
CCB 240-44403/11-A			13:51																					
ZZZZZZ			13:53																					
ZZZZZZ			13:55																					
ZZZZZZ			13:57																					
ZZZZZZ			13:59																					
ZZZZZZ			14:01																					
ZZZZZZ			14:03																					
ZZZZZZ			14:05																					
ZZZZZZ			14:07																					
ZZZZZZ			14:09																					
ZZZZZZ			14:11																					
CCV 240-44403/12-A			14:13																					
CCB 240-44403/11-A			14:15																					
ZZZZZZ			14:17																					
ZZZZZZ			14:19																					
ZZZZZZ			14:22																					
ZZZZZZ			14:24																					
ZZZZZZ			14:26																					
ZZZZZZ			14:28																					
ZZZZZZ			14:30																					
ZZZZZZ			14:32																					
ZZZZZZ			14:34																					
ZZZZZZ			14:36																					
CCV 240-44403/12-A			14:38																					
CCB 240-44403/11-A			14:40																					
ZZZZZZ			14:42																					
ZZZZZZ			14:44																					
ZZZZZZ			14:46																					
ZZZZZZ			14:47																					
CRA 240-44403/9-A			14:49																					
ZZZZZZ			14:51																					
ZZZZZZ			14:54																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			14:55	
ZZZZZZ			14:57	
ZZZZZZ			14:59	
CCV 240-44403/12-A			15:01	
CCB 240-44403/11-A			15:03	
ZZZZZZ			15:05	
ZZZZZZ			15:07	
ZZZZZZ			15:10	
ZZZZZZ			15:12	
ZZZZZZ			15:14	
CCV 240-44403/12-A			15:16	
CCB 240-44403/11-A			15:18	
ZZZZZZ			15:20	
ZZZZZZ			15:22	
ZZZZZZ			15:24	
ZZZZZZ			15:26	
ZZZZZZ			15:29	
ZZZZZZ			15:31	
ZZZZZZ			15:33	
ZZZZZZ			15:35	
ZZZZZZ			15:36	
ZZZZZZ			15:38	
CCV 240-44403/12-A			15:40	
CCB 240-44403/11-A			15:42	
ZZZZZZ			15:44	
ZZZZZZ			15:46	
ZZZZZZ			15:48	
ZZZZZZ			15:50	
ZZZZZZ			15:52	
ZZZZZZ			15:54	
ZZZZZZ			15:56	
ZZZZZZ			15:58	
ZZZZZZ			16:00	
ZZZZZZ			16:02	
CCV 240-44403/12-A			16:04	
CCB 240-44403/11-A			16:06	
ZZZZZZ			16:08	
ZZZZZZ			16:10	
ZZZZZZ			16:12	
ZZZZZZ			16:14	
ZZZZZZ			16:16	
ZZZZZZ			16:18	

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes																					
				Hg																					
ZZZZZZ			16:20																						
ZZZZZZ			16:22																						
ZZZZZZ			16:24																						
ZZZZZZ			16:27																						
CCV 240-44403/12-A	1		16:29	X																					
CCB 240-44403/11-A	1		16:31	X																					
ZZZZZZ			16:33																						
MB 240-44257/1-A	1	T	16:36	X																					
LCS 240-44257/2-A	1	T	16:38	X																					
240-11217-4	1	T	16:40	X																					
240-11217-4 DU	1	T	16:42	X																					
240-11217-4 MS	1	T	16:44	X																					
ZZZZZZ			16:46																						
ZZZZZZ			16:49																						
ZZZZZZ			16:51																						
ZZZZZZ			16:53																						
CCV 240-44403/12-A	1		16:55	X																					
CCB 240-44403/11-A	1		16:57	X																					
ZZZZZZ			16:59																						
ZZZZZZ			17:01																						
ZZZZZZ			17:03																						
ZZZZZZ			17:05																						
ZZZZZZ			17:07																						
ZZZZZZ			17:09																						
ZZZZZZ			17:12																						
ZZZZZZ			17:14																						
240-11217-2	1	T	17:16	X																					
240-11217-2	1	D	17:18	X																					
CCV 240-44403/12-A	1		17:20	X																					
CCB 240-44403/11-A	1		17:23	X																					
240-11217-3	1	T	17:24	X																					
240-11217-3	1	D	17:26	X																					
240-11217-5	1	T	17:28	X																					
240-11217-5	1	D	17:30	X																					
ZZZZZZ			17:32																						
MB 240-44260/1-A	1	T	17:34	X																					
LCS 240-44260/2-A	1	T	17:37	X																					
240-11217-4	1	D	17:39	X																					
240-11217-4 DU	1	D	17:41	X																					
240-11217-4 MS	1	D	17:43	X																					
CCV 240-44403/12-A	1		17:45	X																					
CCB 240-44403/11-A	1		17:47	X																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			17:49	
ZZZZZZ			17:51	
ZZZZZZ			17:53	
ZZZZZZ			17:55	
ZZZZZZ			17:57	
ZZZZZZ			17:59	
ZZZZZZ			18:01	
ZZZZZZ			18:03	
ZZZZZZ			18:05	
ZZZZZZ			18:08	
CCV 240-44403/12-A	1		18:10	X
CCB 240-44403/11-A	1		18:12	X
ZZZZZZ			18:14	
ZZZZZZ			18:16	
ZZZZZZ			18:18	
ZZZZZZ			18:20	
ZZZZZZ			18:22	
240-11217-6	1	T	18:25	X
240-11217-6	1	D	18:26	X
240-11217-7	1	T	18:29	X
240-11217-7	1	D	18:31	X
CCV 240-44403/12-A	1		18:32	X
CCB 240-44403/11-A	1		18:35	X

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTHGICVW_00300 Concentration Units: ug/L

CCV Source: MTHGCALW_00195

Analyte	ICV 240-44403/7-A 05/17/2012 13:44				CCVL 240-44403/10-A 05/17/2012 13:49				CCV 240-44403/12-A 05/17/2012 16:29			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.27		2.50	91	5.00		5.00	100	5.22		5.00	104

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTHGICVW_00300 Concentration Units: ug/L

CCV Source: MTHGCALW_00195

Analyte	CCV 240-44403/12-A 05/17/2012 16:55				CCV 240-44403/12-A 05/17/2012 17:20				CCV 240-44403/12-A 05/17/2012 17:45			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.41		5.00	108	5.31		5.00	106	5.37		5.00	107

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICV Source: MTHGICVW_00300 Concentration Units: ug/L

CCV Source: MTHGCALW_00195

Analyte	CCV 240-44403/12-A 05/17/2012 18:10				CCV 240-44403/12-A 05/17/2012 18:32							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.20		5.00	104	5.32		5.00	106				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-44403/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00195

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.219		110	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44403/8-A 05/17/2012 13:45		CCB 240-44403/11-A 05/17/2012 16:31		CCB 240-44403/11-A 05/17/2012 16:57		CCB 240-44403/11-A 05/17/2012 17:23	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-44403/11-A 05/17/2012 17:47		CCB 240-44403/11-A 05/17/2012 18:12		CCB 240-44403/11-A 05/17/2012 18:35			
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.148	J	0.20	U	0.20	U		

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44236/1-A

Instrument Code: I9 Batch No.: 44817

CAS No.	Analyte	Concentration	C	Q	Method
7440-70-2	Calcium	373	J		6010C
7439-89-6	Iron	200	U		6010C
7440-09-7	Potassium	191	J		6010C
7439-95-4	Magnesium	84.1	J		6010C
7439-96-5	Manganese	0.956	J		6010C
7440-23-5	Sodium	5000	U		6010C
14808-60-7	SiO2, Silica	21.1	J		6010C

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44254/1-A

Instrument Code: I8 Batch No.: 44506

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	0.843	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.521	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.376	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	10.5	J		6020

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44621/1-A

Instrument Code: I8 Batch No.: 44805

MW 310-051012
total metal

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	1.17	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.560	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.161	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	14.7	J		6020

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44713/1-A

Instrument Code: I8 Batch No.: 44964

MW31D-051012 Dissolved metal

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	0.211	J		6020
7440-38-2	Arsenic	0.711	J		6020
7440-39-3	Barium	0.862	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	0.335	J		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	0.392	J		6020
7440-50-8	Copper	1.12	J		6020
7439-92-1	Lead	0.436	J		6020
7439-98-7	Molybdenum	0.319	J		6020
7440-02-0	Nickel	0.632	J		6020
7782-49-2	Selenium	0.586	J		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	0.522	J		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	0.507	J		6020
7440-66-6	Zinc	4.97	J		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44257/1-A

Instrument Code: H4 Batch No.: 44545

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44260/1-A

Instrument Code: H4 Batch No.: 44545

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSA 240-44817/8 Instrument ID: I9

Lab File ID: I9052112A.asc ICS Source: MTTRICSAW_00012

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Calcium	**500000**	**478410**	**96**
Iron	**200000**	**189210**	**95**
Magnesium	**500000**	**498100**	**100**
Manganese		**0.710**	
Potassium		**165**	
Sodium		**155**	
Aluminum	*500000*	*500850*	*100*
Antimony		*-8.97*	
Arsenic		*-1.43*	
Barium		*0.338*	
Beryllium		*-0.369*	
Boron		*1.35*	
Cadmium		*0.609*	
Chromium		*3.46*	
Cobalt		*-1.86*	
Copper		*4.91*	
Lead		*-5.72*	
Li		*-4.69*	
Molybdenum		*-1.36*	
Nickel		*4.32*	
Selenium		*4.06*	
Si		*0.275*	
Silver		*-0.558*	
Sr		*4.94*	
Thallium		*-2.20*	
Tin		*6.14*	
Titanium		*-0.489*	
Vanadium		*-0.297*	
Zinc		*3.84*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSAB 240-44817/9 Instrument ID: I9

Lab File ID: I9052112A.asc ICS Source: MT6500ICSAB2W_00003

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Calcium	**500000**	**457830**	**92**
Iron	**200000**	**179620**	**90**
Magnesium	**500000**	**475810**	**95**
Manganese	**500**	**470**	**94**
Potassium	**10000**	**10122**	**101**
Sodium	**10000**	**10011**	**100**
Aluminum	*500000*	*478750*	*96*
Antimony	*1000*	*959*	*96*
Arsenic	*1000*	*951*	*95*
Barium	*500*	*497*	*99*
Beryllium	*500*	*481*	*96*
Boron	*500*	*504*	*101*
Cadmium	*1000*	*964*	*96*
Chromium	*500*	*465*	*93*
Cobalt	*500*	*463*	*93*
Copper	*500*	*495*	*99*
Lead	*1000*	*853*	*85*
Li	*500*	*520*	*104*
Molybdenum	*1000*	*904*	*90*
Nickel	*1000*	*922*	*92*
Selenium	*1000*	*950*	*95*
Si	*10000*	*9881*	*99*
Silver	*1000*	*1032*	*103*
Sr	*1500*	*1431*	*95*
Thallium	*1000*	*919*	*92*
Tin	*500*	*503*	*101*
Titanium	*500*	*500*	*100*
Vanadium	*500*	*469*	*94*
Zinc	*1000*	*958*	*96*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSA 240-44506/8 Instrument ID: I8

Lab File ID: I8051712A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.156**	
Arsenic		**0.446**	
Barium		**0.153**	
Beryllium		**0.0340**	
Cadmium		**-0.0860**	
Chromium		**0.571**	
Cobalt		**0.117**	
Copper		**0.435**	
Lead		**0.0400**	
Molybdenum	**1000**	**1019**	**102**
Nickel		**0.389**	
Selenium		**0.0220**	
Silver		**0.0350**	
Thallium		**0.0160**	
Tungsten		**0.0520**	
Vanadium		**-0.0120**	
Zinc		**1.47**	
Aluminum	*50000*	*49370*	*99*
Boron		*0.340*	
Calcium	*50000*	*51550*	*103*
Iron	*50000*	*50810*	*102*
Magnesium	*50000*	*51930*	*104*
Manganese		*0.308*	
Potassium	*50000*	*51490*	*103*
Sodium	*50000*	*52050*	*104*
Strontium		*0.310*	
Tin		*-1.86*	
Titanium	*1000*	*1050*	*105*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSAB 240-44506/9 Instrument ID: I8

Lab File ID: I8051712A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**103**	**103**
Arsenic	**100**	**98.9**	**99**
Barium	**100**	**102**	**102**
Beryllium	**100**	**97.2**	**97**
Cadmium	**100**	**100**	**100**
Chromium	**100**	**106**	**106**
Cobalt	**100**	**98.5**	**98**
Copper	**100**	**99.3**	**99**
Lead	**100**	**110**	**110**
Molybdenum	**1100**	**1133**	**103**
Nickel	**100**	**103**	**103**
Selenium	**100**	**101**	**101**
Silver	**100**	**100**	**100**
Thallium	**100**	**111**	**111**
Tungsten	**100**	**102**	**102**
Vanadium	**100**	**99.4**	**99**
Zinc	**100**	**103**	**103**
Aluminum	*50000*	*49830*	*100*
Boron	*100*	*103*	*103*
Calcium	*50000*	*51660*	*103*
Iron	*50000*	*51110*	*102*
Magnesium	*50000*	*52270*	*105*
Manganese	*100*	*108*	*108*
Potassium	*50000*	*52010*	*104*
Sodium	*50000*	*51980*	*104*
Strontium	*100*	*95.7*	*96*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1148*	*104*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSA 240-44805/8 Instrument ID: I8

Lab File ID: I8052112A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.141**	
Arsenic		**0.332**	
Barium		**0.0800**	
Beryllium		**0.0010**	
Cadmium		**-0.259**	
Chromium		**0.553**	
Cobalt		**0.0800**	
Copper		**0.408**	
Lead		**-0.0200**	
Molybdenum	**1000**	**1029**	**103**
Nickel		**0.435**	
Selenium		**-0.0180**	
Silver		**0.0000**	
Thallium		**-0.156**	
Tungsten		**0.104**	
Vanadium		**0.174**	
Zinc		**0.663**	
Aluminum	*50000*	*52660*	*105*
Boron		*0.314*	
Calcium	*50000*	*52290*	*105*
Iron	*50000*	*51920*	*104*
Magnesium	*50000*	*53040*	*106*
Manganese		*0.0540*	
Potassium	*50000*	*51370*	*103*
Sodium	*50000*	*53330*	*107*
Strontium		*0.192*	
Tin		*-1.80*	
Titanium	*1000*	*1087*	*109*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSAB 240-44805/9 Instrument ID: I8

Lab File ID: I8052112A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True	Found	
	Solution AB	Solution AB	Percent Recovery
Antimony	**100**	**104**	**104**
Arsenic	**100**	**101**	**101**
Barium	**100**	**105**	**105**
Beryllium	**100**	**110**	**110**
Cadmium	**100**	**103**	**103**
Chromium	**100**	**110**	**110**
Cobalt	**100**	**103**	**103**
Copper	**100**	**101**	**101**
Lead	**100**	**117**	**117**
Molybdenum	**1100**	**1154**	**105**
Nickel	**100**	**107**	**107**
Selenium	**100**	**102**	**102**
Silver	**100**	**104**	**104**
Thallium	**100**	**117**	**117**
Tungsten	**100**	**104**	**104**
Vanadium	**100**	**104**	**104**
Zinc	**100**	**105**	**105**
Aluminum	*50000*	*52690*	*105*
Boron	*100*	*101*	*101*
Calcium	*50000*	*53460*	*107*
Iron	*50000*	*52890*	*106*
Magnesium	*50000*	*53830*	*108*
Manganese	*100*	*117*	*117*
Potassium	*50000*	*52870*	*106*
Sodium	*50000*	*54050*	*108*
Strontium	*100*	*99.1*	*99*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1201*	*109*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSA 240-44964/9 Instrument ID: I8

Lab File ID: I8052212A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.197**	
Arsenic		**0.484**	
Barium		**0.126**	
Beryllium		**0.0160**	
Cadmium		**-0.232**	
Chromium		**0.662**	
Cobalt		**0.122**	
Copper		**0.463**	
Lead		**0.0210**	
Molybdenum	**1000**	**1025**	**103**
Nickel		**0.395**	
Selenium		**0.111**	
Silver		**-0.0010**	
Thallium		**0.178**	
Tungsten		**0.359**	
Vanadium		**-0.0780**	
Zinc		**0.774**	
Aluminum	*50000*	*52070*	*104*
Boron		*0.519*	
Calcium	*50000*	*52520*	*105*
Iron	*50000*	*51840*	*104*
Magnesium	*50000*	*52790*	*106*
Manganese		*0.288*	
Potassium	*50000*	*52180*	*104*
Sodium	*50000*	*52720*	*105*
Strontium		*0.260*	
Tin		*-1.76*	
Titanium	*1000*	*1082*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Lab Sample ID: ICSAB 240-44964/10 Instrument ID: I8

Lab File ID: I8052212A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**102**	**102**
Arsenic	**100**	**99.2**	**99**
Barium	**100**	**103**	**103**
Beryllium	**100**	**97.6**	**98**
Cadmium	**100**	**102**	**102**
Chromium	**100**	**107**	**107**
Cobalt	**100**	**101**	**101**
Copper	**100**	**99.3**	**99**
Lead	**100**	**109**	**109**
Molybdenum	**1100**	**1123**	**102**
Nickel	**100**	**104**	**104**
Selenium	**100**	**103**	**103**
Silver	**100**	**100**	**100**
Thallium	**100**	**112**	**112**
Tungsten	**100**	**102**	**102**
Vanadium	**100**	**102**	**102**
Zinc	**100**	**105**	**105**
Aluminum	*50000*	*51410*	*103*
Boron	*100*	*98.4*	*98*
Calcium	*50000*	*52540*	*105*
Iron	*50000*	*52190*	*104*
Magnesium	*50000*	*52610*	*105*
Manganese	*100*	*112*	*112*
Potassium	*50000*	*52270*	*105*
Sodium	*50000*	*52010*	*104*
Strontium	*100*	*97.0*	*97*
Tin	*100*	*99.8*	*100*
Titanium	*1100*	*1183*	*108*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: MW31D-051012 MS Lab ID: 240-11217-4 MS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Matrix: Water Concentration Units: ug/L

% Solids:

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.56		0.39		1.00	116	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MW31D-051012 MS | Lab ID: 240-11217-4 MS

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	85.5		0.77	J	100	85	44-153		6020
Arsenic	926		4.6	J	1000	92	82-123		6020
Barium	987		43		1000	94	45-144		6020
Beryllium	1010		0.44	J	1000	101	77-124		6020
Cadmium	947		2.2		1000	94	78-117		6020
Chromium	956		11		1000	95	72-110		6020
Cobalt	951		10		1000	94	67-114		6020
Copper	974		23		1000	95	60-123		6020
Lead	975		14		1000	96	73-115		6020
Molybdenum	94.9		2.6	J	100	92	80-110		6020
Nickel	964		7.0		1000	96	72-111		6020
Selenium	911		5.0	U	1000	91	72-148		6020
Silver	99.0		0.47	J	100	98	10-139		6020
Thallium	242		2.0	U	250	97	69-117		6020
Tungsten	87.7		0.44	J	100	87	43-133		6020
Vanadium	938		10	J	1000	93	70-112		6020
Zinc	4380		3600		1000	81	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: MW31D-051012 MS | Lab ID: 240-11217-4 MS

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	99.0		0.32	J	100	99	44-153		6020
Arsenic	964		2.4	J	1000	96	82-123		6020
Barium	991		17		1000	97	45-144		6020
Beryllium	944		0.25	J	1000	94	77-124		6020
Cadmium	1000		0.54	J	1000	100	78-117		6020
Chromium	984		2.2		1000	98	72-110		6020
Cobalt	979		1.2		1000	98	67-114		6020
Copper	1000		1.0	J	1000	100	60-123		6020
Lead	978		0.61	J	1000	98	73-115		6020
Molybdenum	98.7		2.3	J	100	96	80-110		6020
Nickel	998		1.2	J	1000	100	72-111		6020
Selenium	988		0.73	J	1000	99	72-148		6020
Silver	103		1.0	U	100	103	10-139		6020
Thallium	246		0.69	J	250	98	69-117		6020
Vanadium	966		2.2	J	1000	96	70-112		6020
Zinc	1020		6.6	J	1000	101	49-156		6020
Tungsten	96.8		0.98	J	100	96	43-133		6020
Mercury	1.16		0.20	U	1.00	116	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-11218-A-20-C MS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Calcium	52900		5000	U	50000	106	75-125		6010C
Iron	1030		200	U	1000	103	75-125		6010C
Potassium	51700		200	J	50000	103	75-125		6010C
Magnesium	52700		5000	U	50000	105	75-125		6010C
Manganese	504		0.70	J	500	101	75-125		6010C
Sodium	51000		5000	U	50000	102	75-125		6010C
SiO2, Silica	2320		78	J	2140	105	75-125		6010C

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-11266-I-2-B MS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	98.7		0.24	J	100	98	44-153		6020
Arsenic	972		1.1	J	1000	97	82-123		6020
Barium	976		16		1000	96	45-144		6020
Beryllium	929		1.0	U	1000	93	77-124		6020
Cadmium	965		1.0	U	1000	97	78-117		6020
Chromium	956		2.0	U	1000	96	72-110		6020
Cobalt	948		0.060	J	1000	95	67-114		6020
Copper	956		0.49	J	1000	96	60-123		6020
Lead	955		1.0	U	1000	96	73-115		6020
Molybdenum	101		3.1	J	100	98	80-110		6020
Nickel	957		1.7	J	1000	96	72-111		6020
Selenium	971		0.83	J	1000	97	72-148		6020
Silver	96.3		1.0	U	100	96	10-139		6020
Thallium	243		0.43	J	250	97	69-117		6020
Vanadium	949		20	U	1000	95	70-112		6020
Tungsten	96.2		0.51	J	100	96	43-133		6020
Zinc	1120		160		1000	96	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: _____ Lab ID: 240-11218-A-20-D MSD

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Calcium	53000		50000	106	75-125	0	20		6010C
Iron	1030		1000	103	75-125	0	20		6010C
Potassium	51900		50000	103	75-125	0	20		6010C
Magnesium	52600		50000	105	75-125	0	20		6010C
Manganese	501		500	100	75-125	0	20		6010C
Sodium	51200		50000	102	75-125	0	20		6010C
SiO2, Silica	2320		2140	105	75-125	0	20		6010C

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - DISSOLVED

Client ID: _____ Lab ID: 240-11266-I-2-C MSD

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR)	C	Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Antimony	98.7		100	98	44-153	0	20		6020
Arsenic	978		1000	98	82-123	1	20		6020
Barium	979		1000	96	45-144	0	20		6020
Beryllium	957		1000	96	77-124	3	20		6020
Cadmium	965		1000	96	78-117	0	20		6020
Chromium	962		1000	96	72-110	1	20		6020
Cobalt	951		1000	95	67-114	0	20		6020
Copper	958		1000	96	60-123	0	20		6020
Lead	955		1000	96	73-115	0	20		6020
Molybdenum	102		100	98	80-110	1	20		6020
Nickel	960		1000	96	72-111	0	20		6020
Selenium	972		1000	97	72-148	0	20		6020
Silver	97.1		100	97	10-139	1	20		6020
Thallium	245		250	98	69-117	1	20		6020
Vanadium	957		1000	96	70-112	1	20		6020
Tungsten	97.1		100	97	43-133	1	20		6020
Zinc	1130		1000	97	49-156	1	20		6020

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS

Client ID: MW31D-051012 DU | Lab ID: 240-11217-4 DU

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

% Solids for Sample: | % Solids for Duplicate:

Matrix: Water | Concentration Units: ug/L

Analyte	Control Limit	Sample (S) C	Duplicate (D) C	RPD	Q	Method
Mercury	0.20	0.39	0.475	18.0		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATES
METALS - TOTAL RECOVERABLE

Client ID: MW31D-051012 DU | Lab ID: 240-11217-4 DU

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

% Solids for Sample: | % Solids for Duplicate:

Matrix: Water | Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	2.0	0.77	J	0.728	J	6.00		6020
Arsenic	5.0	4.6	J	4.81	J	5.00		6020
Barium	5.0	43		44.2		2.00		6020
Beryllium	1.0	0.44	J	0.481	J	9.00		6020
Cadmium	1.0	2.2		2.31		6.00		6020
Chromium	2.0	11		11.1		1.00		6020
Cobalt	1.0	10		10.4		1.00		6020
Copper	2.0	23		23.3		1.00		6020
Lead	1.0	14		14.4		0.900		6020
Molybdenum	10	2.6	J	2.53	J	2.00		6020
Nickel	2.0	7.0		7.13		1.00		6020
Selenium	5.0	5.0	U	5.0	U	NC		6020
Silver	1.0	0.47	J	0.471	J	0.900		6020
Thallium	2.0	2.0	U	2.0	U	NC		6020
Tungsten	10	0.44	J	10	U	NC		6020
Vanadium	20	10	J	10.6	J	1.00		6020
Zinc	20	3600		3570		0.0300		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATES
METALS - DISSOLVED

Client ID: MW31D-051012 DU | Lab ID: 240-11217-4 DU

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

% Solids for Sample: | % Solids for Duplicate:

Matrix: Water | Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	2.0	0.32	J	2.0	U	NC		6020
Arsenic	5.0	2.4	J	1.78	J	31.0		6020
Barium	5.0	17		17.1		0.600		6020
Beryllium	1.0	0.25	J	1.0	U	NC		6020
Cadmium	1.0	0.54	J	1.0	U	NC		6020
Chromium	2.0	2.2		1.17	J	60.0		6020
Cobalt	1.0	1.2		0.668	J	55.0		6020
Copper	2.0	1.0	J	0.442	J	80.0		6020
Lead	1.0	0.61	J	1.0	U	NC		6020
Molybdenum	10	2.3	J	1.97	J	17.0		6020
Nickel	2.0	1.2	J	1.10	J	13.0		6020
Selenium	5.0	0.73	J	5.0	U	NC		6020
Silver	1.0	1.0	U	1.0	U	NC		6020
Thallium	2.0	0.69	J	0.263	J	89.0		6020
Vanadium	20	2.2	J	1.36	J	46.0		6020
Zinc	20	6.6	J	5.46	J	19.0		6020
Tungsten	10	0.98	J	0.486	J	67.0		6020
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-44236/2-A

Lab Name: TestAmerica Canton Job No.: 240-11217-1

Sample Matrix: Water LCS Source: MTICP2A_00015

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Calcium	50000	49800		100	80	120		6010C
Iron	1000	971		97	80	120		6010C
Potassium	50000	48400		97	80	120		6010C
Magnesium	50000	49500		99	80	120		6010C
Manganese	500	477		95	80	120		6010C
Sodium	50000	47900		96	80	120		6010C
SiO2, Silica	2140	2140		100	80	120		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-44254/2-A

Lab Name: TestAmerica Canton Job No.: 240-11217-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	94.0		94	80	120		6020
Arsenic	1000	929		93	80	120		6020
Barium	1000	926		93	80	120		6020
Beryllium	1000	875		87	80	120		6020
Cadmium	1000	944		94	80	120		6020
Chromium	1000	934		93	80	120		6020
Cobalt	1000	928		93	80	120		6020
Copper	1000	962		96	80	120		6020
Lead	1000	942		94	80	120		6020
Molybdenum	100	90.3		90	80	120		6020
Nickel	1000	954		95	80	120		6020
Selenium	1000	946		95	80	120		6020
Silver	100	96.3		96	80	120		6020
Thallium	250	237		95	80	120		6020
Vanadium	1000	914		91	80	120		6020
Tungsten	100	89.7		90	80	120		6020
Zinc	1000	973		97	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-44621/2-A

Lab Name: TestAmerica Canton Job No.: 240-11217-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	95.2		95	80	120		6020
Arsenic	1000	948		95	80	120		6020
Barium	1000	953		95	80	120		6020
Beryllium	1000	1030		103	80	120		6020
Cadmium	1000	966		97	80	120		6020
Chromium	1000	963		96	80	120		6020
Cobalt	1000	959		96	80	120		6020
Copper	1000	973		97	80	120		6020
Lead	1000	983		98	80	120		6020
Molybdenum	100	92.5		92	80	120		6020
Nickel	1000	982		98	80	120		6020
Selenium	1000	971		97	80	120		6020
Silver	100	99.6		100	80	120		6020
Thallium	250	245		98	80	120		6020
Vanadium	1000	943		94	80	120		6020
Tungsten	100	89.4		89	80	120		6020
Zinc	1000	987		99	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-44713/2-A

Lab Name: TestAmerica Canton Job No.: 240-11217-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	94.3		94	80	120		6020
Arsenic	1000	928		93	80	120		6020
Barium	1000	927		93	80	120		6020
Beryllium	1000	932		93	80	120		6020
Cadmium	1000	957		96	80	120		6020
Chromium	1000	943		94	80	120		6020
Cobalt	1000	946		95	80	120		6020
Copper	1000	979		98	80	120		6020
Lead	1000	922		92	80	120		6020
Molybdenum	100	90.9		91	80	120		6020
Nickel	1000	973		97	80	120		6020
Selenium	1000	962		96	80	120		6020
Silver	100	99.2		99	80	120		6020
Thallium	250	237		95	80	120		6020
Vanadium	1000	917		92	80	120		6020
Tungsten	100	89.9		90	80	120		6020
Zinc	1000	978		98	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-44257/2-A

Lab Name: TestAmerica Canton Job No.: 240-11217-1

Sample Matrix: Water LCS Source: MTHGICVW_00299

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.31		106	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-44260/2-A

Lab Name: TestAmerica Canton Job No.: 240-11217-1

Sample Matrix: Water LCS Source: MTHGICVW_00299

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.27		105	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-11218-A-20-B SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-11217-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Calcium	5000	U	25000	U	NC		6010C
Iron	200	U	1000	U	NC		6010C
Potassium	200	J	855	J	NC		6010C
Magnesium	5000	U	25000	U	NC		6010C
Manganese	0.70	J	75	U	NC		6010C
Sodium	5000	U	25000	U	NC		6010C
SiO2, Silica	78	J	241	J	NC		6010C

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-11217-4

SDG No:

Lab Name: TestAmerica Canton Job No: 240-11217-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.77	J	0.770	J	NC		6020
Arsenic	4.6	J	4.05	J	NC		6020
Barium	43		43.3		NC		6020
Beryllium	0.44	J	5.0	U	NC		6020
Cadmium	2.2		2.14	J	NC		6020
Chromium	11		10.8		NC		6020
Cobalt	10		10.5		NC		6020
Copper	23		23.5		NC		6020
Lead	14		14.3		NC		6020
Molybdenum	2.6	J	2.79	J	NC		6020
Nickel	7.0		6.85	J	NC		6020
Selenium	5.0	U	25	U	NC		6020
Silver	0.47	J	0.430	J	NC		6020
Thallium	2.0	U	10	U	NC		6020
Vanadium	10	J	10.1	J	NC		6020
Tungsten	0.44	J	50	U	NC		6020
Zinc	3600		3570		0.24		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 240-11217-4

SDG No:

Lab Name: TestAmerica Canton Job No: 240-11217-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.32	J	0.740	J	NC		6020
Arsenic	2.4	J	4.89	J	NC		6020
Barium	17		18.5	J	NC		6020
Beryllium	0.25	J	5.0	U	NC		6020
Cadmium	0.54	J	1.36	J	NC		6020
Chromium	2.2		4.06	J	NC		6020
Cobalt	1.2		2.00	J	NC		6020
Copper	1.0	J	2.32	J	NC		6020
Lead	0.61	J	1.47	J	NC		6020
Molybdenum	2.3	J	3.12	J	NC		6020
Nickel	1.2	J	2.06	J	NC		6020
Selenium	0.73	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.69	J	1.82	J	NC		6020
Vanadium	2.2	J	4.85	J	NC		6020
Tungsten	0.98	J	1.92	J	NC		6020
Zinc	6.6	J	100	U	NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - DISSOLVED

Lab ID: 240-11266-I-2-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-11217-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.24	J	10	U	NC		6020
Arsenic	1.1	J	25	U	NC		6020
Barium	16		16.5	J	NC		6020
Beryllium	1.0	U	5.0	U	NC		6020
Cadmium	1.0	U	5.0	U	NC		6020
Chromium	2.0	U	10	U	NC		6020
Cobalt	0.060	J	5.0	U	NC		6020
Copper	0.49	J	10	U	NC		6020
Lead	1.0	U	5.0	U	NC		6020
Molybdenum	3.1	J	2.75	J	NC		6020
Nickel	1.7	J	1.84	J	NC		6020
Selenium	0.83	J	25	U	NC		6020
Silver	1.0	U	5.0	U	NC		6020
Thallium	0.43	J	0.710	J	NC		6020
Vanadium	20	U	100	U	NC		6020
Tungsten	0.51	J	50	U	NC		6020
Zinc	160		171		NC		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C MDL Date: 01/01/2011 08:42

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN

CALIBRATION BLANK DETECTION LIMITS

METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: I9

Method: 6010C XMDL Date: 01/01/2011 08:57

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Calcium	317.933	5000	130
Iron	271.441	200	81
Magnesium	279.078	5000	34
Manganese	257.610	15	0.41
Potassium	766.491	5000	72
SiO2, Silica	251.6	1070	14
Sodium	330.232	5000	590

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

10-IN
ICP-AES INTERELEMENT CORRECTION FACTORS
METALS

Lab Name: TestAmerica Canton Job Number: 240-11217-1

SDG No.:

ICP-AES Instrument ID: I9 Date: 03/29/2012

Analyte	Wave Length	Al	As	Ca	Co	Cr	Cu	Fe	Mn	Mo	Ni	Si	Ti	Tl	V
Aluminum										0.025824					0.103533
Antimony		-0.000079			-0.000396			-0.000019							0.002225
Arsenic		0.000032			-0.000950	0.000872			-0.000355	0.002557					
Barium															
Beryllium															0.000671
Boron															
Cadmium			0.016268					-0.000006							
Calcium															
Chromium															
Cobalt													0.002095		
Copper				0.000029	0.000378			0.000029							
Iron															
Lead		-0.000103					0.000401	0.000041			0.000228	0.000069			
Lithium				0.000084											
Magnesium															
Manganese															
Molybdenum															
Nickel					0.000518			0.000077							
Potassium															
Selenium									0.000338						
Silver															
Sodium															
Strontium															
Thallium					0.003114				0.000571				-0.000545		-0.001094
Tin															
Titanium															
Vanadium								0.000050							
Zinc						-0.000592									

X-IN

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-11217-1

SDG No.:

Instrument ID: I9 Date: 11/01/2011 11:52

Analyte	Integ. Time (Sec.)	Concentration (ug/L)	Method
Calcium		500000	6010C
Iron		500000	6010C
Potassium		500000	6010C
Magnesium		500000	6010C
Manganese		15000	6010C
Sodium		500000	6010C

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-11217-1

SDG No.:

Instrument ID: I8 Date: 05/03/2012 17:05

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Antimony		1000	6020
Arsenic		10000	6020
Barium		10000	6020
Beryllium		10000	6020
Cadmium		10000	6020
Chromium		10000	6020
Cobalt		10000	6020
Copper		10000	6020
Lead		10000	6020
Molybdenum		1500	6020
Nickel		10000	6020
Selenium		10000	6020
Silver		1000	6020
Thallium		10000	6020
Vanadium		5000	6020
Tungsten		1000	6020
Zinc		10000	6020

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-11217-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44236/1-A	05/16/2012 10:00	44236		50	50
LCS 240-44236/2-A	05/16/2012 10:00	44236		50	50
240-11218-A-20-C MS	05/16/2012 10:00	44236		50	50
240-11218-A-20-D MSD	05/16/2012 10:00	44236		50	50
240-11217-2	05/16/2012 10:00	44236		50	50
240-11217-5	05/16/2012 10:00	44236		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44254/1-A	05/16/2012 10:55	44254		50	50
LCS 240-44254/2-A	05/16/2012 10:55	44254		50	50
240-11266-I-2-B MS	05/16/2012 10:55	44254		50	50
240-11266-I-2-C MSD	05/16/2012 10:55	44254		50	50
240-11217-2	05/16/2012 10:55	44254		50	50
240-11217-2	05/16/2012 10:55	44254		50	50
240-11217-3	05/16/2012 10:55	44254		50	50
240-11217-3	05/16/2012 10:55	44254		50	50
240-11217-5	05/16/2012 10:55	44254		50	50
240-11217-5	05/16/2012 10:55	44254		50	50
240-11217-6	05/16/2012 10:55	44254		50	50
240-11217-6	05/16/2012 10:55	44254		50	50
240-11217-7	05/16/2012 10:55	44254		50	50
240-11217-7	05/16/2012 10:55	44254		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44621/1-A	05/18/2012 15:38	44621		50	50
LCS 240-44621/2-A	05/18/2012 15:38	44621		50	50
240-11217-4	05/18/2012 15:38	44621		50	50
240-11217-4 DU	05/18/2012 15:38	44621		50	50
240-11217-4 MS	05/18/2012 15:38	44621		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44713/1-A	05/21/2012 09:39	44713		50	50
LCS 240-44713/2-A	05/21/2012 09:39	44713		50	50
240-11217-4	05/21/2012 09:39	44713		50	50
240-11217-4 DU	05/21/2012 09:39	44713		50	50
240-11217-4 MS	05/21/2012 09:39	44713		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44257/1-A	05/16/2012 15:05	44257		100	100
LCS 240-44257/2-A	05/16/2012 15:05	44257		100	100
240-11217-4	05/16/2012 15:05	44257		100	100
240-11217-4 DU	05/16/2012 15:05	44257		100	100
240-11217-4 MS	05/16/2012 15:05	44257		100	100
240-11217-2	05/16/2012 15:05	44257		100	100
240-11217-2	05/16/2012 15:05	44257		100	100
240-11217-3	05/16/2012 15:05	44257		100	100
240-11217-3	05/16/2012 15:05	44257		100	100
240-11217-5	05/16/2012 15:05	44257		100	100
240-11217-5	05/16/2012 15:05	44257		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44260/1-A	05/16/2012 15:05	44260		100	100
LCS 240-44260/2-A	05/16/2012 15:05	44260		100	100
240-11217-4	05/16/2012 15:05	44260		100	100
240-11217-4 DU	05/16/2012 15:05	44260		100	100
240-11217-4 MS	05/16/2012 15:05	44260		100	100
240-11217-6	05/16/2012 15:05	44260		100	100
240-11217-6	05/16/2012 15:05	44260		100	100
240-11217-7	05/16/2012 15:05	44260		100	100
240-11217-7	05/16/2012 15:05	44260		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/17/2012 End Date: 05/17/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-44506/2 IC	06:20	89		94		97		96		97	
STD3 240-44506/3 IC	06:27	80		90		95		92		95	
STD4 240-44506/4 IC	06:34	97		96		100		100		101	
ICV 240-44506/5	06:40	91		97		99		98		99	
ICB 240-44506/6	06:47	101		99		100		100		102	
CRI 240-44506/7	06:53	103		102		102		101		102	
ICSA 240-44506/8	06:59	81		83		88		89		92	
ICSAB 240-44506/9	07:04	81		84		90		91		94	
CCV 240-44506/12	07:25	85		93		100		98		100	
CCB 240-44506/13	07:32	94		97		102		102		104	
MB 240-44254/1-A	07:38	101		102		102		103		104	
LCS 240-44254/2-A	07:43	95		94		97		97		101	
240-11266-I-2-A SD	07:56	102		102		102		101		103	
240-11266-I-2-B MS	08:02	84		88		93		91		95	
240-11266-I-2-C MSD	08:09	80		87		96		93		98	
CCV 240-44506/24	08:41	86		90		97		95		98	
CCB 240-44506/25	08:48	95		96		100		100		102	
240-11217-2	09:16	51		65		82		77		84	
240-11217-2	09:22	40		55		86		82		89	
240-11217-3	09:28	56		70		95		92		100	
240-11217-3	09:33	56		69		94		90		98	
240-11217-5	09:39	57		68		93		94		95	
240-11217-5	09:45	61		73		97		96		99	
CCV 240-44506/36	09:50	72		83		104		101		105	
CCB 240-44506/37	09:57	81		89		104		104		107	
240-11217-6	10:03	73		85		97		95		96	
240-11217-6	10:09	72		81		96		95		97	
240-11217-7	10:14	80		86		103		101		104	
240-11217-7	10:20	83		87		97		97		100	
CCV 240-44506/47	10:56	84		90		97		95		98	
CCB 240-44506/48	11:03	89		91		99		98		103	
CCV 240-44506/59	12:09	82		89		96		93		98	
CCB 240-44506/60	12:16	89		92		98		98		101	
240-11217-5	12:39	93		97		97		98		101	
240-11217-5	12:45	84		86		91		90		94	
240-11217-6	12:50	88		91		96		96		98	
240-11217-6	12:56	88		92		95		95		98	
CCV 240-44506/69	13:07	79		87		94		92		96	
CCB 240-44506/70	13:15	87		91		96		96		100	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/17/2012 End Date: 05/17/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-44506/2 IC	06:20			97							
STD3 240-44506/3 IC	06:27			97							
STD4 240-44506/4 IC	06:34			101							
ICV 240-44506/5	06:40			100							
ICB 240-44506/6	06:47			101							
CRI 240-44506/7	06:53			102							
ICSA 240-44506/8	06:59			92							
ICSAB 240-44506/9	07:04			95							
CCV 240-44506/12	07:25			101							
CCB 240-44506/13	07:32			104							
MB 240-44254/1-A	07:38			103							
LCS 240-44254/2-A	07:43			101							
240-11266-I-2-A SD	07:56			103							
240-11266-I-2-B MS	08:02			99							
240-11266-I-2-C MSD	08:09			101							
CCV 240-44506/24	08:41			100							
CCB 240-44506/25	08:48			103							
240-11217-2	09:16			91							
240-11217-2	09:22			97							
240-11217-3	09:28			106							
240-11217-3	09:33			103							
240-11217-5	09:39			265	*						
240-11217-5	09:45			153	*						
CCV 240-44506/36	09:50			109							
CCB 240-44506/37	09:57			109							
240-11217-6	10:03			167	*						
240-11217-6	10:09			166	*						
240-11217-7	10:14			108							
240-11217-7	10:20			105							
CCV 240-44506/47	10:56			100							
CCB 240-44506/48	11:03			103							
CCV 240-44506/59	12:09			100							
CCB 240-44506/60	12:16			102							
240-11217-5	12:39			119							
240-11217-5	12:45			106							
240-11217-6	12:50			113							
240-11217-6	12:56			112							
CCV 240-44506/69	13:07			99							
CCB 240-44506/70	13:15			100							

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/21/2012 End Date: 05/21/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-44805/2 IC	08:37	93		100		99		97		98	
STD3 240-44805/3 IC	08:44	86		97		96		93		95	
STD4 240-44805/4 IC	08:52	99		99		98		99		98	
ICV 240-44805/5	08:57	99		102		99		97		97	
ICB 240-44805/6	09:04	105		103		98		99		98	
CRI 240-44805/7	09:10	109		106		100		99		99	
ICSA 240-44805/8	09:16	86		84		83		86		88	
ICSAB 240-44805/9	09:21	85		86		86		88		90	
CCV 240-44805/22	10:44	88		94		96		94		96	
CCB 240-44805/23	10:51	96		98		98		99		99	
MB 240-44621/1-A	11:42	91		95		95		96		96	
LCS 240-44621/2-A	11:48	85		87		90		90		93	
CCV 240-44805/34	11:55	84		89		91		90		91	
CCB 240-44805/35	12:02	91		92		93		93		93	
240-11217-4	12:08	89		90		88		90		91	
240-11217-4 SD	12:14	94		93		92		94		94	
240-11217-4 DU	12:19	97		97		99		98		97	
240-11217-4 MS	12:25	98		98		97		97		97	
CCV 240-44805/46	13:06	83		89		95		92		93	
CCB 240-44805/47	13:14	90		92		96		96		96	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/21/2012 End Date: 05/21/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-44805/2 IC	08:37			99							
STD3 240-44805/3 IC	08:44			96							
STD4 240-44805/4 IC	08:52			96							
ICV 240-44805/5	08:57			97							
ICB 240-44805/6	09:04			96							
CRI 240-44805/7	09:10			98							
ICSA 240-44805/8	09:16			87							
ICSAB 240-44805/9	09:21			90							
CCV 240-44805/22	10:44			97							
CCB 240-44805/23	10:51			97							
MB 240-44621/1-A	11:42			96							
LCS 240-44621/2-A	11:48			94							
CCV 240-44805/34	11:55			92							
CCB 240-44805/35	12:02			93							
240-11217-4	12:08			92							
240-11217-4 SD	12:14			94							
240-11217-4 DU	12:19			97							
240-11217-4 MS	12:25			96							
CCV 240-44805/46	13:06			94							
CCB 240-44805/47	13:14			95							

15-IN

ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY

METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/22/2012 End Date: 05/22/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-44964/2 IC	06:33	101		98		95		93		95	
STD3 240-44964/3 IC	06:39	98		97		93		90		91	
STD4 240-44964/4 IC	06:46	89		94		90		86		89	
STD5 240-44964/5 IC	06:53	106		99		95		96		96	
ICV 240-44964/6	06:59	104		101		94		92		93	
ICB 240-44964/7	07:06	110		102		96		95		96	
CRI 240-44964/8	07:12	118		109		99		97		97	
ICSA 240-44964/9	07:18	90		82		78		78		83	
ICSAB 240-44964/10	07:23	89		84		79		80		85	
CCV 240-44964/13	07:44	94		94		90		88		90	
CCB 240-44964/14	07:51	104		99		94		94		97	
MB 240-44713/1-A	08:35	121	*	123	*	107		106		107	
LCS 240-44713/2-A	08:41	105		102		94		93		96	
240-11217-4	08:48	115		106		97		97		97	
240-11217-4 SD	08:54	115		108		97		96		97	
CCV 240-44964/25	09:00	93		91		86		84		88	
CCB 240-44964/26	09:07	106		97		89		88		91	
240-11217-4 DU	09:13	100		94		87		87		90	
240-11217-4 MS	09:18	100		92		86		85		88	
CCV 240-44964/37	10:11	89		83		81		78		83	
CCB 240-44964/38	10:18	97		89		88		87		91	
CCV 240-44964/73	13:45	82		79		80		78		82	
CCB 240-44964/74	13:52	91		84		84		83		86	
MB 240-44713/1-A	13:57	105		92		86		83		86	
CCV 240-44964/77	14:09	101		90		82		79		81	
CCB 240-44964/78	14:16	101		91		87		85		87	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/22/2012 End Date: 05/22/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-44964/2 IC	06:33			95							
STD3 240-44964/3 IC	06:39			92							
STD4 240-44964/4 IC	06:46			90							
STD5 240-44964/5 IC	06:53			96							
ICV 240-44964/6	06:59			93							
ICB 240-44964/7	07:06			95							
CRI 240-44964/8	07:12			97							
ICSA 240-44964/9	07:18			83							
ICSAB 240-44964/10	07:23			86							
CCV 240-44964/13	07:44			93							
CCB 240-44964/14	07:51			97							
MB 240-44713/1-A	08:35			106							
LCS 240-44713/2-A	08:41			97							
240-11217-4	08:48			97							
240-11217-4 SD	08:54			97							
CCV 240-44964/25	09:00			92							
CCB 240-44964/26	09:07			93							
240-11217-4 DU	09:13			92							
240-11217-4 MS	09:18			90							
CCV 240-44964/37	10:11			88							
CCB 240-44964/38	10:18			93							
CCV 240-44964/73	13:45			86							
CCB 240-44964/74	13:52			88							
MB 240-44713/1-A	13:57			88							
CCV 240-44964/77	14:09			83							
CCB 240-44964/78	14:16			88							

TETRA TECH **CALCULATION WORKSHEET** PAGE _____ OF _____

CLIENT		JOB NUMBER	
Lockheed-MSA		SDG 240-11217-1	
SUBJECT	Sample Calculation		
BASED ON		DRAWING NUMBER	
BY	CHECKED BY	APPROVED BY	DATE
Ann Cognetta			June 20, 2012

I. VOC; Sample MW18I-051012; Trichloroethene

$$\frac{1536018}{1626937} * 333.33 * \frac{10\ ug/L}{0.2745} = 11,464.6\ ug/L$$

II. SVOC; Sample MW18S-051012; 1,4-dioxane

$$\frac{382109}{229229} * 2 * \frac{4\ ng/uL}{0.5688} * \frac{2mL}{1030mL} * 1000 = 45.5\ ug/L$$

III. GRO; Sample DMW2S-051012

$$\frac{153371983}{350359.609} * 5 = 2188.8\ ug/L$$

IV. OVG; Sample MW18S-051012; Methane

$$\frac{2708362}{1492 6.0108} = 181.5\ ug/L$$

V DRO; Sample DMW 10S-051012

$$\frac{23029176}{186\ 529.226} * \frac{5mL}{990mL} * 1000 = 623.3\ ug/L$$

Sample Calculation

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18I-051012 Lab Sample ID: 240-11217-5

Matrix: Water Lab File ID: UXM6198.D

Analysis Method: 8260C Date Collected: 05/10/2012 13:00

Sample wt/vol: 5(mL) Date Analyzed: 05/23/2012 16:58

Soil Aliquot Vol: Dilution Factor: 333.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45083 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	330	U	330	43
108-90-7	Chlorobenzene	330	U	330	50
75-00-3	Chloroethane	330	U	330	97
67-66-3	Chloroform	330	U	330	53
74-87-3	Chloromethane	330	U	330	100
156-59-2	cis-1,2-Dichloroethene	1200		330	57
10061-01-5	cis-1,3-Dichloropropene	330	U	330	47
124-48-1	Dibromochloromethane	330	U	330	60
74-95-3	Dibromomethane	330	U	330	93
75-71-8	Dichlorodifluoromethane	330	U	330	100
108-20-3	Diisopropyl ether	3300	U	3300	500
100-41-4	Ethylbenzene	330	U	330	57
637-92-3	Ethyl-t-butyl ether (ETBE)	1700	U	1700	37
87-68-3	Hexachlorobutadiene	210	J	330	100
98-82-8	Isopropylbenzene	330	U	330	43
1634-04-4	Methyl tert-butyl ether	1700	U	1700	57
75-09-2	Methylene Chloride	330	U	330	110
179601-23-1	m-Xylene & p-Xylene	670	U	670	80
91-20-3	Naphthalene	330	U	330	80
104-51-8	n-Butylbenzene	330	U	330	40
103-65-1	n-Propylbenzene	330	U	330	47
95-47-6	o-Xylene	330	U	330	47
99-87-6	p-Isopropyltoluene	330	U	330	40
135-98-8	sec-Butylbenzene	330	U	330	43
100-42-5	Styrene	330	U	330	37
994-05-8	Tert-amyl-methyl ether (TAME)	1700	U	1700	22
75-65-0	tert-Butyl alcohol	17000	U	17000	1300
98-06-6	tert-Butylbenzene	330	U	330	43
127-18-4	Tetrachloroethene	330	U	330	97
108-88-3	Toluene	330	U	330	43
156-60-5	trans-1,2-Dichloroethene	330	U	330	63
10061-02-6	trans-1,3-Dichloropropene	330	U	330	63
79-01-6	Trichloroethene	11000		330	57
75-69-4	Trichlorofluoromethane	330	U	330	70
108-05-4	Vinyl acetate	670	U	670	63
75-01-4	Vinyl chloride	540		330	73

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX16\20120523-10212.b\UXM6198.D		
Lims ID:	240-11217-B-5	Client ID:	MW18I-051012
Inject. Date:	23-May-2012 16:58:30	Dil. Factor:	333.3300
Sample Type:	Client		
Sample ID:	240-0010212-013		
Misc. Info.:	M20523A,8260LLUX16,,1644		
Operator:	1644	Instrument ID:	A3UX16
Vol. Injected:	1.0000	ALS Bottle#:	13
Lims Batch ID:	45083	Lims Sample ID:	13
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX16\20120523-10212.b\8260_16.m		
Last Update:	24-May-2012 09:54:19	Calib Date:	09-May-2012 18:43:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX16\20120509-9809.b\UXM5665.D		
Limit Group:	MSV 8260DOD ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-18		

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1626937	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.394	-0.001	90	1241933	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	665619	10.0	
$ 5 Dibromofluoromethane (Surr)	113	5.120	5.121	-0.001	59	414807	10.0	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	590460	11.4	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1731094	10.4	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	92	626720	9.75	
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62	1.954	1.954	0.0	96	119181	1.62	
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.405					
18 Trichlorofluoromethane	101		2.654					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
26 Carbon disulfide	76		3.354					
30 Methylene Chloride	84	3.591	3.591	0.0	88	47521	0.1130	
31 2-Methyl-2-propanol	59	3.686	3.674	0.012	66	9622	3.31	
34 Methyl tert-butyl ether	73		3.840					
33 trans-1,2-Dichloroethene	96		3.840					
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.279					
40 Tert-butyl ethyl ether	59		4.587					
41 2-Butanone (MEK)	43		4.705					
42 cis-1,2-Dichloroethene	96	4.717	4.717	0.0	73	211991	3.73	
43 2,2-Dichloropropane	77		4.717					
47 Chlorobromomethane	128		4.919					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97		5.156					
52 1,1-Dichloropropene	75		5.298					

Sample Calculation

Report Date: 24-May-2012 09:54:25 Chrom Revision: 2.0 08-Feb-2012 11:07:54
Data File: \\Ncchrom\ChromData\A3UX16\20120523-10212.b\UXM6198.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
53 Carbon tetrachloride	117		5.310					
56 1,2-Dichloroethane	62	5.476	5.476	0.0	54	14657	0.2109	
55 Benzene	78		5.476					
57 Tert-amyl methyl ether	73		5.559					
60 Trichloroethene	130	6.022	6.022	0.0	90	1536018	34.4	
62 1,2-Dichloropropane	63		6.211					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91		7.136					
73 trans-1,3-Dichloropropene	75		7.314					
76 1,3-Dichloropropane	76		7.634					
77 Tetrachloroethene	164	7.646	7.646	0.0	50	3583	0.1010	
78 2-Hexanone	43		7.694					
79 Chlorodibromomethane	129		7.848					
123 Ethylene Dibromide	107		7.967					
82 Chlorobenzene	112		8.429					
83 1,1,1,2-Tetrachloroethane	131		8.488					
84 Ethylbenzene	106		8.524					
10 m-Xylene & p-Xylene	106		8.631					
85 o-Xylene	106		9.010					
86 Styrene	104		9.010					
87 Bromoform	173		9.188					
88 Isopropylbenzene	105		9.354					
90 1,1,2,2-Tetrachloroethane	83		9.615					
91 Bromobenzene	156		9.662					
92 1,2,3-Trichloropropane	110		9.674					
94 N-Propylbenzene	120		9.757					
95 2-Chlorotoluene	126		9.840					
104 4-Chlorotoluene	126		9.947					
97 tert-Butylbenzene	119		10.243					
98 1,2,4-Trimethylbenzene	105		10.291					
99 sec-Butylbenzene	105		10.457					
100 1,3-Dichlorobenzene	146		10.575					
101 4-Isopropyltoluene	119		10.599					
102 1,4-Dichlorobenzene	146		10.658					
103 1,2,3-Trimethylbenzene	105		10.706					
105 n-Butylbenzene	91		11.002					
106 1,2-Dichlorobenzene	146		11.026					
107 1,2-Dibromo-3-Chloropropane	157		11.797					
109 1,2,4-Trichlorobenzene	180	12.639	12.639	0.0	71	21946	0.4784	
110 Hexachlorobutadiene	225	12.805	12.817	-0.012	56	12837	0.6268	
111 Naphthalene	128	12.888	12.888	0.0	55	20559	0.2093	
112 1,2,3-Trichlorobenzene	180	13.149	13.149	0.0	56	15624	0.4034	
S 114 Xylenes, Total	106		16.530					

Sample Calculation

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 | Lab Sample ID: 240-11217-2

Matrix: Water | Lab File ID: 20522031.D

Analysis Method: 8270C | Date Collected: 05/10/2012 10:45

Extract. Method: 3520C | Date Extracted: 05/16/2012 10:08

Sample wt/vol: 1030(mL) | Date Analyzed: 05/22/2012 17:51

Con. Extract Vol.: 2(mL) | Dilution Factor: 2

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	45		1.9	0.95

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	44		28-110
367-12-4	2-Fluorophenol (Surr)	42		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	55		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	43		27-111
4165-62-2	Phenol-d5 (Surr)	47		10-110
1718-51-0	Terphenyl-d14 (Surr)	52		37-119

Report Date: 23-May-2012 13:01:30 Chrom Revision: 2.0 08-Feb-2012 11:07:54

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\NCChrom\ChromData\A4HP10\20120522-10164.b\20522031.D		
Lims ID:	240-11217-P-2-A	Client ID:	MW18S-051012
Inject. Date:	22-May-2012 17:51:30	Dil. Factor:	2.0000
Sample Type:	Client		
Sample ID:	240-0010164-031		
Misc. Info.:	240-11217-P-2-A		
Operator:	001710	Instrument ID:	A4HP10
Vol. Injected:	1.0000	ALS Bottle#:	31
Lims Batch ID:	44839	Lims Sample ID:	31
Detector:	MS SCAN		
Method:	\\NCChrom\ChromData\A4HP10\20120522-10164.b\8270_10.m		
Last Update:	23-May-2012 13:01:25	Calib Date:	16-May-2012 20:57:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\NCChrom\ChromData\A4HP10\20120516-10020.b\20516028.D		
Limit Group:	MSS 8270C ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-15		
First Level Reviewer: gruberj		Date:	23-May-2012 12:56:47

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	3.425	3.425	0.0	98	229229	4.00	
* 2 Naphthalene-d8	136	4.312	4.317	-0.005	100	963944	4.00	
* 3 Acenaphthene-d10	164	5.578	5.578	0.0	91	566586	4.00	
* 4 Phenanthrene-d10	188	6.657	6.662	-0.005	99	915291	4.00	
* 5 Chrysene-d12	240	8.612	8.623	-0.011	98	856634	4.00	
* 6 Perylene-d12	264	9.969	9.980	-0.011	96	766184	4.00	
$ 7 2-Fluorophenol	112	2.575	2.570	0.005	94	247926	3.17	
$ 8 Phenol-d5	99	3.152	3.152	0.0	87	365029	3.49	
$ 9 Nitrobenzene-d5	82	3.799	3.804	-0.005	91	234483	2.13	
$ 10 2-Fluorobiphenyl (Surr)	172	5.070	5.070	0.0	99	418771	2.22	
$ 11 2,4,6-Tribromophenol	330	6.149	6.154	-0.005	91	86052	4.12	
$ 12 Terphenyl-d14	244	7.789	7.794	-0.005	99	476051	2.58	
25 1,4-Dioxane	88	1.624	1.624	0.0	98	382109	11.7	M

QC Flag Legend

Review Flags
M - Manually Integrated

Sample Calculation

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 44206

SDG No.:

Instrument ID: A4HP10 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/16/2012 11:09 Calibration End Date: 05/16/2012 15:26 Calibration ID: 8767

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-44206/6	20516006.D
Level 2	STD2 240-44206/5	20516005.D
Level 3	STD3 240-44206/4	20516004.D
Level 4	STD4 240-44206/3	20516003.D
Level 5	STD5 240-44206/2	20516002.D
Level 6	STD6 240-44206/10	20516010.D
Level 7	STD7 240-44206/9	20516009.D
Level 8	STD8 240-44206/8	20516008.D
Level 9	STD9 240-44206/7	20516007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5565	0.5912 0.5339	0.5922 0.5872	0.5660 0.5670	0.5564	Ave		0.5688				3.6		15.0			
N-Nitrosodimethylamine	0.9674	0.9387 0.9287	0.9903 1.0177	0.9566 0.9706	0.9448	Ave		0.9644				3.0		15.0			
Pyridine	1.6033	1.1406 1.5757	1.4614 1.6915	1.4717 1.6368	1.4760	Ave		1.5071				11.0		15.0			
Ethyl methacrylate	1.3911	1.3089 1.3530	1.4366 1.4452	1.4012 1.3876	1.3597	Ave		1.3854				3.2		15.0			
Malononitrile	1.7610	1.7257 1.4747	1.9251 1.3491	1.9233 +++++	1.8662	Ave		1.7179				13.0		15.0			
Benzaldehyde	1.6101 0.9196	1.3384 +++++	1.4372 +++++	1.3533 +++++	1.2589	Ave		1.3196				17.0	*	15.0			
3-Chloropropionitrile	1.0895	1.0078 1.0533	1.1291 1.1423	1.0829 1.0968	1.0500	Ave		1.0815				4.1		15.0			
Phenol	1.9848	1.7296 1.9545	1.9414 2.0854	1.8785 1.9812	1.8587	Ave		1.9267				5.5		15.0			
Aniline	2.4075	1.8788 2.5808	2.3237 2.6905	2.4486 2.4781	2.3085	Ave		2.3896				10.0		15.0			
Bis(2-chloroethyl)ether	1.6859	1.8102 1.5416	1.5925 1.6776	1.5737 1.6806	1.4680	Ave		1.6288				6.5		15.0			
2-Chlorophenol	1.5509	1.4166 1.5403	1.5207 1.6604	1.4985 1.5449	1.4532	Ave		1.5232				4.8		15.0			
1,3-Dichlorobenzene	1.5919	1.5162 1.5718	1.5649 1.6702	1.5653 1.5667	1.5182	Ave		1.5707				3.1		15.0			
1,4-Dichlorobenzene	1.6477	1.5160 1.5959	1.5946 1.7286	1.6396 1.6132	1.5769	Ave		1.6141				3.8		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW2S-051012 | Lab Sample ID: 240-11217-6

Matrix: Water | Lab File ID: AF052135.D

Analysis Method: 8015B | Date Collected: 05/10/2012 14:25

Sample wt/vol: 5(mL) | Date Analyzed: 05/22/2012 07:15

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44701 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	2200		500	130

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	75		10-150

Report Date: 22-May-2012 09:04:53 Chrom Revision: 2.0 08-Feb-2012 11:07:54

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\AFID\20120521-10134.b\AF052135.D		
Lims ID:	240-11217-B-6	Client ID:	DMW2S-051012
Inject. Date:	22-May-2012 07:15:40	Dil. Factor:	5.0000
Sample Type:	Client		
Sample ID:	240-0010134-035		
Misc. Info.:			
Operator:		Instrument ID:	AFID
Vol. Injected:	1.0000	ALS Bottle#:	1
Lims Batch ID:	44701	Lims Sample ID:	35
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\AFID\20120521-10134.b\A80218015.m		
Last Update:	22-May-2012 09:04:45	Calib Date:	14-Feb-2012 17:55:08
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\AFID\20120214-7573.b\AF021410.D		
Limit Group:	GCV 8015B GRO ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

First Level Reviewer: bolgrind Date: 22-May-2012 08:19:24

Compound	Det	RT	ADJ RT	DLT RT	Response	On-Col Amt ug/l	Flags
* 15 Fluorobenzene	1	9.436	9.427	0.009	285736	0	
$ 16 Trifluorotoluene (Surr)	2	10.463	10.460	0.003	2843668	7.53	
A 5 C6-C10	2	11.525	5.829 - 17.279		153371983	437.8	

Sample Calculation

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 33438

SDG No.:

Instrument ID: AFID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 17:20 Calibration End Date: 02/10/2012 20:22 Calibration ID: 6972

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33438/14	AF021014.D
Level 2	STD2 240-33438/15	AF021015.D
Level 3	STD3 240-33438/16	AF021016.D
Level 4	STD4 240-33438/17	AF021017.D
Level 5	STD5 240-33438/18	AF021018.D
Level 6	STD6 240-33438/19	AF021019.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	413318 332298	381704 319349	324961	330527	Ave		350359.609				11.0		20.0			
C6-C12	477220 364247	429686 349887	360866	362529	Ave		390739.136				13.0		20.0			
Trifluorotoluene (Surr)	338791 402599	358328 418139	375665	373847	Ave		377894.900				7.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

FORM I
GC VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: MW18S-051012 | Lab Sample ID: 240-11217-2

Matrix: Water | Lab File ID: Z2051705.D

Analysis Method: RSK-175 | Date Collected: 05/10/2012 10:45

Sample wt/vol: 17(mL) | Date Analyzed: 05/17/2012 16:38

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: | ID:

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44479 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
74-85-1	Ethene	4.9		0.50	0.37
74-84-0	Ethane	0.74		0.50	0.10
74-82-8	Methane	180		0.50	0.098

CAS NO.	SURROGATE	%REC	Q	LIMITS
420-46-2	1,1,1-Trifluoroethane	94		40-122

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\ZPID\20120517-10079.b\Z2051705.D		
Lims ID:	240-11217-F-2	Client ID:	MW18S-051012
Inject. Date:	17-May-2012 16:38:19	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0010079-005		
Misc. Info.:			
Operator:	042476	Instrument ID:	ZPID
Vol. Injected:	1.0000	ALS Bottle#:	1
Lims Batch ID:	44479	Lims Sample ID:	5
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\ZPID\20120517-10079.b\RSK175.m		
Last Update:	23-May-2012 10:07:36	Calib Date:	12-Dec-2011 23:46:44
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\ZPID\20111212-5962.b\Z0121213.D		
Limit Group:	GCV RSK 175 ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-18		

First Level Reviewer: heakind Date: 23-May-2012 10:07:25

Det	RT	EXP RT	DLT RT	Response	On-Col Amt ug/l	Flags
1 Methane						
2	6.325	6.333	-0.008	2708362	181.5	
4 Ethylene						
2	9.789	9.806	-0.017	58634	4.87	
6 Ethane						
2	11.375	11.383	-0.008	10629	0.7388	
$ 7 1,1,1-Trifluoroethane						
2	14.935	14.943	-0.008	15903855	2477.9	

Sample Calculation

FORM VI
GC VOA INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 26502

SDG No.:

Instrument ID: ZPID GC Column: ID: Heated Purge: (Y/N) N

Calibration Start Date: 12/12/2011 19:24 Calibration End Date: 12/12/2011 23:46 Calibration ID: 6094

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-26502/5	Z0121205.D
Level 2	STD2 240-26502/6	Z0121206.D
Level 3	STD3 240-26502/7	Z0121207.D
Level 4	STD5 240-26502/9	Z0121209.D
Level 5	STD4 240-26502/8	Z0121208.D
Level 6	STD6 240-26502/10	Z0121210.D
Level 7	STD7 240-26502/11	Z0121211.D
Level 8	STD8 240-26502/12	Z0121212.D
Level 9	STD9 240-26502/13	Z0121213.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5 LVL 9	LVL 2 LVL 6	LVL 3 LVL 7	LVL 4 LVL 8		B	M1	M2								
Methane	17331 14405 16016	13653 14688	13601 15608	14006 15026	Ave		14926.0108				8.2		30.0			
Ethene	9217.4 12628 13270	10517 12742	11760 13291	12091 12765	Ave		12031.3914				11.0		30.0			
Acetylene	3587.0 5052.4 5089.3	4424.5 5054.6	4752.2 5388.2	4942.8 5100.0	Ave		4821.21377				11.0		30.0			
Ethane	15067 14556 15424	13094 14284	13757 15131	13673 14503	Ave		14387.6497				5.3		30.0			
Propene	9593.3 13178 11834	13077 11423	12527 11950	11082 11410	Ave		11786.0484				9.4		30.0			
Propane	9799.0 15896 15100	13214 13866	14546 14746	13140 14144	Ave		13827.9917				13.0		30.0			
Propane, 2-methyl	12655 16451 12645	13774 11735	15844 12342	11428 11777	Ave		13183.5551				14.0		30.0			
Butane	2882.3 11934 10583	9045.1 9683.7	10754 10308	9153.4 9873.2	Ave		9357.32972				28.0		30.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

FORM I

DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG No.:

Client Sample ID: DMW10S-051012 | Lab Sample ID: 240-11217-3

Matrix: Water | Lab File ID: P6F51811.D

Analysis Method: 8015B | Date Collected: 05/10/2012 11:04

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 990(mL) | Date Analyzed: 05/18/2012 15:18

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	620	B	510	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	61		10-110

TestAmerica Laboratories
Target Compound Quantitation Report

Sample Calculation

Data File:	\\Ncchrom\ChromData\A2HP6F\20120518-10091.b\P6F51811.D		
Lims ID:	240-11217-J-3-A	Client ID:	DMW10S-051012
Inject. Date:	18-May-2012 15:18:54	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0010091-011		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP6F
Vol. Injected:	1.0000	ALS Bottle#:	11
Lims Batch ID:	44529	Lims Sample ID:	11
Detector:	GC FID1A		
Method:	\\Ncchrom\ChromData\A2HP6F\20120518-10091.b\TPH6F.m		
Last Update:	22-May-2012 13:17:56	Calib Date:	17-May-2012 17:03:17
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP6F\20120517-10062.b\P6F51714.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-17		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
4.353	4.353	0.000	13890331	60.8	
A 15 Diesel					
9.519	5.319 - 13.720		21111038	113.2	
A 17 C10-C32					
10.110	5.319 - 14.902		23022176	123.4	

Sample Calculation

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11217-1 Analy Batch No.: 44398

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/17/2012 11:52 Calibration End Date: 05/17/2012 13:56 Calibration ID: 8780

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-44398/4	P6F51704.D
Level 2	STD2 240-44398/5	P6F51705.D
Level 3	ICRT 240-44398/6	P6F51706.D
Level 4	STD4 240-44398/7	P6F51707.D
Level 5	STD5 240-44398/8	P6F51708.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198437 175405	186914	193120	178770	Ave		186529.226				5.2		20.0			
n-Nonane	234271 222460	224689	235678	225392	Ave		228498.010				2.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Sample Calculation

Client Sample ID: MW18S-051012 | Lab Sample ID: 240-11217-2

Lab Name: TestAmerica Canton | Job No.: 240-11217-1

SDG ID.:

Matrix: Water | Date Sampled: 05/10/2012 10:45

Reporting Basis: WET | Date Received: 05/11/2012 09:45

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-70-2	Calcium	200000	5000	130	ug/L		B	1	6010C
7439-89-6	Iron	170000	200	81	ug/L			1	6010C
7440-09-7	Potassium	43000	5000	72	ug/L		B	1	6010C
7439-95-4	Magnesium	210000	5000	34	ug/L		B	1	6010C
7439-96-5	Manganese	3400	15	0.41	ug/L		B	1	6010C
7440-23-5	Sodium	590000	25000	3000	ug/L			5	6010C
14808-60-7	SiO2, Silica	33000	1100	14	ug/L		B	1	6010C
7440-36-0	Antimony	0.19	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	2.2	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	49	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.7	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	48	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	2.3	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.50	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.35	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	35	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	0.78	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	2.3	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	56	20	2.3	ug/L		B	1	6020

MW185-051012

240-11217-k-2-b, 5/17/2012 09:16:49 QC Status: PASS (Initial: PASS)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		50.910%	0.095	M 270.100
%RSD		14.714	40.860	M 10.390
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		TM 575700.000	M 198800.000	347.800
%RSD		TM 1.223	M 1.127	1.801
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		T 0.000	T 39190.000	M 193300.000
%RSD		T 0.000	T 1.485	M 0.240
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		65.398%	81.715%	11.630
%RSD		7.173	1.821	64.880
Run	Time	51V	52Cr	53Cl O
		ppb	ppb	ppb
x		2.304	2.705	-2.022
%RSD		2.359	3.348	14.070
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		TM 3567.000	TM 172200.000	47.680
%RSD		TM 1.382	TM 0.166	1.224
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		35.460	2.267	56.010
%RSD		1.551	3.305	0.388
Run	Time	72Ge	75As	77Ar Cl
		ppb	ppb	ppb
x		77.289%	2.207	-0.553
%RSD		1.860	2.529	11.240
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		0.781	TM 1418.000	0.354
%RSD		21.020	TM 0.512	7.096
Run	Time	105Pd	107Ag	108Mo O
		ppb	ppb	ppb
x		0.000	-0.006	-0.101
%RSD		0.000	38.840	1831.000
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.095	83.692%	-1.706
%RSD		27.470	1.513	2.005
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		0.193	49.110	0.000
%RSD		9.017	1.667	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		91.139%	-0.122	-0.055
%RSD		1.454	3.841	9.846
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		0.498	0.000	
%RSD		2.866	0.000	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **JULY 6, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC DATA VALIDATION- VOC / SVOC SIM / HAA/ GRO / DRO / EXP / PERCHLORATE**
MARTIN STATE AIRPORT GROUNDWATER SAMPLING – FULL REVIEW
SAMPLE DELIVERY GROUP (SDG) 240-11319-1

SAMPLES: 7/Aqueous/VOC

MSA-DMW3D-051412	MSA-DMW3I-051412	MSA-DMW3S-051412
MSA-MW5-051412-25	MSA-MW5-051412-31	MSA-MW5-051412-37
TB-051412		

4/Aqueous/SVOC SIM/Perchlorate

MSA-DMW3D-051412	MSA-DMW3I-051412	MSA-DMW3S-051412
MSA-MW5-051412		

1/Aqueous/GRO

MSA-MW5-051412

2/Aqueous/DRO/EXP

MSA-DMW3S-051412 MSA-MW5-051412

1/Aqueous/HAA

MSA-DMW3S-051412

Overview

The sample set for Martin State Airport Groundwater Sampling, SDG 240-11319-1 consists of six (6) aqueous environmental samples and one trip blank. All samples were analyzed for volatile organic compounds (VOCs). Four (4) aqueous environmental samples were analyzed for 1,4-dioxane in the semivolatile organic compound (SVOC) SIM fraction and perchlorate. Two (2) aqueous environmental samples; MSA-DMW3S-051412 and MSA-MW5-051412 were analyzed for diesel range organics (DRO) and the explosive (EXP), RDX. One (1) aqueous environmental sample was analyzed for gasoline range organics (GRO). GRO is listed on the form 1s and EDD as total petroleum hydrocarbons (TPH) (C6-C10) and DRO as TPH (C10-C32). One (1) aqueous environmental sample, MSA-DMW3S-051412, was analyzed for haloacetic acids (HAA). There are no field duplicate pairs included in this SDG.

The samples were collected on May 14, 2012 and analyzed by Test America Laboratories, Inc. Volatile organic compound analyses were conducted in accordance to SW-846 Method 8260B. The analyses for 1,4-dioxane followed SW-846 Method 8270C in Selective Ion Monitoring SIM mode. GRO and DRO analyses followed SW-846 Method 8015B. The analyses for RDX followed SW-846 Method 8330 and perchlorate 6850 reporting protocol. The analysis for HAA followed EPA Method 552.2.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, matrix spike/matrix spike duplicate results, compound identification, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- In the volatile initial calibration of instrument A3UX16 on May 9, 2012 and the continuing calibration on May 25, 2012 @ 11:36, tert-butyl alcohol and vinyl acetate had a relative response factor (RRF) less than the 0.05 quality control limit. The nondetected vinyl acetate and tert-butyl alcohol results were qualified as rejected (UR) in the affected samples.

- Sample MSA-DMW3D-051412 contained Tentatively Identified Compounds (TICs) containing silanol or siloxanes. These compounds were qualified as rejected (R) because they are indictative of column bleed.

Minor Problems

- The continuing calibration percent differences (%Ds) for bromomethane and chloroethane were greater than 50% on May 25, 2012 @ 11:36 on instrument A3UX16. The nondetected bromomethane and chloroethane results were qualified as estimated (UJ) in the affected samples.

- GRO was detected in the laboratory method blank 240-44711/22.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
GRO	27.4	137.0

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Positive results less than the action level were qualified (B) as a result of blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data.

- DRO was detected in the laboratory method blank 240-44281/17-A.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
DRO	417	2085

An action level of 5X the maximum concentration level has been used in order to evaluate sample data for blank contamination. Positive results less than the action level were qualified (B) as a result of blank contamination. Sample aliquot and dilution factors were taken into account in validation of the data.

- TICs were qualified as presumptively present (NJ) in several samples.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

Sample MSA-DMW3S-051412 was marked on the chain of custody to be analyzed for GRO. According to the case narrative, there was insufficient volume for analysis. The sample was re-sampled. The GRO results were not reported in this SDG.

The continuing calibration %Ds for 1,1,2-trichlorotrifluoroethane, tetrachloroethane and ethyl- tert-butyl ether were greater than the 20% quality control limit and less than 50% on May 25, 2012 @ 11:36 and 11:59 on instrument A3UX16. No action was taken on the nondetected 1,1,2-trichlorotrifluoroethane, tetrachloroethane and ethyl- tert-butyl ether results in the affected samples.

The laboratory control sample (LCS) percent recovery (%R) of tetrachloroethane was greater than the upper quality control limit in batch 240-45325/4. No action was taken on the nondetected tetrachloroethane results in the affected samples.

The relative percent difference (RPD) for 1,4-dioxane was greater than the quality control limit in the matrix spike/matrix spike duplicate of sample 240-11354-AR-2-A. No action was taken because the %Rs of 1,4-dioxane were within quality control limits.

The following sample were diluted resulting in elevated reporting limits.

Sample	Dilution Factor
MSA-DMW3I-051412	333.3X VOC, 10X SVOC
MSA-DMW3S-051412	166.67X VOC, 5X SVOC
MSA-MW5-051412-25	100X VOC
MSA-MW5-051412-31	100X VOC
MSA-MW5-051412-37	90.9X VOC
MSA-MW5-051412	5X GRO

Nondetected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Tert-butyl alcohol and vinyl acetate had RRFs less than quality control limits in the initial and continuing calibrations. GRO and DRO were detected in the laboratory method blanks. The continuing calibration %Ds for bromomethane and chloroethane were greater than 50%.

Other Factors Affecting Data Quality: TICs were detected in several samples.

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (9/94). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW5-051412-25		
SDG: 240-11319-1	LAB_ID	240-11319-8			240-11319-7			240-11319-6			240-11319-4		
FRACTION: OV	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		77	U		38	U		23	U	
1,1,1-TRICHLOROETHANE		0.22	U		73	U		37	U		22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		60	U		30	U		18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		93	U		47	U		28	U	
1,1-DICHLOROETHANE		0.15	U		50	U		25	U		15	U	
1,1-DICHLOROETHENE		0.19	U		63	U		32	U		19	U	
1,1-DICHLOROPROPENE		0.13	U		43	U		22	U		13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		66	J	P	28	U		17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		140	U		72	U		43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		2	U		0.98	U		0.59	U	
1,2,4-TRICHLOROBENZENE		0.15	U		540			25	U		15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		40	U		20	U		12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		220	U		110	U		67	U	
1,2-DIBROMOETHANE		0.24	U		80	U		40	U		24	U	
1,2-DICHLOROBENZENE		0.13	U		43	U		22	U		13	U	
1,2-DICHLOROETHANE		0.22	U		73	U		37	U		22	U	
1,2-DICHLOROPROPANE		0.18	U		60	U		30	U		18	U	
1,3-DICHLOROBENZENE		0.14	U		47	U		23	U		14	U	
1,3-DICHLOROPROPANE		0.16	U		53	U		27	U		16	U	
1,4-DICHLOROBENZENE		0.13	U		43	U		22	U		13	U	
2,2-DICHLOROPROPANE		0.13	U		43	U		22	U		13	U	
2-BUTANONE		0.57	U		190	U		95	U		57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		330	U		170	U		99	U	
2-CHLOROTOLUENE		0.11	U		37	U		18	U		11	U	
2-HEXANONE		0.41	U		140	U		68	U		41	U	
4-CHLOROTOLUENE		0.18	U		60	U		30	U		18	U	
4-ISOPROPYLTOLUENE		0.12	U		40	U		20	U		12	U	
4-METHYL-2-PENTANONE		0.32	U		110	U		53	U		32	U	
ACETONE		3	J	P	370	U		180	U		110	U	
BENZENE		0.13	U		43	U		22	U		13	U	
BROMOBENZENE		0.13	U		43	U		22	U		13	U	
BROMOCHLOROMETHANE		0.29	U		97	U		48	U		29	U	
BROMODICHLOROMETHANE		0.15	U		50	U		25	U		15	U	
BROMOFORM		0.64	U		210	U		110	U		64	U	
BROMOMETHANE		0.41	UJ	C	140	UJ	C	68	UJ	C	41	UJ	C

PROJ_NO: 04021	NSAMPLE	MSA-MW5-051412-31			MSA-MW5-051412-37			TB-051412		
SDG: 240-11319-1	LAB_ID	240-11319-3			240-11319-2			240-11319-5		
FRACTION: OV	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									

PARAMETER	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE	23	U		21	U		0.23	U	
1,1,1-TRICHLOROETHANE	22	U		20	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE	18	U		16	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE	28	U		25	U		0.28	U	
1,1-DICHLOROETHANE	15	U		14	U		0.15	U	
1,1-DICHLOROETHENE	19	U		17	U		0.19	U	
1,1-DICHLOROPROPENE	13	U		12	U		0.13	U	
1,2,3-TRICHLOROBENZENE	17	U		15	U		0.17	U	
1,2,3-TRICHLOROPROPANE	43	U		39	U		0.43	U	
1,2,3-TRIMETHYLBENZENE	0.59	U		0.54	U		0.0059	U	
1,2,4-TRICHLOROBENZENE	15	U		14	U		0.15	U	
1,2,4-TRIMETHYLBENZENE	12	U		11	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE	67	U		61	U		0.67	U	
1,2-DIBROMOETHANE	24	U		22	U		0.24	U	
1,2-DICHLOROBENZENE	13	U		12	U		0.13	U	
1,2-DICHLOROETHANE	22	U		20	U		0.22	U	
1,2-DICHLOROPROPANE	18	U		16	U		0.18	U	
1,3-DICHLOROBENZENE	14	U		13	U		0.14	U	
1,3-DICHLOROPROPANE	16	U		15	U		0.16	U	
1,4-DICHLOROBENZENE	13	U		12	U		0.13	U	
2,2-DICHLOROPROPANE	13	U		12	U		0.13	U	
2-BUTANONE	57	U		52	U		0.57	U	
2-CHLOROETHYL VINYL ETHER	99	U		90	U		0.99	U	
2-CHLOROTOLUENE	11	U		10	U		0.11	U	
2-HEXANONE	41	U		37	U		0.41	U	
4-CHLOROTOLUENE	18	U		16	U		0.18	U	
4-ISOPROPYLTOLUENE	12	U		11	U		0.12	U	
4-METHYL-2-PENTANONE	32	U		29	U		0.32	U	
ACETONE	110	U		100	U		1.1	U	
BENZENE	13	U		12	U		0.13	U	
BROMOBENZENE	13	U		12	U		0.13	U	
BROMOCHLOROMETHANE	29	U		26	U		0.29	U	
BROMODICHLOROMETHANE	15	U		14	U		0.15	U	
BROMOFORM	64	U		58	U		0.64	U	
BROMOMETHANE	41	UJ	C	37	UJ	C	0.41	UJ	C

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW5-051412-25		
SDG: 240-11319-1	LAB_ID	240-11319-8			240-11319-7			240-11319-6			240-11319-4		
FRACTION: OV	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		43	U		22	U		13	U	
CARBON TETRACHLORIDE		0.13	U		43	U		22	U		13	U	
CHLOROBENZENE		0.15	U		50	U		25	U		15	U	
CHLORODIBROMOMETHANE		0.18	U		60	U		30	U		18	U	
CHLOROETHANE		0.29	UJ	C	97	UJ	C	48	UJ	C	29	UJ	C
CHLOROFORM		0.16	U		53	U		27	U		16	U	
CHLOROMETHANE		0.3	U		100	U		50	U		30	U	
CIS-1,2-DICHLOROETHENE		0.17	U		5800			1200			2500		
CIS-1,3-DICHLOROPROPENE		0.14	U		47	U		23	U		14	U	
DIBROMOMETHANE		0.28	U		93	U		47	U		28	U	
DICHLORODIFLUOROMETHANE		0.31	U		100	U		52	U		31	U	
DIISOPROPYL ETHER		1.5	U		500	U		250	U		150	U	
ETHYL TERT-BUTYL ETHER		0.11	U		37	U		18	U		11	U	
ETHYLBENZENE		0.17	U		57	U		28	U		17	U	
HEXACHLOROBUTADIENE		0.3	U		100	U		50	U		30	U	
ISOPROPYLBENZENE		0.13	U		43	U		22	U		13	U	
M+P-XYLENES		0.24	U		80	U		40	U		24	U	
METHYL TERT-BUTYL ETHER		0.17	U		57	U		28	U		17	U	
METHYLCYCLOHEXANE					48	NJ	Z1				31	NJ	Z1
METHYLENE CHLORIDE		0.33	U		110	U		55	U		33	U	
NAPHTHALENE		0.24	U		80	U		40	U		24	U	
N-BUTYLBENZENE		0.12	U		40	U		20	U		12	U	
N-PROPYLBENZENE		0.14	U		47	U		23	U		14	U	
O-XYLENE		0.14	U		47	U		23	U		14	U	
SEC-BUTYLBENZENE		0.13	U		43	U		22	U		13	U	
SILANOL, TRIMETHYL-		4.9	R	Z2									
STYRENE		0.11	U		37	U		18	U		11	U	
TERT-AMYL METHYL ETHER		0.067	U		22	U		11	U		6.7	U	
TERT-BUTYLBENZENE		0.13	U		43	U		22	U		13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	1300	UR	C	650	UR	C	390	UR	C
TETRACHLOROETHENE		0.29	U		97	U		48	U		29	U	
TOLUENE		0.13	U		43	U		44	J	P	13	U	
TOTAL XYLENES		0.28	U		93	U		47	U		28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		63	U		250			58	J	P
TRANS-1,3-DICHLOROPROPENE		0.19	U		63	U		32	U		19	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW5-051412-31			MSA-MW5-051412-37			TB-051412		
SDG: 240-11319-1	LAB_ID	240-11319-3			240-11319-2			240-11319-5		
FRACTION: OV	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		13	U		12	U		0.13	U	
CARBON TETRACHLORIDE		13	U		12	U		0.13	U	
CHLOROBENZENE		15	U		14	U		0.15	U	
CHLORODIBROMOMETHANE		18	U		16	U		0.18	U	
CHLOROETHANE		29	UJ	C	26	UJ	C	0.29	UJ	C
CHLOROFORM		16	U		15	U		0.16	U	
CHLOROMETHANE		30	U		27	U		0.3	U	
CIS-1,2-DICHLOROETHENE		2400			2400			0.17	U	
CIS-1,3-DICHLOROPROPENE		14	U		13	U		0.14	U	
DIBROMOMETHANE		28	U		25	U		0.28	U	
DICHLORODIFLUOROMETHANE		31	U		28	U		0.31	U	
DIISOPROPYL ETHER		150	U		140	U		1.5	U	
ETHYL TERT-BUTYL ETHER		11	U		10	U		0.11	U	
ETHYLBENZENE		17	U		15	U		0.17	U	
HEXACHLOROBUTADIENE		30	U		27	U		0.3	U	
ISOPROPYLBENZENE		13	U		12	U		0.13	U	
M+P-XYLENES		24	U		22	U		0.24	U	
METHYL TERT-BUTYL ETHER		17	U		15	U		0.17	U	
METHYLCYCLOHEXANE		36	NJ	Z1	32	NJ	Z1			
METHYLENE CHLORIDE		33	U		30	U		0.33	U	
NAPHTHALENE		24	U		22	U		0.24	U	
N-BUTYLBENZENE		12	U		11	U		0.12	U	
N-PROPYLBENZENE		14	U		13	U		0.14	U	
O-XYLENE		14	U		13	U		0.14	U	
SEC-BUTYLBENZENE		13	U		12	U		0.13	U	
SILANOL, TRIMETHYL-										
STYRENE		11	U		10	U		0.11	U	
TERT-AMYL METHYL ETHER		6.7	U		6.1	U		0.067	U	
TERT-BUTYLBENZENE		13	U		12	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		390	UR	C	350	UR	C	3.9	UR	C
TETRACHLOROETHENE		29	U		26	U		0.29	U	
TOLUENE		13	U		12	U		0.13	U	
TOTAL XYLENES		28	U		25	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		56	J	P	53	J	P	0.19	U	
TRANS-1,3-DICHLOROPROPENE		19	U		17	U		0.19	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW5-051412-25		
SDG: 240-11319-1	LAB_ID	240-11319-8			240-11319-7			240-11319-6			240-11319-4		
FRACTION: OV	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		0.45	J	P	10000			28	U		17	U	
TRICHLOROFLUOROMETHANE		0.21	U		70	U		35	U		21	U	
VINYL ACETATE		0.19	UR	C	63	UR	C	32	UR	C	19	UR	C
VINYL CHLORIDE		0.22	U		1900			5100			440		

PROJ_NO: 04021	NSAMPLE	MSA-MW5-051412-31			MSA-MW5-051412-37			TB-051412		
SDG: 240-11319-1	LAB_ID	240-11319-3			240-11319-2			240-11319-5		
FRACTION: OV	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROETHENE		17	U		15	U		0.17	U	
TRICHLOROFLUOROMETHANE		21	U		19	U		0.21	U	
VINYL ACETATE		19	UR	C	17	UR	C	0.19	UR	C
VINYL CHLORIDE		440			410			0.22	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW5-051412		
SDG: 240-11319-1	LAB_ID	240-11319-8			240-11319-7			240-11319-6			240-11319-1		
FRACTION: OS	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,4-DIOXANE		0.49	U		230			140			6.1		

PROJ_NO: 04021	NSAMPLE	MSA-DMW3S-051412			MSA-MW5-051412		
SDG: 240-11319-1	LAB_ID	240-11319-6			240-11319-1		
FRACTION: PET	SAMP_DATE	5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TPH (C06-C10)					1700		
TPH (C10-C32)		660	B	A	450	B	A

PROJ_NO: 04021	NSAMPLE	MSA-DMW3S-051412		
SDG: 240-11319-1	LAB_ID	240-11319-6		
FRACTION: MISCO	SAMP_DATE	5/14/2012		
MEDIA: LAB QC	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
2,3-DIBROMOPROPANOIC ACID		6.6		

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW5-051412		
SDG: 240-11319-1	LAB_ID	240-11319-8			240-11319-7			240-11319-6			240-11319-1		
FRACTION: MISC	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
PERCHLORATE		0.082	U		0.082	U		0.082	U		0.082	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW3S-051412			MSA-MW5-051412		
SDG: 240-11319-1	LAB_ID	240-11319-6			240-11319-1		
FRACTION: EXP	SAMP_DATE	5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
RDX		0.036	U		0.036	U	

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3D-051412 | Lab Sample ID: 240-11319-8

Matrix: Water | Lab File ID: UXM6309.D

Analysis Method: 8260C | Date Collected: 05/14/2012 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 16:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
78-93-3	2-Butanone	10	U	10	0.57
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
67-64-1	Acetone	3.0	J	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3D-051412 Lab Sample ID: 240-11319-8

Matrix: Water Lab File ID: UXM6309.D

Analysis Method: 8260C Date Collected: 05/14/2012 12:35

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 16:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
108-20-3	Diisopropyl ether	10	U	10	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	50	U	50	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U *	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	0.45	J	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3D-051412 | Lab Sample ID: 240-11319-8

Matrix: Water | Lab File ID: UXM6309.D

Analysis Method: 8260C | Date Collected: 05/14/2012 12:35

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 16:56

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
1868-53-7	Dibromofluoromethane (Surr)	94		75-121
2037-26-5	Toluene-d8 (Surr)	95		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3D-051412 Lab Sample ID: 240-11319-8

Matrix: Water Lab File ID: UXM6309.D

Analysis Method: 8260C Date Collected: 05/14/2012 12:35

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 16:56

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

Number TICs Found: 1 TIC Result Total: 4.9

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	4.61	4.9	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3I-051412 | Lab Sample ID: 240-11319-7

Matrix: Water | Lab File ID: UXM6308.D

Analysis Method: 8260C | Date Collected: 05/14/2012 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 16:33

Soil Aliquot Vol: | Dilution Factor: 333.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	330	U	330	77
71-55-6	1,1,1-Trichloroethane	330	U	330	73
79-34-5	1,1,2,2-Tetrachloroethane	330	U	330	60
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	330	U	330	93
75-34-3	1,1-Dichloroethane	330	U	330	50
75-35-4	1,1-Dichloroethene	330	U	330	63
563-58-6	1,1-Dichloropropene	330	U	330	43
87-61-6	1,2,3-Trichlorobenzene	66	J	330	57
96-18-4	1,2,3-Trichloropropane	330	U	330	140
526-73-8	1,2,3-Trimethylbenzene	1700	U	1700	2.0
120-82-1	1,2,4-Trichlorobenzene	540		330	50
95-63-6	1,2,4-Trimethylbenzene	330	U	330	40
96-12-8	1,2-Dibromo-3-Chloropropane	670	U	670	220
106-93-4	1,2-Dibromoethane	330	U	330	80
95-50-1	1,2-Dichlorobenzene	330	U	330	43
107-06-2	1,2-Dichloroethane	330	U	330	73
78-87-5	1,2-Dichloropropane	330	U	330	60
541-73-1	1,3-Dichlorobenzene	330	U	330	47
142-28-9	1,3-Dichloropropane	330	U	330	53
106-46-7	1,4-Dichlorobenzene	330	U	330	43
594-20-7	2,2-Dichloropropane	330	U	330	43
78-93-3	2-Butanone	3300	U	3300	190
110-75-8	2-Chloroethyl vinyl ether	3300	U	3300	330
95-49-8	2-Chlorotoluene	330	U	330	37
591-78-6	2-Hexanone	3300	U	3300	140
106-43-4	4-Chlorotoluene	330	U	330	60
108-10-1	4-Methyl-2-pentanone	3300	U	3300	110
67-64-1	Acetone	3300	U	3300	370
71-43-2	Benzene	330	U	330	43
108-86-1	Bromobenzene	330	U	330	43
74-97-5	Bromochloromethane	330	U	330	97
75-27-4	Bromodichloromethane	330	U	330	50
75-25-2	Bromoform	330	U	330	210
74-83-9	Bromomethane	330	U	330	140
75-15-0	Carbon disulfide	330	U	330	43

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3I-051412 | Lab Sample ID: 240-11319-7

Matrix: Water | Lab File ID: UXM6308.D

Analysis Method: 8260C | Date Collected: 05/14/2012 11:10

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 16:33

Soil Aliquot Vol: | Dilution Factor: 333.33

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	330	U	330	43
108-90-7	Chlorobenzene	330	U	330	50
75-00-3	Chloroethane	330	U	330	97
67-66-3	Chloroform	330	U	330	53
74-87-3	Chloromethane	330	U	330	100
156-59-2	cis-1,2-Dichloroethene	5800		330	57
10061-01-5	cis-1,3-Dichloropropene	330	U	330	47
124-48-1	Dibromochloromethane	330	U	330	60
74-95-3	Dibromomethane	330	U	330	93
75-71-8	Dichlorodifluoromethane	330	U	330	100
108-20-3	Diisopropyl ether	3300	U	3300	500
100-41-4	Ethylbenzene	330	U	330	57
637-92-3	Ethyl-t-butyl ether (ETBE)	1700	U	1700	37
87-68-3	Hexachlorobutadiene	330	U	330	100
98-82-8	Isopropylbenzene	330	U	330	43
1634-04-4	Methyl tert-butyl ether	1700	U	1700	57
75-09-2	Methylene Chloride	330	U	330	110
179601-23-1	m-Xylene & p-Xylene	670	U	670	80
91-20-3	Naphthalene	330	U	330	80
104-51-8	n-Butylbenzene	330	U	330	40
103-65-1	n-Propylbenzene	330	U	330	47
95-47-6	o-Xylene	330	U	330	47
99-87-6	p-Isopropyltoluene	330	U	330	40
135-98-8	sec-Butylbenzene	330	U	330	43
100-42-5	Styrene	330	U	330	37
994-05-8	Tert-amyl-methyl ether (TAME)	1700	U	1700	22
75-65-0	tert-Butyl alcohol	17000	U	17000	1300
98-06-6	tert-Butylbenzene	330	U	330	43
127-18-4	Tetrachloroethene	330	U *	330	97
108-88-3	Toluene	330	U	330	43
156-60-5	trans-1,2-Dichloroethene	330	U	330	63
10061-02-6	trans-1,3-Dichloropropene	330	U	330	63
79-01-6	Trichloroethene	10000		330	57
75-69-4	Trichlorofluoromethane	330	U	330	70
108-05-4	Vinyl acetate	670	U	670	63
75-01-4	Vinyl chloride	1900		330	73

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3I-051412 Lab Sample ID: 240-11319-7

Matrix: Water Lab File ID: UXM6308.D

Analysis Method: 8260C Date Collected: 05/14/2012 11:10

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 16:33

Soil Aliquot Vol: Dilution Factor: 333.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	670	U	670	93

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
1868-53-7	Dibromofluoromethane (Surr)	93		75-121
2037-26-5	Toluene-d8 (Surr)	94		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3I-051412 Lab Sample ID: 240-11319-7

Matrix: Water Lab File ID: UXM6308.D

Analysis Method: 8260C Date Collected: 05/14/2012 11:10

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 16:33

Soil Aliquot Vol: Dilution Factor: 333.33

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

Number TICs Found: 1 TIC Result Total: 48

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	48	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 | Lab Sample ID: 240-11319-6

Matrix: Water | Lab File ID: UXM6307.D

Analysis Method: 8260C | Date Collected: 05/14/2012 14:35

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 16:10

Soil Aliquot Vol: | Dilution Factor: 166.67

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	170	U	170	38
71-55-6	1,1,1-Trichloroethane	170	U	170	37
79-34-5	1,1,2,2-Tetrachloroethane	170	U	170	30
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	170	U	170	47
75-34-3	1,1-Dichloroethane	170	U	170	25
75-35-4	1,1-Dichloroethene	170	U	170	32
563-58-6	1,1-Dichloropropene	170	U	170	22
87-61-6	1,2,3-Trichlorobenzene	170	U	170	28
96-18-4	1,2,3-Trichloropropane	170	U	170	72
526-73-8	1,2,3-Trimethylbenzene	830	U	830	0.98
120-82-1	1,2,4-Trichlorobenzene	170	U	170	25
95-63-6	1,2,4-Trimethylbenzene	170	U	170	20
96-12-8	1,2-Dibromo-3-Chloropropane	330	U	330	110
106-93-4	1,2-Dibromoethane	170	U	170	40
95-50-1	1,2-Dichlorobenzene	170	U	170	22
107-06-2	1,2-Dichloroethane	170	U	170	37
78-87-5	1,2-Dichloropropane	170	U	170	30
541-73-1	1,3-Dichlorobenzene	170	U	170	23
142-28-9	1,3-Dichloropropane	170	U	170	27
106-46-7	1,4-Dichlorobenzene	170	U	170	22
594-20-7	2,2-Dichloropropane	170	U	170	22
78-93-3	2-Butanone	1700	U	1700	95
110-75-8	2-Chloroethyl vinyl ether	1700	U	1700	170
95-49-8	2-Chlorotoluene	170	U	170	18
591-78-6	2-Hexanone	1700	U	1700	68
106-43-4	4-Chlorotoluene	170	U	170	30
108-10-1	4-Methyl-2-pentanone	1700	U	1700	53
67-64-1	Acetone	1700	U	1700	180
71-43-2	Benzene	170	U	170	22
108-86-1	Bromobenzene	170	U	170	22
74-97-5	Bromochloromethane	170	U	170	48
75-27-4	Bromodichloromethane	170	U	170	25
75-25-2	Bromoform	170	U	170	110
74-83-9	Bromomethane	170	U	170	68
75-15-0	Carbon disulfide	170	U	170	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Matrix: Water Lab File ID: UXM6307.D

Analysis Method: 8260C Date Collected: 05/14/2012 14:35

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 16:10

Soil Aliquot Vol: Dilution Factor: 166.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	170	U	170	22
108-90-7	Chlorobenzene	170	U	170	25
75-00-3	Chloroethane	170	U	170	48
67-66-3	Chloroform	170	U	170	27
74-87-3	Chloromethane	170	U	170	50
156-59-2	cis-1,2-Dichloroethene	1200		170	28
10061-01-5	cis-1,3-Dichloropropene	170	U	170	23
124-48-1	Dibromochloromethane	170	U	170	30
74-95-3	Dibromomethane	170	U	170	47
75-71-8	Dichlorodifluoromethane	170	U	170	52
108-20-3	Diisopropyl ether	1700	U	1700	250
100-41-4	Ethylbenzene	170	U	170	28
637-92-3	Ethyl-t-butyl ether (ETBE)	830	U	830	18
87-68-3	Hexachlorobutadiene	170	U	170	50
98-82-8	Isopropylbenzene	170	U	170	22
1634-04-4	Methyl tert-butyl ether	830	U	830	28
75-09-2	Methylene Chloride	170	U	170	55
179601-23-1	m-Xylene & p-Xylene	330	U	330	40
91-20-3	Naphthalene	170	U	170	40
104-51-8	n-Butylbenzene	170	U	170	20
103-65-1	n-Propylbenzene	170	U	170	23
95-47-6	o-Xylene	170	U	170	23
99-87-6	p-Isopropyltoluene	170	U	170	20
135-98-8	sec-Butylbenzene	170	U	170	22
100-42-5	Styrene	170	U	170	18
994-05-8	Tert-amyl-methyl ether (TAME)	830	U	830	11
75-65-0	tert-Butyl alcohol	8300	U	8300	650
98-06-6	tert-Butylbenzene	170	U	170	22
127-18-4	Tetrachloroethene	170	U *	170	48
108-88-3	Toluene	44	J	170	22
156-60-5	trans-1,2-Dichloroethene	250		170	32
10061-02-6	trans-1,3-Dichloropropene	170	U	170	32
79-01-6	Trichloroethene	170	U	170	28
75-69-4	Trichlorofluoromethane	170	U	170	35
108-05-4	Vinyl acetate	330	U	330	32
75-01-4	Vinyl chloride	5100		170	37

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Matrix: Water Lab File ID: UXM6307.D

Analysis Method: 8260C Date Collected: 05/14/2012 14:35

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 16:10

Soil Aliquot Vol: Dilution Factor: 166.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	330	U	330	47

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	113		63-129
460-00-4	4-Bromofluorobenzene (Surr)	87		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
2037-26-5	Toluene-d8 (Surr)	95		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Matrix: Water Lab File ID: UXM6307.D

Analysis Method: 8260C Date Collected: 05/14/2012 14:35

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 16:10

Soil Aliquot Vol: Dilution Factor: 166.67

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-25 | Lab Sample ID: 240-11319-4

Matrix: Water | Lab File ID: UXM6305.D

Analysis Method: 8260C | Date Collected: 05/14/2012 12:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 15:24

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	100	U	100	23
71-55-6	1,1,1-Trichloroethane	100	U	100	22
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	100	U	100	28
75-34-3	1,1-Dichloroethane	100	U	100	15
75-35-4	1,1-Dichloroethene	100	U	100	19
563-58-6	1,1-Dichloropropene	100	U	100	13
87-61-6	1,2,3-Trichlorobenzene	100	U	100	17
96-18-4	1,2,3-Trichloropropane	100	U	100	43
526-73-8	1,2,3-Trimethylbenzene	500	U	500	0.59
120-82-1	1,2,4-Trichlorobenzene	100	U	100	15
95-63-6	1,2,4-Trimethylbenzene	100	U	100	12
96-12-8	1,2-Dibromo-3-Chloropropane	200	U	200	67
106-93-4	1,2-Dibromoethane	100	U	100	24
95-50-1	1,2-Dichlorobenzene	100	U	100	13
107-06-2	1,2-Dichloroethane	100	U	100	22
78-87-5	1,2-Dichloropropane	100	U	100	18
541-73-1	1,3-Dichlorobenzene	100	U	100	14
142-28-9	1,3-Dichloropropane	100	U	100	16
106-46-7	1,4-Dichlorobenzene	100	U	100	13
594-20-7	2,2-Dichloropropane	100	U	100	13
78-93-3	2-Butanone	1000	U	1000	57
110-75-8	2-Chloroethyl vinyl ether	1000	U	1000	99
95-49-8	2-Chlorotoluene	100	U	100	11
591-78-6	2-Hexanone	1000	U	1000	41
106-43-4	4-Chlorotoluene	100	U	100	18
108-10-1	4-Methyl-2-pentanone	1000	U	1000	32
67-64-1	Acetone	1000	U	1000	110
71-43-2	Benzene	100	U	100	13
108-86-1	Bromobenzene	100	U	100	13
74-97-5	Bromochloromethane	100	U	100	29
75-27-4	Bromodichloromethane	100	U	100	15
75-25-2	Bromoform	100	U	100	64
74-83-9	Bromomethane	100	U	100	41
75-15-0	Carbon disulfide	100	U	100	13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-25 | Lab Sample ID: 240-11319-4

Matrix: Water | Lab File ID: UXM6305.D

Analysis Method: 8260C | Date Collected: 05/14/2012 12:30

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 15:24

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	100	U	100	13
108-90-7	Chlorobenzene	100	U	100	15
75-00-3	Chloroethane	100	U	100	29
67-66-3	Chloroform	100	U	100	16
74-87-3	Chloromethane	100	U	100	30
156-59-2	cis-1,2-Dichloroethene	2500		100	17
10061-01-5	cis-1,3-Dichloropropene	100	U	100	14
124-48-1	Dibromochloromethane	100	U	100	18
74-95-3	Dibromomethane	100	U	100	28
75-71-8	Dichlorodifluoromethane	100	U	100	31
108-20-3	Diisopropyl ether	1000	U	1000	150
100-41-4	Ethylbenzene	100	U	100	17
637-92-3	Ethyl-t-butyl ether (ETBE)	500	U	500	11
87-68-3	Hexachlorobutadiene	100	U	100	30
98-82-8	Isopropylbenzene	100	U	100	13
1634-04-4	Methyl tert-butyl ether	500	U	500	17
75-09-2	Methylene Chloride	100	U	100	33
179601-23-1	m-Xylene & p-Xylene	200	U	200	24
91-20-3	Naphthalene	100	U	100	24
104-51-8	n-Butylbenzene	100	U	100	12
103-65-1	n-Propylbenzene	100	U	100	14
95-47-6	o-Xylene	100	U	100	14
99-87-6	p-Isopropyltoluene	100	U	100	12
135-98-8	sec-Butylbenzene	100	U	100	13
100-42-5	Styrene	100	U	100	11
994-05-8	Tert-amyl-methyl ether (TAME)	500	U	500	6.7
75-65-0	tert-Butyl alcohol	5000	U	5000	390
98-06-6	tert-Butylbenzene	100	U	100	13
127-18-4	Tetrachloroethene	100	U *	100	29
108-88-3	Toluene	100	U	100	13
156-60-5	trans-1,2-Dichloroethene	58	J	100	19
10061-02-6	trans-1,3-Dichloropropene	100	U	100	19
79-01-6	Trichloroethene	100	U	100	17
75-69-4	Trichlorofluoromethane	100	U	100	21
108-05-4	Vinyl acetate	200	U	200	19
75-01-4	Vinyl chloride	440		100	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-25 Lab Sample ID: 240-11319-4

Matrix: Water Lab File ID: UXM6305.D

Analysis Method: 8260C Date Collected: 05/14/2012 12:30

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 15:24

Soil Aliquot Vol: Dilution Factor: 100

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	200	U	200	28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
2037-26-5	Toluene-d8 (Surr)	97		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-25 Lab Sample ID: 240-11319-4

Matrix: Water Lab File ID: UXM6305.D

Analysis Method: 8260C Date Collected: 05/14/2012 12:30

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 15:24

Soil Aliquot Vol: Dilution Factor: 100

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

Number TICs Found: 1 TIC Result Total: 31

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	31	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-31 | Lab Sample ID: 240-11319-3

Matrix: Water | Lab File ID: UXM6304.D

Analysis Method: 8260C | Date Collected: 05/14/2012 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 15:02

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	100	U	100	23
71-55-6	1,1,1-Trichloroethane	100	U	100	22
79-34-5	1,1,2,2-Tetrachloroethane	100	U	100	18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	100	U	100	28
75-34-3	1,1-Dichloroethane	100	U	100	15
75-35-4	1,1-Dichloroethene	100	U	100	19
563-58-6	1,1-Dichloropropene	100	U	100	13
87-61-6	1,2,3-Trichlorobenzene	100	U	100	17
96-18-4	1,2,3-Trichloropropane	100	U	100	43
526-73-8	1,2,3-Trimethylbenzene	500	U	500	0.59
120-82-1	1,2,4-Trichlorobenzene	100	U	100	15
95-63-6	1,2,4-Trimethylbenzene	100	U	100	12
96-12-8	1,2-Dibromo-3-Chloropropane	200	U	200	67
106-93-4	1,2-Dibromoethane	100	U	100	24
95-50-1	1,2-Dichlorobenzene	100	U	100	13
107-06-2	1,2-Dichloroethane	100	U	100	22
78-87-5	1,2-Dichloropropane	100	U	100	18
541-73-1	1,3-Dichlorobenzene	100	U	100	14
142-28-9	1,3-Dichloropropane	100	U	100	16
106-46-7	1,4-Dichlorobenzene	100	U	100	13
594-20-7	2,2-Dichloropropane	100	U	100	13
78-93-3	2-Butanone	1000	U	1000	57
110-75-8	2-Chloroethyl vinyl ether	1000	U	1000	99
95-49-8	2-Chlorotoluene	100	U	100	11
591-78-6	2-Hexanone	1000	U	1000	41
106-43-4	4-Chlorotoluene	100	U	100	18
108-10-1	4-Methyl-2-pentanone	1000	U	1000	32
67-64-1	Acetone	1000	U	1000	110
71-43-2	Benzene	100	U	100	13
108-86-1	Bromobenzene	100	U	100	13
74-97-5	Bromochloromethane	100	U	100	29
75-27-4	Bromodichloromethane	100	U	100	15
75-25-2	Bromoform	100	U	100	64
74-83-9	Bromomethane	100	U	100	41
75-15-0	Carbon disulfide	100	U	100	13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-31 | Lab Sample ID: 240-11319-3

Matrix: Water | Lab File ID: UXM6304.D

Analysis Method: 8260C | Date Collected: 05/14/2012 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 15:02

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	100	U	100	13
108-90-7	Chlorobenzene	100	U	100	15
75-00-3	Chloroethane	100	U	100	29
67-66-3	Chloroform	100	U	100	16
74-87-3	Chloromethane	100	U	100	30
156-59-2	cis-1,2-Dichloroethene	2400		100	17
10061-01-5	cis-1,3-Dichloropropene	100	U	100	14
124-48-1	Dibromochloromethane	100	U	100	18
74-95-3	Dibromomethane	100	U	100	28
75-71-8	Dichlorodifluoromethane	100	U	100	31
108-20-3	Diisopropyl ether	1000	U	1000	150
100-41-4	Ethylbenzene	100	U	100	17
637-92-3	Ethyl-t-butyl ether (ETBE)	500	U	500	11
87-68-3	Hexachlorobutadiene	100	U	100	30
98-82-8	Isopropylbenzene	100	U	100	13
1634-04-4	Methyl tert-butyl ether	500	U	500	17
75-09-2	Methylene Chloride	100	U	100	33
179601-23-1	m-Xylene & p-Xylene	200	U	200	24
91-20-3	Naphthalene	100	U	100	24
104-51-8	n-Butylbenzene	100	U	100	12
103-65-1	n-Propylbenzene	100	U	100	14
95-47-6	o-Xylene	100	U	100	14
99-87-6	p-Isopropyltoluene	100	U	100	12
135-98-8	sec-Butylbenzene	100	U	100	13
100-42-5	Styrene	100	U	100	11
994-05-8	Tert-amyl-methyl ether (TAME)	500	U	500	6.7
75-65-0	tert-Butyl alcohol	5000	U	5000	390
98-06-6	tert-Butylbenzene	100	U	100	13
127-18-4	Tetrachloroethene	100	U *	100	29
108-88-3	Toluene	100	U	100	13
156-60-5	trans-1,2-Dichloroethene	56	J	100	19
10061-02-6	trans-1,3-Dichloropropene	100	U	100	19
79-01-6	Trichloroethene	100	U	100	17
75-69-4	Trichlorofluoromethane	100	U	100	21
108-05-4	Vinyl acetate	200	U	200	19
75-01-4	Vinyl chloride	440		100	22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-31 | Lab Sample ID: 240-11319-3

Matrix: Water | Lab File ID: UXM6304.D

Analysis Method: 8260C | Date Collected: 05/14/2012 11:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 15:02

Soil Aliquot Vol: | Dilution Factor: 100

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	200	U	200	28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	104		63-129
460-00-4	4-Bromofluorobenzene (Surr)	84		66-117
1868-53-7	Dibromofluoromethane (Surr)	88		75-121
2037-26-5	Toluene-d8 (Surr)	90		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-31 Lab Sample ID: 240-11319-3

Matrix: Water Lab File ID: UXM6304.D

Analysis Method: 8260C Date Collected: 05/14/2012 11:40

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 15:02

Soil Aliquot Vol: Dilution Factor: 100

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

Number TICs Found: 1 TIC Result Total: 36

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	36	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-37 | Lab Sample ID: 240-11319-2

Matrix: Water | Lab File ID: UXM6303.D

Analysis Method: 8260C | Date Collected: 05/14/2012 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 14:39

Soil Aliquot Vol: | Dilution Factor: 90.9

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	91	U	91	21
71-55-6	1,1,1-Trichloroethane	91	U	91	20
79-34-5	1,1,2,2-Tetrachloroethane	91	U	91	16
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	91	U	91	25
75-34-3	1,1-Dichloroethane	91	U	91	14
75-35-4	1,1-Dichloroethene	91	U	91	17
563-58-6	1,1-Dichloropropene	91	U	91	12
87-61-6	1,2,3-Trichlorobenzene	91	U	91	15
96-18-4	1,2,3-Trichloropropane	91	U	91	39
526-73-8	1,2,3-Trimethylbenzene	450	U	450	0.54
120-82-1	1,2,4-Trichlorobenzene	91	U	91	14
95-63-6	1,2,4-Trimethylbenzene	91	U	91	11
96-12-8	1,2-Dibromo-3-Chloropropane	180	U	180	61
106-93-4	1,2-Dibromoethane	91	U	91	22
95-50-1	1,2-Dichlorobenzene	91	U	91	12
107-06-2	1,2-Dichloroethane	91	U	91	20
78-87-5	1,2-Dichloropropane	91	U	91	16
541-73-1	1,3-Dichlorobenzene	91	U	91	13
142-28-9	1,3-Dichloropropane	91	U	91	15
106-46-7	1,4-Dichlorobenzene	91	U	91	12
594-20-7	2,2-Dichloropropane	91	U	91	12
78-93-3	2-Butanone	910	U	910	52
110-75-8	2-Chloroethyl vinyl ether	910	U	910	90
95-49-8	2-Chlorotoluene	91	U	91	10
591-78-6	2-Hexanone	910	U	910	37
106-43-4	4-Chlorotoluene	91	U	91	16
108-10-1	4-Methyl-2-pentanone	910	U	910	29
67-64-1	Acetone	910	U	910	100
71-43-2	Benzene	91	U	91	12
108-86-1	Bromobenzene	91	U	91	12
74-97-5	Bromochloromethane	91	U	91	26
75-27-4	Bromodichloromethane	91	U	91	14
75-25-2	Bromoform	91	U	91	58
74-83-9	Bromomethane	91	U	91	37
75-15-0	Carbon disulfide	91	U	91	12

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-37 | Lab Sample ID: 240-11319-2

Matrix: Water | Lab File ID: UXM6303.D

Analysis Method: 8260C | Date Collected: 05/14/2012 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 14:39

Soil Aliquot Vol: | Dilution Factor: 90.9

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	91	U	91	12
108-90-7	Chlorobenzene	91	U	91	14
75-00-3	Chloroethane	91	U	91	26
67-66-3	Chloroform	91	U	91	15
74-87-3	Chloromethane	91	U	91	27
156-59-2	cis-1,2-Dichloroethene	2400		91	15
10061-01-5	cis-1,3-Dichloropropene	91	U	91	13
124-48-1	Dibromochloromethane	91	U	91	16
74-95-3	Dibromomethane	91	U	91	25
75-71-8	Dichlorodifluoromethane	91	U	91	28
108-20-3	Diisopropyl ether	910	U	910	140
100-41-4	Ethylbenzene	91	U	91	15
637-92-3	Ethyl-t-butyl ether (ETBE)	450	U	450	10
87-68-3	Hexachlorobutadiene	91	U	91	27
98-82-8	Isopropylbenzene	91	U	91	12
1634-04-4	Methyl tert-butyl ether	450	U	450	15
75-09-2	Methylene Chloride	91	U	91	30
179601-23-1	m-Xylene & p-Xylene	180	U	180	22
91-20-3	Naphthalene	91	U	91	22
104-51-8	n-Butylbenzene	91	U	91	11
103-65-1	n-Propylbenzene	91	U	91	13
95-47-6	o-Xylene	91	U	91	13
99-87-6	p-Isopropyltoluene	91	U	91	11
135-98-8	sec-Butylbenzene	91	U	91	12
100-42-5	Styrene	91	U	91	10
994-05-8	Tert-amyl-methyl ether (TAME)	450	U	450	6.1
75-65-0	tert-Butyl alcohol	4500	U	4500	350
98-06-6	tert-Butylbenzene	91	U	91	12
127-18-4	Tetrachloroethene	91	U *	91	26
108-88-3	Toluene	91	U	91	12
156-60-5	trans-1,2-Dichloroethene	53	J	91	17
10061-02-6	trans-1,3-Dichloropropene	91	U	91	17
79-01-6	Trichloroethene	91	U	91	15
75-69-4	Trichlorofluoromethane	91	U	91	19
108-05-4	Vinyl acetate	180	U	180	17
75-01-4	Vinyl chloride	410		91	20

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-37 Lab Sample ID: 240-11319-2

Matrix: Water Lab File ID: UXM6303.D

Analysis Method: 8260C Date Collected: 05/14/2012 10:55

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 14:39

Soil Aliquot Vol: Dilution Factor: 90.9

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	180	U	180	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	110		63-129
460-00-4	4-Bromofluorobenzene (Surr)	90		66-117
1868-53-7	Dibromofluoromethane (Surr)	96		75-121
2037-26-5	Toluene-d8 (Surr)	100		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-37 | Lab Sample ID: 240-11319-2

Matrix: Water | Lab File ID: UXM6303.D

Analysis Method: 8260C | Date Collected: 05/14/2012 10:55

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 14:39

Soil Aliquot Vol: | Dilution Factor: 90.9

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

Number TICs Found: 1 | TIC Result Total: 32

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	
108-87-2	Methylcyclohexane	6.21	32	J

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: TB-051412 Lab Sample ID: 240-11319-5

Matrix: Water Lab File ID: UXM6306.D

Analysis Method: 8260C Date Collected: 05/14/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 15:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
78-93-3	2-Butanone	10	U	10	0.57
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: TB-051412 Lab Sample ID: 240-11319-5

Matrix: Water Lab File ID: UXM6306.D

Analysis Method: 8260C Date Collected: 05/14/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 15:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
108-20-3	Diisopropyl ether	10	U	10	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	50	U	50	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U *	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: TB-051412 Lab Sample ID: 240-11319-5

Matrix: Water Lab File ID: UXM6306.D

Analysis Method: 8260C Date Collected: 05/14/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 15:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	114		63-129
460-00-4	4-Bromofluorobenzene (Surr)	89		66-117
1868-53-7	Dibromofluoromethane (Surr)	96		75-121
2037-26-5	Toluene-d8 (Surr)	96		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: TB-051412 Lab Sample ID: 240-11319-5

Matrix: Water Lab File ID: UXM6306.D

Analysis Method: 8260C Date Collected: 05/14/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 15:47

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3D-051412 | Lab Sample ID: 240-11319-8

Matrix: Water | Lab File ID: 20523012.D

Analysis Method: 8270C | Date Collected: 05/14/2012 12:35

Extract. Method: 3520C | Date Extracted: 05/19/2012 09:14

Sample wt/vol: 1000(mL) | Date Analyzed: 05/23/2012 11:33

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44986 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	58		28-110
367-12-4	2-Fluorophenol (Surr)	54		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	71		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	55		27-111
4165-62-2	Phenol-d5 (Surr)	59		10-110
1718-51-0	Terphenyl-d14 (Surr)	63		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3I-051412 | Lab Sample ID: 240-11319-7

Matrix: Water | Lab File ID: 20523036.D

Analysis Method: 8270C | Date Collected: 05/14/2012 11:10

Extract. Method: 3520C | Date Extracted: 05/19/2012 09:14

Sample wt/vol: 990(mL) | Date Analyzed: 05/23/2012 18:39

Con. Extract Vol.: 2(mL) | Dilution Factor: 10

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44986 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	230		10	4.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		28-110
367-12-4	2-Fluorophenol (Surr)	52		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	62		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	55		10-110
1718-51-0	Terphenyl-d14 (Surr)	67		37-119

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name:	TestAmerica Canton	Job No.:	240-11319-1
SDG No.:			
Client Sample ID:	MSA-DMW3S-051412	Lab Sample ID:	240-11319-6
Matrix:	Water	Lab File ID:	20523035.D
Analysis Method:	8270C	Date Collected:	05/14/2012 14:35
Extract. Method:	3520C	Date Extracted:	05/19/2012 09:14
Sample wt/vol:	1050(mL)	Date Analyzed:	05/23/2012 18:21
Con. Extract Vol.:	2(mL)	Dilution Factor:	5
Injection Volume:	1(uL)	Level: (low/med)	Low
% Moisture:		GPC Cleanup:(Y/N)	N
Analysis Batch No.:	44986	Units:	ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	140		4.8	2.3

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	44		28-110
367-12-4	2-Fluorophenol (Surr)	30		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	63		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	40		27-111
4165-62-2	Phenol-d5 (Surr)	30		10-110
1718-51-0	Terphenyl-d14 (Surr)	53		37-119

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412 | Lab Sample ID: 240-11319-1

Matrix: Water | Lab File ID: 20523024.D

Analysis Method: 8270C | Date Collected: 05/14/2012 12:40

Extract. Method: 3520C | Date Extracted: 05/19/2012 09:14

Sample wt/vol: 1050(mL) | Date Analyzed: 05/23/2012 15:06

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44986 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	6.1		0.95	0.47

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	59		28-110
367-12-4	2-Fluorophenol (Surr)	58		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	83		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	57		27-111
4165-62-2	Phenol-d5 (Surr)	62		10-110
1718-51-0	Terphenyl-d14 (Surr)	67		37-119

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412 | Lab Sample ID: 240-11319-1

Matrix: Water | Lab File ID: YF052143.D

Analysis Method: 8015B | Date Collected: 05/14/2012 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/22/2012 13:16

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44711 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	1700	B	500	130

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	60		10-150

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Matrix: Water Lab File ID: ye17046.d

Analysis Method: 552.2 Date Collected: 05/14/2012 14:35

Extraction Method: 552.2 Date Extracted: 05/17/2012 07:35

Sample wt/vol: 40(mL) Date Analyzed: 05/17/2012 21:58

Con. Extract Vol.: 4(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: DB-1701-p ID: 0.25(um)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 238070 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid	106		70-130

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Matrix: Water Lab File ID: ye17046.d

Analysis Method: 552.2 Date Collected: 05/14/2012 14:35

Extraction Method: 552.2 Date Extracted: 05/17/2012 07:35

Sample wt/vol: 40(mL) Date Analyzed: 05/17/2012 21:58

Con. Extract Vol.: 4(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: CLP II ID: 0.32(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 238070 Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid	90		70-130

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412 | Lab Sample ID: 240-11319-1

Matrix: Water | Lab File ID: P6F51824.D

Analysis Method: 8015B | Date Collected: 05/14/2012 12:40

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 1050(mL) | Date Analyzed: 05/18/2012 23:46

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	450	J B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	60		10-110

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Matrix: Water Lab File ID: P6F51825.D

Analysis Method: 8015B Date Collected: 05/14/2012 14:35

Extraction Method: 3510C Date Extracted: 05/16/2012 12:53

Sample wt/vol: 1050(mL) Date Analyzed: 05/19/2012 00:24

Con. Extract Vol.: 5(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: RTX-5 ID: 0.53(mm)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	660	B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	63		10-110

TestAmerica Canton

Client Sample ID: MSA-DMW3S-051412

HPLC

Lot-Sample #...: G2E160436-002	**Work Order #...:** MTLA51AC	**Matrix.....:** WATER	
Date Sampled...: 05/14/12	**Date Received..:** 05/16/12		
Prep Date.....: 05/21/12	**Analysis Date..:** 05/26/12		
Prep Batch #...: 2142031			
Dilution Factor: 1	**Method.....:** SW846 8330/8330A		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
RDX	ND	0.10	ug/L	0.036

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	88	(79 - 111)

TestAmerica Canton

Client Sample ID: MSA-MW5-051412

HPLC

Lot-Sample #...: G2E160436-001	**Work Order #...:** MTLAV1AC		**Matrix.....:** WATER	
Date Sampled...: 05/14/12	**Date Received..:** 05/16/12			
Prep Date.....: 05/21/12	**Analysis Date..:** 05/26/12			
Prep Batch #...: 2142031				
Dilution Factor: 1.01	**Method.....:** SW846 8330/8330A			

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
RDX	ND	0.10	ug/L	0.036

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	101	(79 - 111)

TestAmerica Canton

Client Sample ID: MSA-DMW3D-051412

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E160436-004	**Work Order #...:**	MTLCD1AA	**Matrix.....:**	WATER
Date Sampled...:	05/14/12	**Date Received..:**	05/16/12		
Prep Date.....:	05/23/12	**Analysis Date..:**	05/26/12		
Prep Batch #...:	2144091				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW3I-051412

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E160436-003	Work Order #...:	MTLCC1AA	Matrix.....:	WATER
Date Sampled...:	05/14/12	Date Received..:	05/16/12		
Prep Date.....:	05/23/12	Analysis Date..:	05/26/12		
Prep Batch #...:	2144091				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-DMW3S-051412

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E160436-002	Work Order #...:	MTLA51AA	Matrix.....:	WATER
Date Sampled...:	05/14/12	Date Received..:	05/16/12		
Prep Date.....:	05/23/12	Analysis Date..:	05/26/12		
Prep Batch #...:	2144091				
Dilution Factor:	1	Method.....:	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

TestAmerica Canton

Client Sample ID: MSA-MW5-051412

Dissolved HPLC - Mass. Spec.

Lot-Sample #...:	G2E160436-001	**Work Order #...:**	MTLAV1AA	**Matrix.....:**	WATER
Date Sampled...:	05/14/12	**Date Received..:**	05/16/12		
Prep Date.....:	05/23/12	**Analysis Date..:**	05/26/12		
Prep Batch #...:	2144091				
Dilution Factor:	1	**Method.....:**	SW846 6850		

PARAMETER	RESULT	REPORTING LIMIT	UNITS	MDL
Perchlorate	ND	1.0	ug/L	0.082

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater

Report Number: 240-11319-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate and Explosives - RDX analyses were performed at the TestAmerica West Sacramento Laboratory. The Total Alpha Radium and Radium 228 analyses were performed at the TestAmerica Richland Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/15/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.0, 3.4, and 4.6 C.

Insufficient volume was received to perform the GRO analysis requested on the COC for the following sample: 240-11319-6. The GRO analysis was not logged. The client was contacted and the sample was recollected for this analysis. Results for the GRO on this sample are included on a different report.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples MSA-MW5-051412-37 (240-11319-2), MSA-MW5-051412-31 (240-11319-3), MSA-MW5-051412-25 (240-11319-4), TB-051412 (240-11319-5), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/25/2012.

The laboratory control sample (LCS) for batch 45325 exceeded control limits for the following analytes: Tetrachloroethene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

Samples MSA-MW5-051412-37 (240-11319-2)[90.9X], MSA-MW5-051412-31 (240-11319-3)[100X], MSA-MW5-051412-25 (240-11319-4)[100X], MSA-DMW3S-051412 (240-11319-6)[166.67X] and MSA-DMW3I-051412 (240-11319-7)[333.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for 1,1,2-Trichloro-1,2,2-trifluoroethane and Tetrachloroethene associated with batch 45325 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) for analytical batch 45325 recovered below the lower control limitfor Bromomethane and Cloroethane. The samples associated with this CCV were non-detects for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is acceptable and reportable per the laboratory Standard Operating Procedure.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/19/2012 and analyzed on 05/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for 240-11354-AS-2-A MS.

1,4-Dioxane exceeded the rpd limit for the MSD of sample 240-11354-2 in batch 240-44986.

Refer to the QC report for details.

Samples MSA-DMW3S-051412 (240-11319-6)[5X] and MSA-DMW3I-051412 (240-11319-7)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Sample MSA-MW5-051412 (240-11319-1) was analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/22/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-44711/22 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sample MSA-MW5-051412 (240-11319-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the GRO analysis. All other quality control parameters were within the acceptance limits.

HALOACETIC ACIDS (HAAS)
Sample MSA-DMW3S-051412 (240-11319-6) was analyzed for Haloacetic Acids (HAAs) in accordance with EPA Method 552.2. The samples were prepared and analyzed on 05/17/2012.

No difficulties were encountered during the haloacetic acids analysis. All quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples MSA-MW5-051412 (240-11319-1) and MSA-DMW3S-051412 (240-11319-6) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/16/2012 and analyzed on 05/18/2012 and 05/19/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Total Petroleum Hydrocarbons (C10-C32) was detected in method blank MB 240-44281/17-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 44281.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/18/2012 and analyzed on 05/21/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method

6020. The samples were prepared on 05/18/2012 and analyzed on 05/21/2012.

Several analytes were detected in method blank MB 240-44621/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/16/2012 and 05/21/2012 and analyzed on 05/17/2012 and 05/22/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/16/2012 and analyzed on 05/17/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____
Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Aparicio	Site Contact: Stu Cameron	Lab Contact:	COC No: 009939
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5552	Telephone: (703) 342-8384	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Aparicio@tetratech.com	Analysis Turnaround Time (CALENDAR DAYS)	Analyses	
Phone: (301)528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MSA-GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04121-03	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	Zn Ac/ NaOH	1 gres	Other:	Filtered Sample (Y/N)	Perform MS/MSD (Y/N)	VOCs	Total Metals	Dissolved Metals	1,4-Dioxane	Perchlorate	RDX	GRO + DRO	Radium 224, 226, 228	Halo Acetic Acids	Sample Specific Notes / Special Instructions:
MSA-MW5-051412	5/14/12	1240		X					2	2			7					X	X	X	X	X	X			
MSA-MW5-051412-37		1055								3							X									
MSA-MW5-051412-31		1140								3							X									
MSA-MW5-051412-25		1230								3							X									
TB-051412										2							X									
MSA-DMW3S-051412		1435							2	3			7	2			X	X	X	X	X	X	X		X	
MSA-DMW3I-051412		1110							3	3			3				X	X	X	X	X			X		
MSA-DMW3D-051412	↓	~~1350~~ 1235		↓					5	3			3				X	X	X	X	X			X		

Possible Hazard Identification
☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	5-14-12 / 1607	Paul Gayleard	TestAmerica	5/14/12 / 1608
Relinquished by: [signature]	Company: TestAmerica	Date/Time: 5/14/12 / 1700	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by: [signature]	Company: TAL	Date/Time: 5/15/12 9:07

Page 1603 of 1607

06/13/2012

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TestAmerica North Canton Sample Receipt Form/Narrative Login # : 11319

Client Tetra Tech Site Name USA By: (Signature)

Cooler Received on 5/15/12 Opened on 5/15/12

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other

TestAmerica Cooler # Foam Box Client Cooler Box Other Mult.

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 4G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 5G	(CF -1°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp._____°C	Corrected Sample Temp._____°C

X Multiple on Back

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity 3 (Yes) No
   -Were custody seals on the outside of the cooler(s) signed & dated? (Yes) No NA
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
MW5	<2 <2	5/15/12	MM
35	<2 <2	"	"
3T	<2 <2 <2 <2 <2	"	"
3D	<2 <2 <2 <2 <2	"	"

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant
client	5.6	4.6	5G	ice
1	4.4	3.4	1	1
	4.0	3.0		

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11319-1

Login Number: 11319
List Number: 1
Creator: Sutek, Nick

List Source: TestAmerica Canton

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11319-1

Login Number: 11319
List Number: 1
Creator: Howard, Brandon L

List Source: TestAmerica Savannah
List Creation: 05/16/12 03:13 PM

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	N/A	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	N/A	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	N/A	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

TestAmerica Canton
4101 Shuffel Street NW
North Canton, OH 44720
Phone (330) 497-9396 Fax (330) 497-0772

Chain of Custody Record

G2E160436

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

Client Information (Sub Contract Lab)	Sampler	Lab PM: O'Meara, Patrick J	Carrier Tracking No(s)	COC No: 240-5894.1
Client Contact: Shipping/Receiving	Phone:	E-Mail: patrick omeara@testamericainc com		Page: Page 1 of 1
Company: TestAmerica Laboratories, Inc				Job #: 240-11319-1
Address: 880 Riverside Parkway,	Due Date Requested: 6/1/2012			
City: West Sacramento	TAT Requested (days):			
State, Zip: CA, 95605				
Phone: 916-373-5600(Tel)	PO #			
Email:	WO #			
Project Name: MSA Groundwater	Project #: 24005772			
Site	SSOW#:			

Analysis Requested

Preservation Codes:

A - HCL	M - Hexane
B - NaOH	N - None
C - Zn Acetate	O - AsNaO2
D - Nitric Acid	P - Na2O4S
E - NaHSO4	Q - Na2SO3
F - MeOH	R - Na2S2SO3
G - Amchlor	S - H2SO4
H - Ascorbic Acid	T - TSP Dodecahydrate
I - Ice	U - Acetone
J - DI Water	V - MCAA
K - EDTA	W - ph 4-5
L - EDA	Z - other (specify)

Other:

Sample Identification - Client ID (Lab ID)	Sample Date	Sample Time	Sample Type (C=comp, G=grab)	Matrix (W=water, S=solid, O=waste/oil, BT=Tissue, A=Air)	Field Filtered Sample (Yes or No)	Perform MS/MSD (Yes or No)	SUBCONTRACT/ 6850 Perchlorate-West Sacramento	SUBCONTRACT/ Explosive-RDX	Total Number of containers	Special Instructions/Note:
			Preservation Code:							
MSA-MW5-051412 (240-11319-1)	5/14/12	12:40 Eastern		Water			X	X	3	
MSA-DMW3S-051412 (240-11319-6)	5/14/12	14:35 Eastern		Water			X	X	3	
MSA-DMW3I-051412 (240-11319-7)	5/14/12	11:10 Eastern		Water			X		1	
MSA-DMW3D-051412 (240-11319-8)	5/14/12	12:35 Eastern		Water			X		1	

Possible Hazard Identification
Unconfirmed

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month)
☐ *Return To Client* ☐ *Disposal By Lab* ☐ *Archive For* _____ *Months*

Deliverable Requested. I, II, III, IV, Other (specify)

Special Instructions/QC Requirements:

Empty Kit Relinquished by:	Date:	Time:	Method of Shipment		
Relinquished by: [signature]	Date/Time: 15/May/2012 1747	Company: TA Canton	Received by: Nick Burnett	Date/Time: 6/16/12 1015	Company: TA WSAC
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:
Relinquished by:	Date/Time:	Company:	Received by:	Date/Time:	Company:

Custody Seals Intact: Δ Yes Δ No | Custody Seal No.: NA | Cooler Temperature(s) °C and Other Remarks: 1.7

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

LOT RECEIPT CHECKLIST
TestAmerica West Sacramento

CLIENT TA CANTON PM KD

LOT# (QUANTIMS ID) G2E160436 QUOTE# 88936 LOCATION W2B

Checked (✓)

DATE RECEIVED 5/16/12 TIME RECEIVED 850 ☑

DELIVERED BY ☑ FEDEX ☐ ON TRAC ☐ OTHER

☐ GOLDENSTATE ☐ UPS ☐ EZ PARCEL

☐ TAL COURIER ☐ TAL SF ☐ CLIENT ☑

SHIPPPING CONTAINER(S) ☑ TAL ☐ CLIENT ☐ N/A

MULIT-COOLER(S) (If checked see multi-cooler form) ☐

SINGLE COOLER INFORMATION N/A

CUSTODY SEAL STATUS ☐ INTACT ☐ BROKEN ☑ N/A ☐ ☑

CUSTODY SEAL #(S) NA

COC #(S) 240-5894.1 ☐ ☑

TEMPERATURE BLANK Observed: 2.1 Corrected: 1.3

SAMPLE TEMPERATURE - (TEMPERATURES ARE IN °C)

Observed: 2.1,2.1,2.4 Average 2.2 Corrected Average 1.7

LABORATORY THERMOMETER ID:

IR UNIT: #4 ☐ #5☑ ☐ OTHER ☐ ☑

NB (Initials) 5/16/12 (Date)

---

pH MEASURED ☐ YES ☐ ANOMALY ☑ N/A ☑

LABELED BY..... NB ☑

LOGGED IN BY..... CH ☑

SHORT HOLD TEST NOTIFICATION

SAMPLE RECEIVING ☑

WETCHEM ☑ N/A ☑

VOA-ENCORES ☑ N/A ☑

☐ METALS NOTIFIED OF FILTER/PRESERVE VIA VERBAL & EMAIL ☑ N/A ☑

☑ COMPLETE SHIPMENT RECEIVED IN GOOD CONDITION WITH APPROPRIATE TEMPERATURES, CONTAINERS, PRESERVATIVES ☐ N/A ☑

☐ CLOUSEAU ☐ TEMPERATURE EXCEEDED (0 °C – 6 °C)*1 ☑ N/A

☑ WET ICE ☐ BLUE ICE ☐ GEL PACK ☐ NO COOLING AGENTS USED

NB (Initials) 5/16/12 (Date)

Notes

*1 Acceptable temperature range for State of Wisconsin samples is ≤4°C.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11319-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-11319-1	MSA-MW5-051412	Water	05/14/2012 1240	05/15/2012 0900
240-11319-2	MSA-MW5-051412-37	Water	05/14/2012 1055	05/15/2012 0900
240-11319-3	MSA-MW5-051412-31	Water	05/14/2012 1140	05/15/2012 0900
240-11319-4	MSA-MW5-051412-25	Water	05/14/2012 1230	05/15/2012 0900
240-11319-5TB	TB-051412	Water	05/14/2012 0000	05/15/2012 0900
240-11319-6	MSA-DMW3S-051412	Water	05/14/2012 1435	05/15/2012 0900
240-11319-7	MSA-DMW3I-051412	Water	05/14/2012 1110	05/15/2012 0900
240-11319-8	MSA-DMW3D-051412	Water	05/14/2012 1235	05/15/2012 0900

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11319-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL NC		SW846 3510C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Total Radium	TAL RCH	TAL-RCH EPA	
Haloacetic Acids (HAAs) (GC)	TAL SAV	EPA 552.2	
Microextraction	TAL SAV		EPA 552.2
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL RCH = TestAmerica Richland

TAL SAV = TestAmerica Savannah

TAL WSC = TestAmerica West Sacramento

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-RCH = TestAmerica Laboratories, Richland, Facility Standard Operating Procedure.

HOLDTIME

SDG 240-11319-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/21/2012	5/26/2012	7	5	12
EXP	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/21/2012	5/26/2012	7	5	12
HG	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HG	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HG	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HG	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
M	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
M	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
M	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
M	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
HGF	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/21/2012	5/22/2012	7	1	8
HGF	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HGF	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HGF	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
MF	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
MF	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
MF	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
PCL	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
PCL	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
PCL	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
PCL	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
OS	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OS	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OS	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OS	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OV	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/17/2012	5/17/2012	3	0	3
OV	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-MW5-051412-25	240-11319-4	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-MW5-051412-31	240-11319-3	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	TB-051412	240-11319-5	TB	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	TB-051412	240-11319-5	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MSA-MW5-051412-37	240-11319-2	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
DRO	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/16/2012	5/18/2012	2	2	4
DRO	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/16/2012	5/19/2012	2	3	5
GRO	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/22/2012	5/22/2012	8	0	8
RAD	PCI/L	MSA-DMW3D-051412	9MTLR510	NM	5/14/2012	5/22/2012	6/1/2012	8	10	18
RAD	PCI/L	MSA-DMW3D-051412	9MTLR530	NM	5/14/2012	6/6/2012	6/8/2012	23	2	25
RAD	PCI/L	MSA-DMW3I-051412	9MTLR410	NM	5/14/2012	5/22/2012	6/1/2012	8	10	18
RAD	PCI/L	MSA-DMW3I-051412	9MTLR420	NM	5/14/2012	5/22/2012	6/4/2012	8	13	21

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab File ID: BFB2914.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX16 BFB Injection Time: 15:11

Analysis Batch No.: 42092

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	21.4	
75	30.0 - 60.0 % of mass 95	55.5	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.3	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	67.2	
175	5.0 - 9.0 % of mass 174	4.9	(7.4)1
176	95.0 - 101.0 % of mass 174	65.5	(97.4)1
177	5.0 - 9.0 % of mass 176	4.1	(6.3)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD1 240-42092/8	UXM5245.D	04/29/2012	17:57
	STD2 240-42092/9	UXM5246.D	04/29/2012	18:20
	STD3 240-42092/10	UXM5247.D	04/29/2012	18:42
	STD4 240-42092/11	UXM5248.D	04/29/2012	19:05
	STD5 240-42092/12	UXM5249.D	04/29/2012	19:28
	STD6 240-42092/13	UXM5250.D	04/29/2012	19:50

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD6 240-42092/13	UXM5250.D
Level 2	STD5 240-42092/12	UXM5249.D
Level 3	STD4 240-42092/11	UXM5248.D
Level 4	STD3 240-42092/10	UXM5247.D
Level 5	STD2 240-42092/9	UXM5246.D
Level 6	STD1 240-42092/8	UXM5245.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4944 0.5457	0.5179	0.5366	0.5411	0.5388	Ave		0.5291				3.7		15.0			
Ethyl ether	0.2959 0.3118	0.3149	0.3299	0.3322	0.3247	Ave		0.3182				4.3		15.0			
3-Chloro-1-propene	0.1138 0.1626	0.1307	0.1332	0.1472	0.1572	Ave		0.1408				13.0		15.0			
Diisopropyl ether	0.2325 0.3039	0.2698	0.2820	0.2880	0.2888	Ave		0.2775				8.9		15.0			
2-Chloro-1,3-butadiene	0.4443 0.5618	0.4913	0.5190	0.5386	0.5385	Ave		0.5156				8.2		15.0			
Ethyl-t-butyl ether (ETBE)	0.7557 0.9819	0.8293	0.9029	0.9314	0.9383	Ave		0.8899				9.3		15.0			
Propionitrile	0.0349 0.0408	0.0346	0.0382	0.0420	0.0412	Ave		0.0386				8.5		15.0			
Ethyl acetate	0.2532 0.2900	0.2546	0.2741	0.2771	0.2824	Ave		0.2719				5.5		15.0			
Methacrylonitrile	0.1606 0.2023	0.1897	0.1949	0.2046	0.2003	Ave		0.1921				8.5		15.0			
Isobutyl alcohol	0.0077 0.0091	0.0077	0.0086	0.0094	0.0092	Ave		0.0086				8.8		15.0			
Tert-amyl-methyl ether (TAME)	0.5871 0.7972	0.6671	0.7241	0.7535	0.7651	Ave		0.7157				11.0		15.0			
n-Heptane	0.0338 0.0458	0.0359	0.0418	0.0425	0.0440	Ave		0.0406				12.0		15.0			
n-Butanol	0.0041 0.0069	0.0052	0.0059	0.0064	0.0070	Lin1	-0.068	0.0070							0.9990		0.9950
2-Nitropropane	0.0349 0.0534	0.0349	0.0424	0.0409	0.0453	Qua	0	0.0373	0.0002						1.0000		0.9900
Cyclohexanone	0.0676 0.1071	0.0696	0.0924	0.0940	0.1083	Lin1	-0.573	0.1077							0.9980		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 42092

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 17:57 Calibration End Date: 04/29/2012 19:50 Calibration ID: 8428

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2,3-Trimethylbenzene	2.3062 3.3384	2.8522	3.0020	3.1126	3.2823	Ave		2.9823				13.0		15.0			
2-Methylnaphthalene	0.5487 0.8482	0.7229	0.8158	0.9225	1.0313	Qua	-2.422	1.2182	-0.004						0.9970		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab File ID: BFB2951.D BFB Injection Date: 05/09/2012

Instrument ID: A3UX16 BFB Injection Time: 16:26

Analysis Batch No.: 43409

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	24.5	
75	30.0 - 60.0 % of mass 95	47.7	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.9	
173	Less than 2.0 % of mass 174	0.2	(0.2)1
174	50.0 - 120.00 % of mass 95	79.3	
175	5.0 - 9.0 % of mass 174	5.7	(7.2)1
176	95.0 - 101.0 % of mass 174	78.8	(99.5)1
177	5.0 - 9.0 % of mass 176	4.7	(5.9)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-43409/2	UXM5660.D	05/09/2012	16:50
	STD8260 240-43409/3	UXM5661.D	05/09/2012	17:12
	STD8260 240-43409/4	UXM5662.D	05/09/2012	17:35
	STD8260 240-43409/5	UXM5663.D	05/09/2012	17:58
	STD8260 240-43409/6	UXM5664.D	05/09/2012	18:20
	STD8260 240-43409/7	UXM5665.D	05/09/2012	18:43
	ICV 240-43409/8	UXM5666.D	05/09/2012	19:06

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-43409/7	UXM5665.D
Level 2	STD8260 240-43409/6	UXM5664.D
Level 3	STD8260 240-43409/5	UXM5663.D
Level 4	STD8260 240-43409/4	UXM5662.D
Level 5	STD8260 240-43409/3	UXM5661.D
Level 6	STD8260 240-43409/2	UXM5660.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.3032 0.3143	0.2539	0.2973	0.2657	0.3062	Ave		0.2901			0.1000	8.4		15.0			
Chloromethane	0.6852 0.6205	0.6371	0.6849	0.6156	0.6587	Ave		0.6503			0.1000	4.7		15.0			
Vinyl chloride	0.4547 0.4560	0.4270	0.4657	0.4279	0.4758	Ave		0.4512			0.1000	4.4		15.0			
Bromomethane	0.2084 0.1529	0.1821	0.1851	0.1563	0.1804	Ave		0.1775			0.0500	12.0		15.0			
Chloroethane	0.2573 0.2377	0.2580	0.2693	0.2344	0.2581	Ave		0.2524				5.4		15.0			
Trichlorofluoromethane	0.3101 0.3295	0.3079	0.3225	0.2997	0.3473	Ave		0.3195			0.1000	5.4		15.0			
Acrolein	0.0620 0.0594	0.0566	0.0598	0.0605	0.0630	Ave		0.0602				3.7		15.0			
1,1-Dichloroethene	0.2593 0.2847	0.2457	0.2768	0.2781	0.2948	Ave		0.2733			0.1000	6.5		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1558 0.2077	0.1678	0.1758	0.1970	0.2009	Ave		0.1842			0.0500	11.0		15.0			
Acetone	0.1950 0.0973	0.1448	0.1189	0.1063	0.1066	Lin1	0.1992	0.0970			0.0500				0.9990		0.9950
Iodomethane	0.4877 0.4873	0.4523	0.4923	0.4807	0.4978	Ave		0.4830				3.3		15.0			
Carbon disulfide	0.8203 0.9849	0.8078	0.8789	0.8856	0.9660	Ave		0.8906			0.1000	8.2		15.0			
Acetonitrile	0.0521 0.0408	0.0448	0.0457	0.0427	0.0442	Ave		0.0451				8.6		15.0			
Methyl acetate	0.2743 0.2474	0.2522	0.2631	0.2590	0.2628	Ave		0.2598			0.1000	3.6		15.0			
Methylene Chloride	0.5939 0.3427	0.4564	0.4050	0.3631	0.3666	Lin1	0.2534	0.3421			0.1000				0.9990		0.9950

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.2834 0.4163	0.2994	0.3340	0.3600	0.3897	Ave		0.3471			0.1000	15.0		15.0			
1,2-Dichloropropane	0.3163 0.3393	0.3026	0.3214	0.3206	0.3464	Ave		0.3244			0.1000	4.9		15.0			
Dibromomethane	0.1317 0.1397	0.1303	0.1368	0.1366	0.1460	Ave		0.1369				4.1		15.0			
1,4-Dioxane	0.0019 0.0018	0.0020	0.0021	0.0020	0.0021	Ave		0.0020				7.2		15.0			
Bromodichloromethane	0.2564 0.3265	0.2419	0.2713	0.2771	0.3245	Ave		0.2830			0.1000	12.0		15.0			
2-Chloroethyl vinyl ether	0.1506 0.1609	0.1383	0.1637	0.1582	0.1703	Ave		0.1570				7.1		15.0			
cis-1,3-Dichloropropene	0.2551 0.3710	0.2499	0.2985	0.3081	0.3650	Lin1	-0.188	0.3666			0.1500				0.9960		0.9950
4-Methyl-2-pentanone	0.2837 0.2990	0.2651	0.2929	0.2909	0.3111	Ave		0.2905			0.0500	5.3		15.0			
Toluene	1.6482 1.7043	1.5200	1.5382	1.5720	1.7039	Ave		1.6145			0.4000	5.1		15.0			
trans-1,3-Dichloropropene	0.2583 0.4170	0.2712	0.3095	0.3332	0.4003	Qua	-0.269	0.3783	0.0012		0.1000				0.9990		0.9900
Ethyl methacrylate	0.3360 0.4227	0.3466	0.3745	0.3996	0.4375	Ave		0.3861				11.0		15.0			
1,1,2-Trichloroethane	0.2835 0.2793	0.2694	0.2686	0.2750	0.2894	Ave		0.2775			0.1000	2.9		15.0			
1,3-Dichloropropane	0.5297 0.5095	0.5041	0.4977	0.5018	0.5376	Ave		0.5134				3.2		15.0			
Tetrachloroethene	0.2829 0.3018	0.2688	0.2694	0.2845	0.3065	Ave		0.2856			0.2000	5.5		15.0			
2-Hexanone	0.2570 0.2616	0.2458	0.2583	0.2602	0.2737	Ave		0.2594			0.0500	3.5		15.0			
Dibromochloromethane	0.1998 0.2905	0.1878	0.2173	0.2406	0.2828	Lin1	-0.158	0.2858							0.9950		0.9950
1,2-Dibromoethane	0.2771 0.2885	0.2414	0.2810	0.2689	0.2989	Ave		0.2760				7.2		15.0			
Chlorobenzene	1.0779 1.0958	1.0292	1.0419	1.0268	1.0997	Ave		1.0619			0.3000	3.1		15.0			
1,1,1,2-Tetrachloroethane	0.2890 0.3687	0.2701	0.3001	0.3244	0.3603	Ave		0.3188				12.0		15.0			
Ethylbenzene	0.5370 0.5872	0.5263	0.5398	0.5618	0.5955	Ave		0.5579				5.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	0.6927 0.7473	0.6545	0.6868	0.6838	0.7439	Ave		0.7015				5.2		15.0			
o-Xylene	0.6585 0.7303	0.6697	0.6826	0.7022	0.7337	Ave		0.6962				4.5		15.0			
Styrene	1.0101 1.2393	1.0332	1.0826	1.1410	1.2330	Ave		1.1232			0.3000	8.8		15.0			
Bromoform	0.0997 0.1652	0.1002	0.1141	0.1314	0.1520	Qua	-0.092	0.1394	0.0007		0.1000				1.0000		0.9900
Isopropylbenzene	1.5686 1.8453	1.5081	1.5792	1.6843	1.7759	Ave		1.6603			0.1000	7.9		15.0			
1,1,2,2-Tetrachloroethane	0.6421 0.6392	0.5897	0.6508	0.6293	0.6884	Ave		0.6399			0.3000	5.0		15.0			
Bromobenzene	0.7124 0.8007	0.7229	0.7655	0.7154	0.8316	Ave		0.7581				6.6		15.0			
1,2,3-Trichloropropane	0.2331 0.2050	0.1899	0.2018	0.2064	0.2197	Ave		0.2093				7.2		15.0			
trans-1,4-Dichloro-2-butene	0.0972 0.1779	0.1139	0.1228	0.1331	0.1671	Qua	-0.117	0.1526	0.0007						0.9990		0.9900
n-Propylbenzene	0.7268 0.8204	0.6778	0.7587	0.7438	0.8378	Ave		0.7609				7.8		15.0			
2-Chlorotoluene	0.6703 0.7397	0.6758	0.6924	0.6931	0.7657	Ave		0.7061				5.4		15.0			
1,3,5-Trimethylbenzene	2.0828 2.5958	2.0405	2.3124	2.3306	2.5681	Ave		2.3217				10.0		15.0			
4-Chlorotoluene	0.7205 0.7747	0.6930	0.7396	0.7189	0.7965	Ave		0.7405				5.2		15.0			
tert-Butylbenzene	1.9330 2.3935	1.9972	1.9127	2.1455	2.3504	Ave		2.1221				9.9		15.0			
1,2,4-Trimethylbenzene	2.2784 2.6594	2.2133	2.3747	2.3863	2.6735	Ave		2.4310				8.0		15.0			
sec-Butylbenzene	2.3140 2.8409	2.3222	2.4938	2.5429	2.7579	Ave		2.5453				8.6		15.0			
1,3-Dichlorobenzene	1.3846 1.4804	1.3348	1.4061	1.3608	1.4933	Ave		1.4100			0.6000	4.6		15.0			
p-Isopropyltoluene	1.8496 2.5189	1.9566	2.1436	2.2002	2.4336	Ave		2.1837				12.0		15.0			
1,4-Dichlorobenzene	1.5343 1.5331	1.3976	1.4633	1.4252	1.5585	Ave		1.4853			0.5000	4.5		15.0			
n-Butylbenzene	1.5207 2.0613	1.5638	1.6967	1.7858	1.9861	Ave		1.7691				12.0		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
1,2-Dichlorobenzene	1.3844 1.4205	1.3540	1.3870	1.3472	1.4582	Ave		1.3919			0.4000	3.0		15.0			
1,2-Dibromo-3-Chloropropane	0.0794 0.0870	0.0683	0.0814	0.0746	0.0883	Ave		0.0798			0.0500	9.5		15.0			
1,3,5-Trichlorobenzene	0.7539 0.8344	0.7656	0.7991	0.8104	0.8665	Ave		0.8050				5.2		15.0			
1,2,4-Trichlorobenzene	0.6479 0.6976	0.6519	0.6850	0.7123	0.7408	Ave		0.6892			0.2000	5.2		15.0			
Hexachlorobutadiene	0.2984 0.2880	0.3131	0.3156	0.3236	0.3074	Ave		0.3077				4.2		15.0			
Naphthalene	1.3167 1.5171	1.2964	1.5138	1.5269	1.6839	Ave		1.4758				9.9		15.0			
1,2,3-Trichlorobenzene	0.6093 0.5088	0.5775	0.5956	0.5994	0.6006	Ave		0.5819				6.4		15.0			
Dibromofluoromethane (Surr)	0.2449 0.2557	0.2414	0.2613	0.2511	0.2697	Ave		0.2540				4.1		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3352 0.3180	0.3022	0.3162	0.3092	0.3364	Ave		0.3195				4.3		15.0			
Toluene-d8 (Surr)	1.3399 1.4228	1.2843	1.2848	1.3063	1.4382	Ave		1.3460				5.1		15.0			
4-Bromofluorobenzene (Surr)	0.5239 0.5294	0.5089	0.5007	0.5033	0.5393	Ave		0.5176				3.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.3182	0.3514		11.0	10.0	10.4	20.0
Diisopropyl ether	Ave	0.2775	0.2746		9.89	10.0	-1.1	20.0
Isobutyl alcohol	Ave	0.0086	0.0089		517	500	3.5	20.0
Cyclohexanone	Lin1		0.0196		41.7	200	-79.2*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.571		8.62	10.0	-13.8	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2045	0.1000	7.05	10.0	-29.5*	20.0
Chloromethane	Ave	0.6503	0.5741	0.1000	8.83	10.0	-11.7	20.0
Vinyl chloride	Ave	0.4512	0.4382	0.1000	9.71	10.0	-2.9	20.0
Bromomethane	Ave	0.1775	0.1621	0.0500	9.13	10.0	-8.7	20.0
Chloroethane	Ave	0.2524	0.2375	0.0500	9.41	10.0	-5.9	20.0
Trichlorofluoromethane	Ave	0.3195	0.3224	0.1000	10.1	10.0	0.9	20.0
Acrolein	Ave	0.0602	0.0316		15.7	30.0	-47.6*	20.0
1,1-Dichloroethene	Ave	0.2733	0.2968	0.1000	10.9	10.0	8.6	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2129	0.0500	11.6	10.0	15.6	20.0
Acetone	Lin1		0.1000	0.0500	18.6	20.0	-7.0	20.0
Iodomethane	Ave	0.4830	0.4930		10.2	10.0	2.1	20.0
Carbon disulfide	Ave	0.8906	0.9121	0.1000	10.2	10.0	2.4	20.0
Acetonitrile	Ave	0.0451	0.0442		29.4	30.0	-2.0	20.0
Methyl acetate	Ave	0.2598	0.2961	0.1000	11.4	10.0	14.0	20.0
Methylene Chloride	Lin1		0.3698	0.1000	10.1	10.0	1.0	20.0
tert-Butyl alcohol	Ave	0.0178	0.0177		198	200	-1.0	20.0
Acrylonitrile	Ave	0.1429	0.1377		28.9	30.0	-3.6	20.0
Methyl tert-butyl ether	Ave	0.7108	0.7047	0.1000	9.91	10.0	-0.9	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3422	0.1000	10.3	10.0	3.4	20.0
Hexane	Ave	0.0431	0.0478		11.1	10.0	10.8	20.0
1,1-Dichloroethane	Ave	0.6504	0.6789	0.1000	10.4	10.0	4.4	20.0
Vinyl acetate	Ave	0.0379	0.0349		9.19	10.0	-8.1	20.0
2-Butanone	Ave	0.1434	0.1319	0.0500	18.4	20.0	-8.1	20.0
2,2-Dichloropropane	Ave	0.2584	0.2680		10.4	10.0	3.7	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3544	0.1000	10.2	10.0	1.5	20.0
Bromochloromethane	Ave	0.1454	0.1487		10.2	10.0	2.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0879		9.32	10.0	-6.8	20.0
Chloroform	Ave	0.5228	0.5335	0.2000	10.2	10.0	2.0	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2365		9.50	10.2	-6.9	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4102	0.1000	10.4	10.0	4.2	20.0
Cyclohexane	Ave	0.6493	0.6633	0.1000	10.2	10.0	2.2	20.0
1,1-Dichloropropene	Ave	0.3618	0.3695		10.2	10.0	2.1	20.0
Carbon tetrachloride	Lin1		0.3100	0.1000	9.41	10.0	-5.9	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.2929		9.36	10.2	-8.3	20.0
1,2-Dichloroethane	Ave	0.4273	0.4347	0.1000	10.2	10.0	1.7	20.0
Benzene	Ave	1.162	1.177	0.5000	10.1	10.0	1.2	20.0
Trichloroethene	Ave	0.2745	0.2806	0.2000	10.2	10.0	2.2	20.0
1,2-Dichloropropane	Ave	0.3244	0.3251	0.1000	10.0	10.0	0.2	20.0
Methylcyclohexane	Ave	0.3471	0.3473	0.1000	10.0	10.0	0.0	20.0
Dibromomethane	Ave	0.1369	0.1442		10.5	10.0	5.4	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Bromodichloromethane	Ave	0.2830	0.2938	0.1000	10.4	10.0	3.8	20.0
2-Chloroethyl vinyl ether	Ave	0.1570	0.1413		9.00	10.0	-10.0	20.0
cis-1,3-Dichloropropene	Lin1		0.3014	0.1500	8.73	10.0	-12.7	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.2896	0.0500	19.9	20.0	-0.3	20.0
Toluene-d8 (Surr)	Ave	1.346	1.233		9.35	10.2	-8.4	20.0
Toluene	Ave	1.614	1.572	0.4000	9.74	10.0	-2.6	20.0
trans-1,3-Dichloropropene	Qua		0.3327	0.1000	9.24	10.0	-7.6	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.2762	0.1000	9.95	10.0	-0.5	20.0
1,3-Dichloropropane	Ave	0.5134	0.4975		9.69	10.0	-3.1	20.0
Tetrachloroethene	Ave	0.2856	0.2813	0.2000	9.85	10.0	-1.5	20.0
2-Hexanone	Ave	0.2594	0.2452	0.0500	18.9	20.0	-5.5	20.0
Dibromochloromethane	Lin1		0.2350		8.77	10.0	-12.3	20.0
1,2-Dibromoethane	Ave	0.2760	0.2737		9.92	10.0	-0.8	20.0
Chlorobenzene	Ave	1.062	1.051	0.3000	9.90	10.0	-1.0	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3286		10.3	10.0	3.1	20.0
Ethylbenzene	Ave	0.5579	0.5654		10.1	10.0	1.3	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.6978		19.9	20.0	-0.5	20.0
o-Xylene	Ave	0.6962	0.7046		10.1	10.0	1.2	20.0
Styrene	Ave	1.123	1.167	0.3000	10.4	10.0	3.9	20.0
Bromoform	Qua		0.1291	0.1000	9.47	10.0	-5.3	20.0
Isopropylbenzene	Ave	1.660	1.692	0.1000	10.2	10.0	1.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.4948		9.76	10.2	-4.4	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6196	0.3000	9.68	10.0	-3.2	20.0
Bromobenzene	Ave	0.7581	0.7479		9.87	10.0	-1.3	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.1984		9.48	10.0	-5.2	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1324		16.8	20.0	-16.0	20.0
n-Propylbenzene	Ave	0.7609	0.7738		10.2	10.0	1.7	20.0
2-Chlorotoluene	Ave	0.7061	0.7155		10.1	10.0	1.3	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.338		10.1	10.0	0.7	20.0
4-Chlorotoluene	Ave	0.7405	0.7420		10.0	10.0	0.2	20.0
tert-Butylbenzene	Ave	2.122	2.147		10.1	10.0	1.2	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.470		10.2	10.0	1.6	20.0
sec-Butylbenzene	Ave	2.545	2.467		9.69	10.0	-3.1	20.0
1,3-Dichlorobenzene	Ave	1.410	1.419	0.6000	10.1	10.0	0.6	20.0
p-Isopropyltoluene	Ave	2.184	2.305		10.6	10.0	5.5	20.0
1,4-Dichlorobenzene	Ave	1.485	1.439	0.5000	9.69	10.0	-3.1	20.0
n-Butylbenzene	Ave	1.769	1.800		10.2	10.0	1.7	20.0
1,2-Dichlorobenzene	Ave	1.392	1.345	0.4000	9.66	10.0	-3.4	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0779	0.0500	9.76	10.0	-2.4	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6576	0.2000	9.54	10.0	-4.6	20.0
Hexachlorobutadiene	Ave	0.3077	0.2672		8.69	10.0	-13.1	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICV 240-43409/8 Calibration Date: 05/09/2012 19:06

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM5666.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Naphthalene	Ave	1.476	1.471		9.97	10.0	-0.3	20.0
1,2,3-Trichlorobenzene	Ave	0.5819	0.5595		9.61	10.0	-3.9	20.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab File ID: BFB2989.D BFB Injection Date: 05/25/2012

Instrument ID: A3UX16 BFB Injection Time: 11:04

Analysis Batch No.: 45325

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	25.8	
75	30.0 - 60.0 % of mass 95	48.3	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	6.8	
173	Less than 2.0 % of mass 174	0.3	(0.4)1
174	50.0 - 120.00 % of mass 95	84.7	
175	5.0 - 9.0 % of mass 174	5.9	(7.0)1
176	95.0 - 101.0 % of mass 174	81.9	(96.7)1
177	5.0 - 9.0 % of mass 176	5.5	(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-45325/2	UXM6295.D	05/25/2012	11:36
	CCV 240-45325/3	UXM6296.D	05/25/2012	11:59
	LCS 240-45325/4	UXM6297.D	05/25/2012	12:22
	MRL 240-45325/5	UXM6298.D	05/25/2012	12:45
	MB 240-45325/6	UXM6299.D	05/25/2012	13:08
MSA-MW5-051412-37	240-11319-2	UXM6303.D	05/25/2012	14:39
MSA-MW5-051412-31	240-11319-3	UXM6304.D	05/25/2012	15:02
MSA-MW5-051412-25	240-11319-4	UXM6305.D	05/25/2012	15:24
TB-051412	240-11319-5	UXM6306.D	05/25/2012	15:47
MSA-DMW3S-051412	240-11319-6	UXM6307.D	05/25/2012	16:10
MSA-DMW3I-051412	240-11319-7	UXM6308.D	05/25/2012	16:33
MSA-DMW3D-051412	240-11319-8	UXM6309.D	05/25/2012	16:56
MSA-MW5-051412-37 MS	240-11319-2 MS	UXM6320.D	05/25/2012	21:04
MSA-MW5-051412-37 MSD	240-11319-2 MSD	UXM6321.D	05/25/2012	21:27

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCVIS 240-45325/2 Calibration Date: 05/25/2012 11:36

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6295.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.2901	0.2763	0.1000	9.53	10.0	-4.7	20.0
Chloromethane	Ave	0.6503	0.6360	0.1000	9.78	10.0	-2.2	20.0
Vinyl chloride	Ave	0.4512	0.4116	0.1000	9.12	10.0	-8.8	20.0
Bromomethane	Ave	0.1775	0.0886	0.0500	4.99	10.0	-50.1*	20.0
Chloroethane	Ave	0.2524	0.1213	0.0500	4.81	10.0	-51.9*	20.0
Trichlorofluoromethane	Ave	0.3195	0.2990	0.1000	9.36	10.0	-6.4	20.0
Acrolein	Ave	0.0602	0.0672		112	100	11.5	20.0
1,1-Dichloroethene	Ave	0.2733	0.2593	0.1000	9.49	10.0	-5.1	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Ave	0.1842	0.2264	0.0500	12.3	10.0	22.9*	20.0
Acetone	Lin1		0.1121	0.0500	21.1	20.0	5.5	20.0
Iodomethane	Ave	0.4830	0.4681		9.69	10.0	-3.1	20.0
Carbon disulfide	Ave	0.8906	0.8207	0.1000	9.21	10.0	-7.9	20.0
Acetonitrile	Ave	0.0451	0.0509		113	100	13.0	20.0
Methyl acetate	Ave	0.2598	0.2897	0.1000	22.3	20.0	11.5	20.0
Methylene Chloride	Lin1		0.3474	0.1000	9.42	10.0	-5.8	20.0
tert-Butyl alcohol	Ave	0.0178	0.0186		209	200	4.4	20.0
Acrylonitrile	Ave	0.1429	0.1590		22.3	20.0	11.3	20.0
Methyl tert-butyl ether	Ave	0.7108	0.6592	0.1000	9.28	10.0	-7.2	20.0
trans-1,2-Dichloroethene	Ave	0.3309	0.3228	0.1000	9.76	10.0	-2.4	20.0
Hexane	Ave	0.0431	0.0532		12.3	10.0	23.3*	20.0
1,1-Dichloroethane	Ave	0.6504	0.6677	0.1000	10.3	10.0	2.7	20.0
Vinyl acetate	Ave	0.0379	0.0426		11.2	10.0	12.2	20.0
2-Butanone	Ave	0.1434	0.1621	0.0500	22.6	20.0	13.0	20.0
cis-1,2-Dichloroethene	Ave	0.3490	0.3337	0.1000	9.56	10.0	-4.4	20.0
2,2-Dichloropropane	Ave	0.2584	0.2811		10.9	10.0	8.8	20.0
Bromochloromethane	Ave	0.1454	0.1530		10.5	10.0	5.2	20.0
Tetrahydrofuran	Ave	0.0944	0.0985		10.4	10.0	4.4	20.0
Chloroform	Ave	0.5228	0.5448	0.2000	10.4	10.0	4.2	20.0
Dibromofluoromethane (Surr)	Ave	0.2540	0.2634		10.6	10.2	3.7	20.0
1,1,1-Trichloroethane	Ave	0.3937	0.4306	0.1000	10.9	10.0	9.3	20.0
Cyclohexane	Ave	0.6493	0.7348	0.1000	11.3	10.0	13.2	20.0
1,1-Dichloropropene	Ave	0.3618	0.3868		10.7	10.0	6.9	20.0
Carbon tetrachloride	Lin1		0.3528	0.1000	10.6	10.0	6.0	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3393		10.8	10.2	6.2	20.0
1,2-Dichloroethane	Ave	0.4273	0.5013	0.1000	11.7	10.0	17.3	20.0
Benzene	Ave	1.162	1.190	0.5000	10.2	10.0	2.4	20.0
Trichloroethene	Ave	0.2745	0.3182	0.2000	11.6	10.0	15.9	20.0
1,2-Dichloropropane	Ave	0.3244	0.3553	0.1000	11.0	10.0	9.5	20.0
Methylcyclohexane	Ave	0.3471	0.3705	0.1000	10.7	10.0	6.7	20.0
1,4-Dioxane	Ave	0.0020	0.0020		498	500	-0.5	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCVIS 240-45325/2 Calibration Date: 05/25/2012 11:36

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6295.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromomethane	Ave	0.1369	0.1569		11.5	10.0	14.6	20.0
Bromodichloromethane	Ave	0.2830	0.3217	0.1000	11.4	10.0	13.7	20.0
2-Chloroethyl vinyl ether	Ave	0.1570	0.1777		22.6	20.0	13.2	20.0
cis-1,3-Dichloropropene	Lin1		0.3523	0.1500	10.1	10.0	1.0	20.0
4-Methyl-2-pentanone	Ave	0.2905	0.3454	0.0500	23.8	20.0	18.9	20.0
Toluene-d8 (Surr)	Ave	1.346	1.399		10.6	10.2	3.9	20.0
Toluene	Ave	1.614	1.746	0.4000	10.8	10.0	8.2	20.0
trans-1,3-Dichloropropene	Qua		0.4030	0.1000	11.0	10.0	10.0	20.0
Ethyl methacrylate	Ave	0.3861	0.4340		11.2	10.0	12.4	20.0
1,1,2-Trichloroethane	Ave	0.2775	0.3148	0.1000	11.3	10.0	13.4	20.0
1,3-Dichloropropane	Ave	0.5134	0.5598		10.9	10.0	9.0	20.0
Tetrachloroethene	Ave	0.2856	0.3471	0.2000	12.2	10.0	21.5*	20.0
2-Hexanone	Ave	0.2594	0.3093	0.0500	23.8	20.0	19.2	20.0
Dibromochloromethane	Lin1		0.2932		10.8	10.0	8.0	20.0
1,2-Dibromoethane	Ave	0.2760	0.3178		11.5	10.0	15.2	20.0
Chlorobenzene	Ave	1.062	1.152	0.3000	10.9	10.0	8.5	20.0
1,1,1,2-Tetrachloroethane	Ave	0.3188	0.3751		11.8	10.0	17.7	20.0
Ethylbenzene	Ave	0.5579	0.6083		10.9	10.0	9.0	20.0
m-Xylene & p-Xylene	Ave	0.7015	0.7651		21.8	20.0	9.1	20.0
o-Xylene	Ave	0.6962	0.7440		10.7	10.0	6.9	20.0
Styrene	Ave	1.123	1.251	0.3000	11.1	10.0	11.4	20.0
Bromoform	Qua		0.1632	0.1000	11.7	10.0	17.0	20.0
Isopropylbenzene	Ave	1.660	1.786	0.1000	10.8	10.0	7.6	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5137		10.1	10.2	-0.8	20.0
1,1,2,2-Tetrachloroethane	Ave	0.6399	0.6335	0.3000	9.90	10.0	-1.0	20.0
Bromobenzene	Ave	0.7581	0.7937		10.5	10.0	4.7	20.0
1,2,3-Trichloropropane	Ave	0.2093	0.2082		9.94	10.0	-0.6	20.0
trans-1,4-Dichloro-2-butene	Qua		0.1808		11.9	10.0	19.0	20.0
n-Propylbenzene	Ave	0.7609	0.7742		10.2	10.0	1.8	20.0
2-Chlorotoluene	Ave	0.7061	0.7053		9.99	10.0	-0.1	20.0
1,3,5-Trimethylbenzene	Ave	2.322	2.386		10.3	10.0	2.8	20.0
4-Chlorotoluene	Ave	0.7405	0.7819		10.6	10.0	5.6	20.0
tert-Butylbenzene	Ave	2.122	2.206		10.4	10.0	4.0	20.0
1,2,4-Trimethylbenzene	Ave	2.431	2.442		10.0	10.0	0.5	20.0
sec-Butylbenzene	Ave	2.545	2.502		9.83	10.0	-1.7	20.0
1,3-Dichlorobenzene	Ave	1.410	1.492	0.6000	10.6	10.0	5.8	20.0
p-Isopropyltoluene	Ave	2.184	2.288		10.5	10.0	4.8	20.0
1,4-Dichlorobenzene	Ave	1.485	1.508	0.5000	10.2	10.0	1.5	20.0
n-Butylbenzene	Ave	1.769	1.743		9.85	10.0	-1.5	20.0
1,2-Dichlorobenzene	Ave	1.392	1.424	0.4000	10.2	10.0	2.3	20.0
1,2-Dibromo-3-Chloropropane	Ave	0.0798	0.0811	0.0500	10.2	10.0	1.6	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCVIS 240-45325/2 Calibration Date: 05/25/2012 11:36

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6295.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,3,5-Trichlorobenzene	Ave	0.8050	0.8494		10.6	10.0	5.5	20.0
1,2,4-Trichlorobenzene	Ave	0.6892	0.6862	0.2000	9.96	10.0	-0.4	20.0
Hexachlorobutadiene	Ave	0.3077	0.3401		11.1	10.0	10.5	20.0
Naphthalene	Ave	1.476	1.335		9.05	10.0	-9.5	20.0
1,2,3-Trichlorobenzene	Ave	0.5819	0.5767		9.91	10.0	-0.9	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-45325/3 Calibration Date: 05/25/2012 11:59

Instrument ID: A3UX16 Calib Start Date: 04/29/2012 17:57

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 19:50

Lab File ID: UXM6296.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.5291	0.4451		8.41	10.0	-15.9	20.0
Ethyl ether	Ave	0.3182	0.3625		11.4	10.0	13.9	20.0
3-Chloro-1-propene	Ave	0.1408	0.1399		9.94	10.0	-0.6	20.0
Diisopropyl ether	Ave	0.2775	0.2732		49.2	50.0	-1.5	20.0
2-Chloro-1,3-butadiene	Ave	0.5156	0.7517		14.6	10.0	45.8*	20.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8899	1.118		12.6	10.0	25.7*	20.0
Propionitrile	Ave	0.0386	0.0555		28.7	20.0	43.7*	20.0
Ethyl acetate	Ave	0.2719	0.3314		24.4	20.0	21.9*	20.0
Methacrylonitrile	Ave	0.1921	0.2372		12.3	10.0	23.5*	20.0
Isobutyl alcohol	Ave	0.0086	0.0120		279	200	39.4*	20.0
Tert-amyl-methyl ether (TAME)	Ave	0.7157	0.6151		8.59	10.0	-14.1	20.0
n-Heptane	Ave	0.0406	0.0417		10.3	10.0	2.5	20.0
n-Butanol	Lin1		0.0074		220	200	10.1	20.0
2-Nitropropane	Qua		0.0529		25.0	20.0	25.0*	20.0
Cyclohexanone	Lin1		0.0595		60.5	100	-39.5*	20.0
1,2,3-Trimethylbenzene	Ave	2.982	2.622		8.79	10.0	-12.1	20.0
2-Methylnaphthalene	Qua		0.5095		10.8	20.0	-46.0*	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-45325/3 Calibration Date: 05/25/2012 11:59

Instrument ID: A3UX16 Calib Start Date: 05/09/2012 16:50

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 05/09/2012 18:43

Lab File ID: UXM6296.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.2540	0.2452		9.85	10.2	-3.5	20.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3195	0.3465		11.1	10.2	8.4	20.0
Toluene-d8 (Surr)	Ave	1.346	1.320		10.0	10.2	-1.9	20.0
4-Bromofluorobenzene (Surr)	Ave	0.5176	0.5041		9.94	10.2	-2.6	20.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab File ID: UXM6299.D Lab Sample ID: MB 240-45325/6

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX16 Date Analyzed: 05/25/2012 13:08

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-45325/4	UXM6297.D	05/25/2012 12:22
MSA-MW5-051412-37	240-11319-2	UXM6303.D	05/25/2012 14:39
MSA-MW5-051412-31	240-11319-3	UXM6304.D	05/25/2012 15:02
MSA-MW5-051412-25	240-11319-4	UXM6305.D	05/25/2012 15:24
TB-051412	240-11319-5	UXM6306.D	05/25/2012 15:47
MSA-DMW3S-051412	240-11319-6	UXM6307.D	05/25/2012 16:10
MSA-DMW3I-051412	240-11319-7	UXM6308.D	05/25/2012 16:33
MSA-DMW3D-051412	240-11319-8	UXM6309.D	05/25/2012 16:56
MSA-MW5-051412-37 MS	240-11319-2 MS	UXM6320.D	05/25/2012 21:04
MSA-MW5-051412-37 MSD	240-11319-2 MSD	UXM6321.D	05/25/2012 21:27

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45325/6

Matrix: Water | Lab File ID: UXM6299.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 13:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
96-12-8	1,2-Dibromo-3-Chloropropane	2.0	U	2.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
78-93-3	2-Butanone	10	U	10	0.57
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
591-78-6	2-Hexanone	10	U	10	0.41
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
108-10-1	4-Methyl-2-pentanone	10	U	10	0.32
67-64-1	Acetone	10	U	10	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
75-15-0	Carbon disulfide	1.0	U	1.0	0.13

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45325/6

Matrix: Water | Lab File ID: UXM6299.D

Analysis Method: 8260C | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/25/2012 13:08

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45325 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
74-95-3	Dibromomethane	1.0	U	1.0	0.28
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
108-20-3	Diisopropyl ether	10	U	10	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	50	U	50	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-45325/6

Matrix: Water Lab File ID: UXM6299.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 13:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
17060-07-0	1,2-Dichloroethane-d4 (Surr)	119		63-129
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
1868-53-7	Dibromofluoromethane (Surr)	102		75-121
2037-26-5	Toluene-d8 (Surr)	101		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-45325/6

Matrix: Water Lab File ID: UXM6299.D

Analysis Method: 8260C Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 13:08

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.28

CAS NO.	COMPOUND NAME	RT	RESULT	Q
2809-69-0	2,4-Hexadiyne	2.12	1.28	T J N

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
MSA-MW5-051412-37	240-11319-2	96	110	100	90
MSA-MW5-051412-31	240-11319-3	88	104	90	84
MSA-MW5-051412-25	240-11319-4	97	111	97	89
TB-051412	240-11319-5	96	114	96	89
MSA-DMW3S-051412	240-11319-6	97	113	95	87
MSA-DMW3I-051412	240-11319-7	93	104	94	84
MSA-DMW3D-051412	240-11319-8	94	110	95	89
	MB 240-45325/6	102	119	101	97
	LCS 240-45325/4	102	109	102	101
	MRL 240-45325/5	98	111	102	99
MSA-MW5-051412-37 MS	240-11319-2 MS	99	109	99	98
MSA-MW5-051412-37 MSD	240-11319-2 MSD	94	101	94	94

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6297.D

Lab ID: LCS 240-45325/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	10.0	11.1	111	72-116	
1,1,1-Trichloroethane	10.0	10.8	108	74-118	
1,1,2,2-Tetrachloroethane	10.0	9.74	97	68-118	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	12.4	124	74-151	
1,1-Dichloroethane	10.0	10.2	102	82-115	
1,1-Dichloroethene	10.0	10.2	102	78-131	
1,1-Dichloropropene	10.0	10.4	104	83-114	
1,2,3-Trichlorobenzene	10.0	9.99	100	54-126	
1,2,3-Trichloropropane	10.0	10.3	103	73-129	
1,2,3-Trimethylbenzene	10.0	8.44	84	70-130	
1,2,4-Trichlorobenzene	10.0	9.51	95	48-135	
1,2,4-Trimethylbenzene	10.0	9.83	98	76-120	
1,2-Dibromo-3-Chloropropane	10.0	10.5	105	42-136	
1,2-Dibromoethane	10.0	11.1	111	79-113	
1,2-Dichlorobenzene	10.0	10.1	101	81-110	
1,2-Dichloroethane	10.0	11.7	117	71-127	
1,2-Dichloropropane	10.0	11.1	111	81-115	
1,3-Dichlorobenzene	10.0	10.2	102	80-110	
1,3-Dichloropropane	10.0	10.6	106	79-116	
1,4-Dichlorobenzene	10.0	10.1	101	82-110	
2,2-Dichloropropane	10.0	11.0	110	50-129	
2-Butanone	20.0	23.1	116	60-126	
2-Chloroethyl vinyl ether	10.0	10.8	108	52-131	
2-Chlorotoluene	10.0	9.77	98	76-116	
2-Hexanone	20.0	24.1	121	55-133	
4-Chlorotoluene	10.0	10.1	101	77-115	
4-Methyl-2-pentanone	20.0	24.8	124	63-128	
Acetone	20.0	21.1	106	43-136	
Benzene	10.0	10.1	101	83-112	
Bromobenzene	10.0	10.2	102	76-115	
Bromochloromethane	10.0	10.8	108	77-120	
Bromodichloromethane	10.0	11.3	113	72-121	
Bromoform	10.0	10.8	108	40-131	
Bromomethane	10.0	6.14	61	11-185	
Carbon disulfide	10.0	8.76	88	62-142	
Carbon tetrachloride	10.0	10.6	106	66-128	
Chlorobenzene	10.0	10.3	103	85-110	
Chloroethane	10.0	5.81	58	25-153	
Chloroform	10.0	10.0	100	79-117	
Chloromethane	10.0	10.0	100	44-126	
cis-1,2-Dichloroethene	10.0	9.51	95	80-113	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6297.D

Lab ID: LCS 240-45325/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	10.0	9.46	95	61-115	
Dibromochloromethane	10.0	10.2	102	64-119	
Dibromomethane	10.0	11.9	119	81-120	
Dichlorodifluoromethane	10.0	9.36	94	19-129	
Diisopropyl ether	10.0	9.37 J	94	77-118	
Ethylbenzene	10.0	10.5	105	83-112	
Hexachlorobutadiene	10.0	9.45	95	36-134	
Isopropylbenzene	10.0	10.3	103	75-114	
Methyl tert-butyl ether	10.0	9.63	96	52-144	
Methylene Chloride	10.0	9.40	94	66-131	
m-Xylene & p-Xylene	20.0	20.9	105	83-113	
Naphthalene	10.0	9.60	96	32-141	
n-Butylbenzene	10.0	9.31	93	66-125	
n-Propylbenzene	10.0	10.2	102	74-121	
o-Xylene	10.0	10.3	103	83-113	
p-Isopropyltoluene	10.0	10.4	104	74-120	
sec-Butylbenzene	10.0	9.37	94	70-117	
Styrene	10.0	11.0	110	79-114	
tert-Butyl alcohol	200	225	112	70-130	
tert-Butylbenzene	10.0	9.88	99	71-115	
Tetrachloroethene	10.0	11.5	115	79-114	*
Toluene	10.0	10.3	103	84-111	
trans-1,2-Dichloroethene	10.0	9.85	99	83-117	
trans-1,3-Dichloropropene	10.0	10.5	105	58-117	
Trichloroethene	10.0	11.5	115	76-117	
Trichlorofluoromethane	10.0	10.5	105	49-157	
Vinyl acetate	10.0	9.31	93	46-161	
Vinyl chloride	10.0	8.79	88	53-127	
Xylenes, Total	30.0	31.2	104	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6298.D

Lab ID: MRL 240-45325/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	1.00	1.02	102		
1,1,1-Trichloroethane	1.00	0.988 J	99		
1,1,2,2-Tetrachloroethane	1.00	1.10	110		
1,1,2-Trichloro-1,2,2-trichfluoroethane	1.00	1.18	118		
1,1-Dichloroethane	1.00	1.03	103		
1,1-Dichloroethene	1.00	1.03	103		
1,1-Dichloropropene	1.00	1.03	103		
1,2,3-Trichlorobenzene	1.00	1.39	139		
1,2,3-Trichloropropane	1.00	1.29	129		
1,2,4-Trichlorobenzene	1.00	1.10	110		
1,2,4-Trimethylbenzene	1.00	0.930 J	93		
1,2-Dibromo-3-Chloropropane	1.00	1.47 J	147		
1,2-Dibromoethane	1.00	1.20	120		
1,2-Dichlorobenzene	1.00	1.08	108		
1,2-Dichloroethane	1.00	1.27	127		
1,2-Dichloropropane	1.00	1.22	122		
1,3-Dichlorobenzene	1.00	1.08	108		
1,3-Dichloropropane	1.00	1.17	117		
1,4-Dichlorobenzene	1.00	1.15	115		
2,2-Dichloropropane	1.00	1.01	101		
2-Butanone	2.00	2.80 J	140		
2-Chloroethyl vinyl ether	2.00	2.21 J	111		
2-Chlorotoluene	1.00	1.06	106		
2-Hexanone	2.00	2.16 J	108		
4-Chlorotoluene	1.00	1.08	108		
4-Methyl-2-pentanone	2.00	2.28 J	114		
Acetone	2.00	2.22 J	111		
Benzene	1.00	1.07	107		
Bromobenzene	1.00	1.17	117		
Bromochloromethane	1.00	1.11	111		
Bromodichloromethane	1.00	1.06	106		
Bromoform	1.00	1.54	154		
Bromomethane	1.00	0.587 J	59		
Carbon disulfide	1.00	0.840 J	84		
Carbon tetrachloride	1.00	1.43	143		
Chlorobenzene	1.00	1.15	115		
Chloroethane	1.00	0.669 J	67		
Chloroform	1.00	1.10	110		
Chloromethane	1.00	1.00	100		
cis-1,2-Dichloroethene	1.00	0.977 J	98		
cis-1,3-Dichloropropene	1.00	1.30	130		

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA METHOD REPORTING LIMIT CHECK RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6298.D

Lab ID: MRL 240-45325/5 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MRL CONCENTRATION (ug/L)	MRL % REC	QC LIMITS REC	#
Dibromochloromethane	1.00	1.39	139		
Dibromomethane	1.00	1.14	114		
Dichlorodifluoromethane	1.00	0.903 J	90		
Ethylbenzene	1.00	0.977 J	98		
Hexachlorobutadiene	1.00	1.67	167		
Isopropylbenzene	1.00	0.967 J	97		
Methyl tert-butyl ether	1.00	0.925 J	93		
Methylene Chloride	1.00	0.986 J	99		
m-Xylene & p-Xylene	2.00	2.02	101		
Naphthalene	1.00	0.955 J	95		
n-Butylbenzene	1.00	0.949 J	95		
n-Propylbenzene	1.00	1.04	104		
o-Xylene	1.00	1.08	108		
p-Isopropyltoluene	1.00	0.941 J	94		
sec-Butylbenzene	1.00	0.935 J	93		
Styrene	1.00	0.969 J	97		
tert-Butyl alcohol	20.0	25.1 J	126		
tert-Butylbenzene	1.00	0.896 J	90		
Tetrachloroethene	1.00	1.31	131		
Toluene	1.00	1.09	109		
trans-1,2-Dichloroethene	1.00	0.989 J	99		
trans-1,3-Dichloropropene	1.00	1.50	150		
Trichloroethene	1.00	1.24	124		
Trichlorofluoromethane	1.00	0.979 J	98		
Vinyl acetate	1.00	1.10 J	110		
Vinyl chloride	1.00	0.937 J	94		
Xylenes, Total	3.00	3.10	103		

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6320.D

Lab ID: 240-11319-2 MS Client ID: MSA-MW5-051412-37 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	909	91 U	982	108	64-118	
1,1,1-Trichloroethane	909	91 U	918	101	68-121	
1,1,2,2-Tetrachloroethane	909	91 U	873	96	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	909	91 U	991	109	70-152	
1,1-Dichloroethane	909	91 U	936	103	79-116	
1,1-Dichloroethene	909	91 U	879	97	74-135	
1,1-Dichloropropene	909	91 U	918	101	80-114	
1,2,3-Trichlorobenzene	909	91 U	824	91	45-129	
1,2,3-Trichloropropane	909	91 U	927	102	67-132	
1,2,3-Trimethylbenzene	909	450 U	724	80	70-130	
1,2,4-Trichlorobenzene	909	91 U	790	87	38-138	
1,2,4-Trimethylbenzene	909	91 U	843	93	67-124	
1,2-Dibromo-3-Chloropropane	909	180 U	936	103	32-139	
1,2-Dibromoethane	909	91 U	1020	112	74-113	
1,2-Dichlorobenzene	909	91 U	869	96	75-111	
1,2-Dichloroethane	909	91 U	1070	118	68-129	
1,2-Dichloropropane	909	91 U	936	103	78-115	
1,3-Dichlorobenzene	909	91 U	878	97	73-110	
1,3-Dichloropropane	909	91 U	954	105	74-118	
1,4-Dichlorobenzene	909	91 U	860	95	75-110	
2,2-Dichloropropane	909	91 U	851	94	38-127	
2-Butanone	1820	910 U	2180	120	54-129	
2-Chloroethyl vinyl ether	909	910 U	610 J	67	10-150	
2-Chlorotoluene	909	91 U	843	93	69-117	
2-Hexanone	1820	910 U	2170	120	47-139	
4-Chlorotoluene	909	91 U	851	94	71-116	
4-Methyl-2-pentanone	1820	910 U	2170	120	56-131	
Acetone	1820	910 U	2070	114	33-145	
Benzene	909	91 U	893	98	72-121	
Bromobenzene	909	91 U	876	96	71-116	
Bromochloromethane	909	91 U	954	105	73-121	
Bromodichloromethane	909	91 U	982	108	67-120	
Bromoform	909	91 U	964	106	32-128	
Bromomethane	909	91 U	528	58	10-186	
Carbon disulfide	909	91 U	744	82	57-147	
Carbon tetrachloride	909	91 U	900	99	59-129	
Chlorobenzene	909	91 U	918	101	80-110	
Chloroethane	909	91 U	533	59	21-165	
Chloroform	909	91 U	892	98	76-118	
Chloromethane	909	91 U	884	97	33-132	
cis-1,2-Dichloroethene	909	2400	3300	94	70-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6320.D

Lab ID: 240-11319-2 MS Client ID: MSA-MW5-051412-37 MS

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
cis-1,3-Dichloropropene	909	91 U	797	88	51-110	
Dibromochloromethane	909	91 U	918	101	56-118	
Dibromomethane	909	91 U	1050	115	77-121	
Dichlorodifluoromethane	909	91 U	742	82	17-128	
Diisopropyl ether	909	910 U	806 J	89	73-118	
Ethylbenzene	909	91 U	909	100	75-116	
Hexachlorobutadiene	909	91 U	799	88	27-132	
Isopropylbenzene	909	91 U	886	98	68-116	
Methyl tert-butyl ether	909	450 U	820	90	46-144	
Methylene Chloride	909	91 U	876	96	63-128	
m-Xylene & p-Xylene	1820	180 U	1800	99	75-117	
Naphthalene	909	91 U	836	92	15-158	
n-Butylbenzene	909	91 U	781	86	56-127	
n-Propylbenzene	909	91 U	864	95	64-124	
o-Xylene	909	91 U	906	100	76-116	
p-Isopropyltoluene	909	91 U	856	94	64-122	
sec-Butylbenzene	909	91 U	784	86	60-119	
Styrene	909	91 U	964	106	71-117	
tert-Butyl alcohol	18200	4500 U	20300	112	70-130	
tert-Butylbenzene	909	91 U	823	91	61-119	
Tetrachloroethene	909	91 U	964	106	70-117	
Toluene	909	91 U	909	100	78-114	
trans-1,2-Dichloroethene	909	53 J	905	94	80-119	
trans-1,3-Dichloropropene	909	91 U	886	98	46-116	
Trichloroethene	909	91 U	964	106	66-120	
Trichlorofluoromethane	909	91 U	905	100	46-157	
Vinyl acetate	909	180 U	887	98	43-157	
Vinyl chloride	909	410	1130	79	49-130	
Xylenes, Total	2730	180 U	2710	99	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6321.D

Lab ID: 240-11319-2 MSD Client ID: MSA-MW5-051412-37 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,1,1,2-Tetrachloroethane	909	918	101	7	30	64-118	
1,1,1-Trichloroethane	909	867	95	6	30	68-121	
1,1,2,2-Tetrachloroethane	909	817	90	7	30	63-122	
1,1,2-Trichloro-1,2,2-trichfluoroethane	909	982	108	1	30	70-152	
1,1-Dichloroethane	909	853	94	9	30	79-116	
1,1-Dichloroethene	909	794	87	10	30	74-135	
1,1-Dichloropropene	909	876	96	5	30	80-114	
1,2,3-Trichlorobenzene	909	842	93	2	30	45-129	
1,2,3-Trichloropropane	909	860	95	8	30	67-132	
1,2,3-Trimethylbenzene	909	688	76	5	30	70-130	
1,2,4-Trichlorobenzene	909	797	88	1	30	38-138	
1,2,4-Trimethylbenzene	909	806	89	4	30	67-124	
1,2-Dibromo-3-Chloropropane	909	851	94	10	30	32-139	
1,2-Dibromoethane	909	927	102	9	30	74-113	
1,2-Dichlorobenzene	909	843	93	3	30	75-111	
1,2-Dichloroethane	909	973	107	10	30	68-129	
1,2-Dichloropropane	909	918	101	2	30	78-115	
1,3-Dichlorobenzene	909	839	92	5	30	73-110	
1,3-Dichloropropane	909	905	100	5	30	74-118	
1,4-Dichlorobenzene	909	811	89	6	30	75-110	
2,2-Dichloropropane	909	843	93	1	30	38-127	
2-Butanone	1820	2000	110	9	30	54-129	
2-Chloroethyl vinyl ether	909	609 J	67	0	30	10-150	
2-Chlorotoluene	909	783	86	7	30	69-117	
2-Hexanone	1820	2090	115	4	30	47-139	
4-Chlorotoluene	909	786	87	8	30	71-116	
4-Methyl-2-pentanone	1820	2050	113	6	30	56-131	
Acetone	1820	2000	110	4	30	33-145	
Benzene	909	843	93	6	30	72-121	
Bromobenzene	909	844	93	4	30	71-116	
Bromochloromethane	909	871	96	9	30	73-121	
Bromodichloromethane	909	936	103	5	30	67-120	
Bromoform	909	909	100	6	30	32-128	
Bromomethane	909	496	55	6	30	10-186	
Carbon disulfide	909	691	76	7	30	57-147	
Carbon tetrachloride	909	871	96	3	30	59-129	
Chlorobenzene	909	860	95	7	30	80-110	
Chloroethane	909	512	56	4	30	21-165	
Chloroform	909	835	92	7	30	76-118	
Chloromethane	909	814	90	8	30	33-132	
cis-1,2-Dichloroethene	909	3180	81	4	30	70-120	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXM6321.D

Lab ID: 240-11319-2 MSD Client ID: MSA-MW5-051412-37 MSD

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
cis-1,3-Dichloropropene	909	755	83	5	30	51-110	
Dibromochloromethane	909	835	92	9	30	56-118	
Dibromomethane	909	973	107	7	30	77-121	
Dichlorodifluoromethane	909	700	77	6	30	17-128	
Diisopropyl ether	909	736 J	81	9	30	73-118	
Ethylbenzene	909	849	93	7	30	75-116	
Hexachlorobutadiene	909	788	87	1	30	27-132	
Isopropylbenzene	909	829	91	7	30	68-116	
Methyl tert-butyl ether	909	796	88	3	30	46-144	
Methylene Chloride	909	787	87	11	30	63-128	
m-Xylene & p-Xylene	1820	1720	95	5	30	75-117	
Naphthalene	909	807	89	4	30	15-158	
n-Butylbenzene	909	757	83	3	30	56-127	
n-Propylbenzene	909	829	91	4	30	64-124	
o-Xylene	909	861	95	5	30	76-116	
p-Isopropyltoluene	909	820	90	4	30	64-122	
sec-Butylbenzene	909	739	81	6	30	60-119	
Styrene	909	877	97	9	30	71-117	
tert-Butyl alcohol	18200	19500	107	4	30	70-130	
tert-Butylbenzene	909	799	88	3	30	61-119	
Tetrachloroethene	909	945	104	2	30	70-117	
Toluene	909	854	94	6	30	78-114	
trans-1,2-Dichloroethene	909	843	87	7	30	80-119	
trans-1,3-Dichloropropene	909	837	92	6	30	46-116	
Trichloroethene	909	918	101	5	30	66-120	
Trichlorofluoromethane	909	884	97	2	30	46-157	
Vinyl acetate	909	785	86	12	30	43-157	
Vinyl chloride	909	1100	76	2	30	49-130	
Xylenes, Total	2730	2580	95	5	30	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: STD8260 240-43409/4 Date Analyzed: 05/09/2012 17:35

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM5662.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1744720	5.70	1311107	8.39	771411	10.64
UPPER LIMIT		3489440	6.20	2622214	8.89	1542822	11.14
LOWER LIMIT		872360	5.20	655554	7.89	385706	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43409/8		1716805	5.70	1288543	8.39	755167	10.64
CCVIS 240-45325/2		1553924	5.70	1135692	8.39	713294	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: CCVIS 240-45325/2 Date Analyzed: 05/25/2012 11:36

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXM6295.D Heated Purge: (Y/N) N

Calibration ID: 8614

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1553924	5.70	1135692	8.39	713294	10.64
UPPER LIMIT		3107848	6.20	2271384	8.89	1426588	11.14
LOWER LIMIT		776962	5.20	567846	7.89	356647	10.14
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-45325/3		1487767	5.70	1129575	8.39	625729	10.64
LCS 240-45325/4		1504544	5.70	1133359	8.39	708995	10.64
MRL 240-45325/5		1517153	5.70	1143914	8.39	657567	10.64
MB 240-45325/6		1422391	5.70	1079101	8.39	605675	10.64
240-11319-2	MSA-MW5-051412-37	1573952	5.70	1156128	8.39	627179	10.64
240-11319-3	MSA-MW5-051412-31	1620295	5.70	1226106	8.39	664961	10.64
240-11319-4	MSA-MW5-051412-25	1495909	5.70	1145575	8.39	628706	10.64
240-11319-5	TB-051412	1463124	5.70	1126554	8.39	594246	10.64
240-11319-6	MSA-DMW3S-051412	1492948	5.70	1154253	8.39	611456	10.64
240-11319-7	MSA-DMW3I-051412	1559596	5.70	1181791	8.39	661417	10.64
240-11319-8	MSA-DMW3D-051412	1539527	5.70	1146836	8.39	617594	10.64
240-11319-2 MS	MSA-MW5-051412-37 MS	1495120	5.70	1103481	8.39	703219	10.64
240-11319-2 MSD	MSA-MW5-051412-37 MSD	1619299	5.70	1195767	8.39	751127	10.64

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260C

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab File ID: 20511001.D DFTPP Injection Date: 05/11/2012

Instrument ID: A4HP7 DFTPP Injection Time: 08:59

Analysis Batch No.: 43665

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	47.8	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	36.2	
70	Less than 2.0% of mass 69	0.1	(0.4)1
127	25.0 - 75.0% of mass 198	47.8	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.6	
275	10.0- 30.0% of mass 198	24.5	
365	Greater than 0.75% of mass 198	2.9	
441	Present, but less than mass 443	6.8	
442	40.0 - 110.0% of mass 198	85.6	
443	15.0 - 24.0% of mass 442	16.2	(18.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD5 240-43665/2	20511002.D	05/11/2012	09:17
	STD4 240-43665/3	20511003.D	05/11/2012	09:36
	STD3 240-43665/4	20511004.D	05/11/2012	09:54
	STD2 240-43665/5	20511005.D	05/11/2012	10:13
	STD1 240-43665/6	20511006.D	05/11/2012	10:32
	STD9 240-43665/7	20511007.D	05/11/2012	10:50
	STD8 240-43665/8	20511008.D	05/11/2012	11:09
	STD7 240-43665/9	20511009.D	05/11/2012	11:28
	STD6 240-43665/10	20511010.D	05/11/2012	11:47
	ICV 240-43665/11	20511011.D	05/11/2012	12:06

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43665

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2012 09:17 Calibration End Date: 05/11/2012 11:47 Calibration ID: 8680

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-43665/6	20511006.D
Level 2	STD2 240-43665/5	20511005.D
Level 3	STD3 240-43665/4	20511004.D
Level 4	STD4 240-43665/3	20511003.D
Level 5	STD5 240-43665/2	20511002.D
Level 6	STD6 240-43665/10	20511010.D
Level 7	STD7 240-43665/9	20511009.D
Level 8	STD8 240-43665/8	20511008.D
Level 9	STD9 240-43665/7	20511007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.8214	0.7424 0.8345	0.8429 0.7791	0.7470 0.8123	0.6817	Ave		0.7827				7.1		15.0			
N-Nitrosodimethylamine	1.3517	1.1966 1.3430	1.1696 1.3633	1.2470 1.2652	1.0985	Ave		1.2544				7.6		15.0			
Pyridine	2.2974	1.9328 2.3707	1.9078 2.3286	1.9502 2.3534	1.8306	Ave		2.1214				11.0		15.0			
Ethyl methacrylate	1.6866	1.3892 1.6940	1.4486 1.6548	1.5423 1.6320	1.3388	Ave		1.5483				9.1		15.0			
Benzaldehyde	1.5333 0.8741	1.2294 +++++	1.1836 +++++	1.2281 +++++	1.1826	Ave		1.2052				17.0	*	15.0			
3-Chloropropionitrile	1.4897	1.2595 1.4622	1.3006 1.4937	1.3044 1.3859	1.2124	Ave		1.3636				8.0		15.0			
Malononitrile	2.2448	1.9935 1.8577	2.0845 1.6532	2.1475 1.3326	2.0596	Qua	-0.921	2.8087	-0.057						0.9970		0.9900
Phenol	1.8841	1.8281 1.8717	1.6617 1.9458	1.8052 1.8512	1.7580	Ave		1.8257				4.7		15.0			
Aniline	2.4151	2.2639 2.3911	2.0794 2.6720	2.3016 2.4648	2.2573	Ave		2.3556				7.4		15.0			
Bis(2-chloroethyl)ether	1.6894	1.5295 1.6002	1.6300 1.6117	1.5935 1.5697	1.4387	Ave		1.5829				4.7		15.0			
2-Chlorophenol	1.5079	1.4241 1.4922	1.3577 1.5327	1.4941 1.4601	1.4438	Ave		1.4641				3.8		15.0			
1,3-Dichlorobenzene	1.5599	1.5840 1.5209	1.5347 1.5599	1.5653 1.5199	1.4890	Ave		1.5417				2.0		15.0			
1,4-Dichlorobenzene	1.5862	1.5357 1.5490	1.5652 1.6083	1.5720 1.5963	1.5055	Ave		1.5648				2.2		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICV 240-43665/11 Calibration Date: 05/11/2012 12:06

Instrument ID: A4HP7 Calib Start Date: 05/11/2012 09:17

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/11/2012 11:47

Lab File ID: 20511011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.7827	1.792		22.9	10.0	128.9*	50.0
N-Nitrosodimethylamine	Ave	1.254	1.385		11.0	10.0	10.4	50.0
Pyridine	Ave	2.121	2.312		10.9	10.0	9.0	50.0
Ethyl methacrylate	Ave	1.548	1.663		10.7	10.0	7.4	50.0
3-Chloropropionitrile	Ave	1.364	1.513		11.1	10.0	11.0	50.0
Malononitrile	Qua		2.271		10.8	10.0	8.0	50.0
2-Fluorophenol (Surr)	Ave	1.486	1.537		10.3	10.0	3.4	50.0
Benzaldehyde	Ave	1.205	0.7368		6.11	10.0	-38.9	50.0
Phenol-d5 (Surr)	Ave	1.757	1.817		10.3	10.0	3.4	50.0
Phenol	Ave	1.826	1.912		10.5	10.0	4.7	20.0
Aniline	Ave	2.356	2.457		10.4	10.0	4.3	50.0
Bis(2-chloroethyl)ether	Ave	1.583	1.667		10.5	10.0	5.3	50.0
2-Chlorophenol	Ave	1.464	1.525		10.4	10.0	4.2	50.0
1,3-Dichlorobenzene	Ave	1.542	1.553		10.1	10.0	0.7	50.0
1,4-Dichlorobenzene	Ave	1.565	1.585		10.1	10.0	1.3	20.0
Benzyl alcohol	Ave	0.9081	0.9464		10.4	10.0	4.2	50.0
1,2-Dichlorobenzene	Ave	1.430	1.443		10.1	10.0	0.9	50.0
2-Methylphenol	Ave	1.285	1.318		10.3	10.0	2.6	50.0
bis (2-chloroisopropyl) ether	Ave	2.393	2.451		10.2	10.0	2.4	50.0
3 & 4 Methylphenol	Ave	1.345	1.375		10.2	10.0	2.3	50.0
N-Nitrosodi-n-propylamine	Ave	0.9738	1.018	0.0500	10.5	10.0	4.6	50.0
Acetophenone	Ave	1.885	1.946		10.3	10.0	3.2	50.0
Hexachloroethane	Ave	0.5545	0.5753		10.4	10.0	3.7	50.0
Nitrobenzene-d5 (Surr)	Ave	0.4312	0.4317		10.0	10.0	0.1	50.0
Nitrobenzene	Ave	0.4062	0.4273		10.5	10.0	5.2	50.0
Isophorone	Ave	0.7209	0.7540		10.5	10.0	4.6	50.0
2,4-Dimethylphenol	Ave	0.3697	0.3794		10.3	10.0	2.6	50.0
2-Nitrophenol	Ave	0.1894	0.1968		10.4	10.0	3.9	20.0
1,3,5-Trichlorobenzene	Ave	0.3433	0.3404		9.92	10.0	-0.8	50.0
Bis(2-chloroethoxy)methane	Ave	0.4323	0.4458		10.3	10.0	3.1	50.0
Benzoic acid	Qua		0.2483		21.0	20.0	5.0	50.0
2,4-Dichlorophenol	Ave	0.3052	0.3155		10.3	10.0	3.4	20.0
1,2,4-Trichlorobenzene	Ave	0.3316	0.3285		9.91	10.0	-0.9	50.0
Naphthalene	Ave	1.108	1.114		10.1	10.0	0.5	50.0
4-Chloroaniline	Ave	0.4507	0.4746		10.5	10.0	5.3	50.0
Hexachlorobutadiene	Ave	0.1695	0.1692		9.98	10.0	-0.2	20.0
1,2,3-Trichlorobenzene	Ave	0.3021	0.3048		10.1	10.0	0.9	50.0
Caprolactam	Ave	0.1145	0.1256		11.0	10.0	9.6	50.0
4-Chloro-3-methylphenol	Ave	0.2919	0.3026		10.4	10.0	3.7	20.0
2-Methylnaphthalene	Ave	0.6841	0.6838		10.0	10.0	-0.0	50.0

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab File ID: 20523001.D DFTPP Injection Date: 05/23/2012

Instrument ID: A4HP7 DFTPP Injection Time: 08:44

Analysis Batch No.: 44986

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	50.0	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	33.5	
70	Less than 2.0% of mass 69	0.2	(0.7)1
127	25.0 - 75.0% of mass 198	43.6	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.5	
275	10.0- 30.0% of mass 198	25.1	
365	Greater than 0.75% of mass 198	2.7	
441	Present, but less than mass 443	2.6	
442	40.0 - 110.0% of mass 198	88.7	
443	15.0 - 24.0% of mass 442	16.3	(18.4)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCV 240-44986/2	20523002.D	05/23/2012	09:02
	MB 240-44651/23-A	20523003.D	05/23/2012	09:27
	LCS 240-44651/24-A	20523004.D	05/23/2012	09:44
MSA-DMW3D-051412	240-11319-8	20523012.D	05/23/2012	11:33
	240-11354-AS-2-A MS	20523014.D	05/23/2012	12:08
	240-11354-AR-2-A MSD	20523015.D	05/23/2012	12:26
MSA-MW5-051412	240-11319-1	20523024.D	05/23/2012	15:06
MSA-DMW3S-051412	240-11319-6	20523035.D	05/23/2012	18:21
MSA-DMW3I-051412	240-11319-7	20523036.D	05/23/2012	18:39

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-44986/2 Calibration Date: 05/23/2012 09:02

Instrument ID: A4HP7 Calib Start Date: 05/11/2012 09:17

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/11/2012 11:47

Lab File ID: 20523002.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.7827	0.6818		8.71	10.0	-12.9	50.0
N-Nitrosodimethylamine	Ave	1.254	1.024		8.17	10.0	-18.3	50.0
Pyridine	Ave	2.121	1.794		8.45	10.0	-15.5	50.0
Ethyl methacrylate	Ave	1.548	1.289		8.33	10.0	-16.7	50.0
3-Chloropropionitrile	Ave	1.364	1.450		10.6	10.0	6.3	50.0
Malononitrile	Qua		1.894		8.56	10.0	-14.4	50.0
2-Fluorophenol (Surr)	Ave	1.486	1.272		8.56	10.0	-14.4	50.0
Benzaldehyde	Ave	1.205	0.7518		6.24	10.0	-37.6	50.0
Phenol-d5 (Surr)	Ave	1.757	1.596		9.08	10.0	-9.2	50.0
Phenol	Ave	1.826	1.671		9.15	10.0	-8.5	20.0
Aniline	Ave	2.356	2.063		8.76	10.0	-12.4	50.0
Bis(2-chloroethyl)ether	Ave	1.583	1.337		8.44	10.0	-15.6	50.0
2-Chlorophenol	Ave	1.464	1.408		9.62	10.0	-3.8	50.0
1,3-Dichlorobenzene	Ave	1.542	1.541		10.0	10.0	-0.0	50.0
1,4-Dichlorobenzene	Ave	1.565	1.564		10.0	10.0	-0.0	50.0
Benzyl alcohol	Ave	0.9081	0.8653		9.53	10.0	-4.7	50.0
1,2-Dichlorobenzene	Ave	1.430	1.436		10.0	10.0	0.4	50.0
2-Methylphenol	Ave	1.285	1.227		9.54	10.0	-4.6	50.0
bis (2-chloroisopropyl) ether	Ave	2.393	2.739		11.4	10.0	14.5	50.0
3 & 4 Methylphenol	Ave	1.345	1.278		9.50	10.0	-5.0	50.0
N-Nitrosodi-n-propylamine	Ave	0.9738	0.8865	0.0500	9.10	10.0	-9.0	50.0
Acetophenone	Ave	1.885	1.763		9.35	10.0	-6.5	50.0
Hexachloroethane	Ave	0.5545	0.5191		9.36	10.0	-6.4	50.0
Nitrobenzene-d5 (Surr)	Ave	0.4312	0.3701		8.58	10.0	-14.2	50.0
Nitrobenzene	Ave	0.4062	0.3661		9.01	10.0	-9.9	50.0
Isophorone	Ave	0.7209	0.6836		9.48	10.0	-5.2	50.0
2-Nitrophenol	Ave	0.1894	0.2026		10.7	10.0	7.0	20.0
1,3,5-Trichlorobenzene	Ave	0.3433	0.3331		9.70	10.0	-3.0	50.0
2,4-Dimethylphenol	Ave	0.3697	0.3476		9.40	10.0	-6.0	50.0
Bis(2-chloroethoxy)methane	Ave	0.4323	0.3764		8.71	10.0	-12.9	50.0
Benzoic acid	Qua		0.2156		18.4	20.0	-8.0	50.0
2,4-Dichlorophenol	Ave	0.3052	0.3103		10.2	10.0	1.7	20.0
1,2,4-Trichlorobenzene	Ave	0.3316	0.3419		10.3	10.0	3.1	50.0
Naphthalene	Ave	1.108	1.017		9.18	10.0	-8.2	50.0
4-Chloroaniline	Ave	0.4507	0.4265		9.46	10.0	-5.4	50.0
Hexachlorobutadiene	Ave	0.1695	0.1902		11.2	10.0	12.2	20.0
1,2,3-Trichlorobenzene	Ave	0.3021	0.3197		10.6	10.0	5.8	50.0
Caprolactam	Ave	0.1145	0.1142		9.97	10.0	-0.3	50.0
4-Chloro-3-methylphenol	Ave	0.2919	0.2927		10.0	10.0	0.3	20.0
2-Methylnaphthalene	Ave	0.6841	0.6768		9.89	10.0	-1.1	50.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab File ID: 20523003.D Lab Sample ID: MB 240-44651/23-A

Matrix: Water Date Extracted: 05/19/2012 09:14

Instrument ID: A4HP7 Date Analyzed: 05/23/2012 09:27

Level:(Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-44651/24-A	20523004.D	05/23/2012 09:44
MSA-DMW3D-051412	240-11319-8	20523012.D	05/23/2012 11:33
	240-11354-AS-2-A MS	20523014.D	05/23/2012 12:08
	240-11354-AR-2-A MSD	20523015.D	05/23/2012 12:26
MSA-MW5-051412	240-11319-1	20523024.D	05/23/2012 15:06
MSA-DMW3S-051412	240-11319-6	20523035.D	05/23/2012 18:21
MSA-DMW3I-051412	240-11319-7	20523036.D	05/23/2012 18:39

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-44651/23-A

Matrix: Water | Lab File ID: 20523003.D

Analysis Method: 8270C | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/19/2012 09:14

Sample wt/vol: 1000(mL) | Date Analyzed: 05/23/2012 09:27

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44986 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	72		28-110
367-12-4	2-Fluorophenol (Surr)	68		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	79		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	69		27-111
4165-62-2	Phenol-d5 (Surr)	72		10-110
1718-51-0	Terphenyl-d14 (Surr)	84		37-119

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MSA-MW5-051412	240-11319-1	58	62	57	59	83	67
MSA-DMW3S-051412	240-11319-6	30	30	40	44	63	53
MSA-DMW3I-051412	240-11319-7	52	55	50	54	62	67
MSA-DMW3D-051412	240-11319-8	54	59	55	58	71	63
	MB 240-44651/23-A	68	72	69	72	79	84
	LCS 240-44651/24-A	57	61	57	67	89	85
	240-11354-AS-2-A MS	23	26	23 X	28	36	33 X
	240-11354-AR-2-A MSD	44	49	45	53	69	65

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270C

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20523004.D

Lab ID: LCS 240-44651/24-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
1,4-Dioxane	20.0	9.56	48	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20523014.D

Lab ID: 240-11354-AS-2-A MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
1,4-Dioxane	19.0	0.95 U	3.68	19	10-110	

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM III
GC/MS SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 20523015.D

Lab ID: 240-11354-AR-2-A MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
1,4-Dioxane	19.0	7.01	37	62	30	10-110	F

Column to be used to flag recovery and RPD values

FORM III 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: STD6 240-43665/10 Date Analyzed: 05/11/2012 11:47

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20511010.D Heated Purge: (Y/N) N

Calibration ID: 8680

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		437336	3.45	1550128	4.35	857737	5.61
UPPER LIMIT		874672	3.95	3100256	4.85	1715474	6.11
LOWER LIMIT		218668	2.95	775064	3.85	428869	5.11
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43665/11		440902	3.45	1545336	4.35	858847	5.61
CCV 240-44986/2 CCVIS		267588	3.20	979478	4.09	554628	5.34

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: STD6 240-43665/10 Date Analyzed: 05/11/2012 11:47

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20511010.D Heated Purge: (Y/N) N

Calibration ID: 8680

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1328211	6.69	1262099	8.67	1119020	10.02
UPPER LIMIT		2656422	7.19	2524198	9.17	2238040	10.52
LOWER LIMIT		664106	6.19	631050	8.17	559510	9.52
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-43665/11		1301262	6.69	1208547	8.67	1044058	10.03
CCV 240-44986/2 CCVIS		908596	6.41	890323	8.35	808996	9.53

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: CCV 240-44986/2 Date Analyzed: 05/23/2012 09:02

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20523002.D Heated Purge: (Y/N) N

Calibration ID: 8680

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		267588	3.20	979478	4.09	554628	5.34
UPPER LIMIT		535176	3.70	1958956	4.59	1109256	5.84
LOWER LIMIT		133794	2.70	489739	3.59	277314	4.84
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-44651/23-A		296518	3.20	1064720	4.09	578786	5.34
LCS 240-44651/24-A		208001	3.20	782501	4.09	438943	5.34
240-11319-8	MSA-DMW3D-051412	318633	3.20	1179181	4.09	661669	5.34
240-11354-AS-2-A MS		291639	3.20	1028200	4.09	596161	5.34
240-11354-AR-2-A MSD		285032	3.20	1020169	4.09	595601	5.34
240-11319-1	MSA-MW5-051412	260304	3.20	919136	4.09	540702	5.34
240-11319-6	MSA-DMW3S-051412	300551	3.20	1002704	4.09	578566	5.34
240-11319-7	MSA-DMW3I-051412	314664	3.20	1101933	4.09	609598	5.34

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

FORM VIII

GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: CCV 240-44986/2 Date Analyzed: 05/23/2012 09:02

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 20523002.D Heated Purge: (Y/N) N

Calibration ID: 8680

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		908596	6.41	890323	8.35	808996	9.53
UPPER LIMIT		1817192	6.91	1780646	8.85	1617992	10.03
LOWER LIMIT		454298	5.91	445162	7.85	404498	9.03
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 240-44651/23-A		921656	6.41	854608	8.36	755079	9.55
LCS 240-44651/24-A		726947	6.41	714480	8.35	630139	9.53
240-11319-8	MSA-DMW3D-051412	1059778	6.41	1058354	8.35	942218	9.54
240-11354-AS-2-A MS		951422	6.41	962343	8.34	802790	9.53
240-11354-AR-2-A MSD		959956	6.41	952212	8.35	819636	9.53
240-11319-1	MSA-MW5-051412	924686	6.41	946233	8.35	829264	9.53
240-11319-6	MSA-DMW3S-051412	979246	6.41	963364	8.35	844179	9.53
240-11319-7	MSA-DMW3I-051412	1044957	6.41	990609	8.35	854452	9.53

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270C

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: YPID Start Date: 02/10/2012 10:35

Analysis Batch Number: 33435 End Date: 02/10/2012 23:53

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		02/10/2012 10:35	1		RTX-VRX 0.45(mm)
STD1 240-33435/12 IC		02/10/2012 16:17	1	YF021012.D	RTX-VRX 0.45(mm)
STD2 240-33435/13 IC		02/10/2012 16:55	1	YF021013.D	RTX-VRX 0.45(mm)
STD3 240-33435/14 IC		02/10/2012 17:32	1	YF021014.D	RTX-VRX 0.45(mm)
STD4 240-33435/15 ICRT		02/10/2012 18:11	1	YF021015.D	RTX-VRX 0.45(mm)
STD5 240-33435/16 IC		02/10/2012 18:49	1	YF021016.D	RTX-VRX 0.45(mm)
STD6 240-33435/17 IC		02/10/2012 19:27	1	YF021017.D	RTX-VRX 0.45(mm)
ICV 240-33435/18		02/10/2012 20:05	1	YF021018.D	RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 20:43	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:21	1		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 21:59	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 22:37	10		RTX-VRX 0.45(mm)
ZZZZZ		02/10/2012 23:15	10		RTX-VRX 0.45(mm)
CCV 240-33435/24		02/10/2012 23:53	1		RTX-VRX 0.45(mm)

GASOLINE RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: YPID Start Date: 05/21/2012 11:25

Analysis Batch Number: 44711 End Date: 05/22/2012 13:56

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
ZZZZZ		05/21/2012 11:25	1		RTX-VRX 0.45(mm)
CCV 240-44711/5 CCVRT		05/21/2012 12:46	1	YF052105.D	RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 13:26	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 14:06	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 14:46	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 15:26	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 16:06	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 16:47	10		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 17:27	10		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 18:07	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 18:46	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 19:26	1		RTX-VRX 0.45(mm)
CCV 240-44711/16		05/21/2012 20:05	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 20:44	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 21:23	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 22:01	1		RTX-VRX 0.45(mm)
ZZZZZ		05/21/2012 22:40	1		RTX-VRX 0.45(mm)
CCV 240-44711/21		05/21/2012 23:19	1	YF052121.D	RTX-VRX 0.45(mm)
MB 240-44711/22		05/21/2012 23:58	1	YF052122.D	RTX-VRX 0.45(mm)
LCS 240-44711/23		05/22/2012 00:37	1	YF052123.D	RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 01:16	1		RTX-VRX 0.45(mm)
240-11360-B-1 MS		05/22/2012 01:54	1	YF052125.D	RTX-VRX 0.45(mm)
240-11360-B-1 MSD		05/22/2012 02:33	1	YF052126.D	RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 03:12	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 03:50	10		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 04:28	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 05:05	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 05:43	50		RTX-VRX 0.45(mm)
CCV 240-44711/33		05/22/2012 06:57	1	YF052133.D	RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 07:35	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 08:12	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 08:49	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 09:27	10		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 10:04	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 10:42	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 11:20	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 11:58	1		RTX-VRX 0.45(mm)
ZZZZZ		05/22/2012 12:37	2		RTX-VRX 0.45(mm)
240-11319-1	MSA-MW5-051412	05/22/2012 13:16	5	YF052143.D	RTX-VRX 0.45(mm)
CCV 240-44711/44		05/22/2012 13:56	1	YF052144.D	RTX-VRX 0.45(mm)

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICV 240-33435/18 Calibration Date: 02/10/2012 20:05

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF021018.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Trifluorotoluene (Surr)	Ave	420494	416828		9.91	10.0	-0.9	20.0
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	333932		891	800	11.4	20.0
C6-C12	Ave	336931	375679		892	800	11.5	20.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-44711/5 Calibration Date: 05/21/2012 12:46

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF052105.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Trifluorotoluene (Surr)	Ave	420494	311074		7.40	10.0	-26.0*	15.0
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	324542		866	800	8.2	15.0
C6-C12	Ave	336931	360822		857	800	7.1	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-44711/21 Calibration Date: 05/21/2012 23:19

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF052121.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Trifluorotoluene (Surr)	Ave	420494	319682		7.60	10.0	-24.0*	15.0
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	303314		809	800	1.1	15.0
C6-C12	Ave	336931	335464		797	800	-0.4	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-44711/33 Calibration Date: 05/22/2012 06:57

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF052133.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Trifluorotoluene (Surr)	Ave	420494	306861		7.30	10.0	-27.0*	15.0
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	313095		835	800	4.4	15.0
C6-C12	Ave	336931	353338		839	800	4.9	15.0

FORM VII
GASOLINE RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-44711/44 Calibration Date: 05/22/2012 13:56

Instrument ID: YPID Calib Start Date: 02/10/2012 16:17

GC Column: RTX-VRX ID: 0.45(mm) Calib End Date: 02/10/2012 19:27

Lab File ID: YF052144.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Trifluorotoluene (Surr)	Ave	420494	299852		7.13	10.0	-28.7*	15.0
Total Petroleum Hydrocarbons (C6-C10)	Ave	299875	313074		835	800	4.4	15.0
C6-C12	Ave	336931	348390		827	800	3.4	15.0

FORM IV
GASOLINE RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: MB 240-44711/22

Matrix: Water Date Extracted: 05/21/2012 23:58

Lab File ID:(1) YF052122.D Lab File ID:(2)

Date Analyzed:(1) 05/21/2012 23:58 Date Analyzed:(2)

Instrument ID:(1) YPID Instrument ID:(2)

GC Column:(1) RTX-VRX ID: 0.45(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 240-44711/23	05/22/2012 00:37	
	240-11360-B-1 MS	05/22/2012 01:54	
	240-11360-B-1 MSD	05/22/2012 02:33	
MSA-MW5-051412	240-11319-1	05/22/2012 13:16	

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-44711/22

Matrix: Water Lab File ID: YF052122.D

Analysis Method: 8015B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/21/2012 23:58

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 44711 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	27.4	J	100	25

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	59		10-150

FORM II
GASOLINE RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-VRX ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	TFT1 #
MSA-MW5-051412	240-11319-1	60
	MB 240-44711/22	59
	LCS 240-44711/23	75
	240-11360-B-1 MS	69
	240-11360-B-1 MSD	73

	QC LIMITS
TFT = Trifluorotoluene (Surr)	10-150

Column to be used to flag recovery values

FORM II 8015B

FORM III
GASOLINE RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF052123.D

Lab ID: LCS 240-44711/23 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	851	106	72-140	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III
GASOLINE RANGE ORGANICS MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF052125.D

Lab ID: 240-11360-B-1 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	55 J	930	109	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM III

GASOLINE RANGE ORGANICS MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: YF052126.D

Lab ID: 240-11360-B-1 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Total Petroleum Hydrocarbons (C6-C10)	800	897	105	4	20	63-143	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
GASOLINE RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: CCV 240-44711/5 Date Analyzed: 05/21/2012 12:46

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm)

Lab File ID (Standard): YF052105.D Heated Purge: (Y/N) N

Calibration ID: 6924

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				TFT RT #		
CONTINUING CALIBRATION SURROGATE				9.75		
UPPER LIMIT				9.85		
LOWER LIMIT				9.65		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCV 240-44711/5 CCVRT		05/21/2012 12:46	YF052105.D	9.75		
CCV 240-44711/21		05/21/2012 23:19	YF052121.D	9.75		
MB 240-44711/22		05/21/2012 23:58	YF052122.D	9.75		
LCS 240-44711/23		05/22/2012 00:37	YF052123.D	9.76		
240-11360-B-1 MS		05/22/2012 01:54	YF052125.D	9.76		
240-11360-B-1 MSD		05/22/2012 02:33	YF052126.D	9.75		
CCV 240-44711/33		05/22/2012 06:57	YF052133.D	9.76		
240-11319-1	MSA-MW5-051412	05/22/2012 13:16	YF052143.D	9.75		
CCV 240-44711/44		05/22/2012 13:56	YF052144.D	9.76		

TFT = Trifluorotoluene (Surr)

TFT RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Instrument ID: SGY Start Date: 05/10/2012 16:46

Analysis Batch Number: 237317 End Date: 05/10/2012 19:44

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
IC 680-237317/1		05/10/2012 16:46	1	ye10008.d	DB-1701-p 0.25(um)
IC 680-237317/1		05/10/2012 16:46	1	ye10008.d	CLP II 0.32(mm)
IC 680-237317/2		05/10/2012 16:55	1	ye10009.d	DB-1701-p 0.25(um)
IC 680-237317/2		05/10/2012 16:55	1	ye10009.d	CLP II 0.32(mm)
IC 680-237317/3		05/10/2012 17:04	1	ye10010.d	DB-1701-p 0.25(um)
IC 680-237317/3		05/10/2012 17:04	1	ye10010.d	CLP II 0.32(mm)
IC 680-237317/4		05/10/2012 17:13	1	ye10011.d	DB-1701-p 0.25(um)
IC 680-237317/4		05/10/2012 17:13	1	ye10011.d	CLP II 0.32(mm)
IC 680-237317/5		05/10/2012 17:22	1	ye10012.d	DB-1701-p 0.25(um)
IC 680-237317/5		05/10/2012 17:22	1	ye10012.d	CLP II 0.32(mm)
IC 680-237317/6		05/10/2012 17:31	1	ye10013.d	DB-1701-p 0.25(um)
IC 680-237317/6		05/10/2012 17:31	1	ye10013.d	CLP II 0.32(mm)
IC 680-237317/7		05/10/2012 17:40	1	ye10014.d	DB-1701-p 0.25(um)
IC 680-237317/7		05/10/2012 17:40	1	ye10014.d	CLP II 0.32(mm)
ZZZZZ		05/10/2012 17:58	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 17:58	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:06	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:06	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:15	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:15	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:24	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:24	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:33	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:33	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:42	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:42	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 18:51	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 18:51	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:00	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:00	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:09	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:09	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:18	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:18	1		CLP II 0.32(mm)
ZZZZZ		05/10/2012 19:27	1		DB-1701-p 0.25(um)
ZZZZZ		05/10/2012 19:27	1		CLP II 0.32(mm)
CCV 680-237317/19		05/10/2012 19:35	1		DB-1701-p 0.25(um)
CCV 680-237317/19		05/10/2012 19:35	1		CLP II 0.32(mm)
PIBLK 680-237317/20		05/10/2012 19:44	1		DB-1701-p 0.25(um)
PIBLK 680-237317/20		05/10/2012 19:44	1		CLP II 0.32(mm)

GC SEMI VOA ANALYSIS RUN LOG

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Instrument ID: SGY Start Date: 05/17/2012 20:29

Analysis Batch Number: 238070 End Date: 05/17/2012 22:51

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVIS 680-238070/1		05/17/2012 20:29	1	ye17036.d	DB-1701-p 0.25(um)
CCVIS 680-238070/1		05/17/2012 20:29	1	ye17036.d	CLP II 0.32(mm)
PIBLK 680-238070/2		05/17/2012 20:38	1	ye17037.d	DB-1701-p 0.25(um)
PIBLK 680-238070/2		05/17/2012 20:38	1	ye17037.d	CLP II 0.32(mm)
MB 680-237588/21-A		05/17/2012 20:47	1	ye17038.d	DB-1701-p 0.25(um)
MB 680-237588/21-A		05/17/2012 20:47	1	ye17038.d	CLP II 0.32(mm)
LCS 680-237588/22-A		05/17/2012 20:56	1	ye17039.d	DB-1701-p 0.25(um)
LCS 680-237588/22-A		05/17/2012 20:56	1	ye17039.d	CLP II 0.32(mm)
ZZZZZ		05/17/2012 21:05	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 21:05	1		CLP II 0.32(mm)
ZZZZZ		05/17/2012 21:13	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 21:13	1		CLP II 0.32(mm)
680-79541-B-1-B MS		05/17/2012 21:22	1	ye17042.d	DB-1701-p 0.25(um)
680-79541-B-1-B MS		05/17/2012 21:22	1	ye17042.d	CLP II 0.32(mm)
680-79541-B-1-C MSD		05/17/2012 21:31	1	ye17043.d	DB-1701-p 0.25(um)
680-79541-B-1-C MSD		05/17/2012 21:31	1	ye17043.d	CLP II 0.32(mm)
ZZZZZ		05/17/2012 21:40	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 21:40	1		CLP II 0.32(mm)
ZZZZZ		05/17/2012 21:49	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 21:49	1		CLP II 0.32(mm)
240-11319-6	MSA-DMW3S-051412	05/17/2012 21:58	1	ye17046.d	DB-1701-p 0.25(um)
240-11319-6	MSA-DMW3S-051412	05/17/2012 21:58	1	ye17046.d	CLP II 0.32(mm)
ZZZZZ		05/17/2012 22:07	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 22:07	1		CLP II 0.32(mm)
ZZZZZ		05/17/2012 22:15	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 22:15	1		CLP II 0.32(mm)
ZZZZZ		05/17/2012 22:24	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 22:24	1		CLP II 0.32(mm)
ZZZZZ		05/17/2012 22:33	1		DB-1701-p 0.25(um)
ZZZZZ		05/17/2012 22:33	1		CLP II 0.32(mm)
CCV 680-238070/16		05/17/2012 22:42	1	ye17051.d	DB-1701-p 0.25(um)
CCV 680-238070/16		05/17/2012 22:42	1	ye17051.d	CLP II 0.32(mm)
PIBLK 680-238070/17		05/17/2012 22:51	1	ye17052.d	DB-1701-p 0.25(um)
PIBLK 680-238070/17		05/17/2012 22:51	1	ye17052.d	CLP II 0.32(mm)

FORM VI
GC SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-11319-1 Analy Batch No.: 237317

SDG No.:

Instrument ID: SGY GC Column: DB-1701-p ID: 0.25(um) Heated Purge: (Y/N) N

Calibration Start Date: 05/10/2012 16:46 Calibration End Date: 05/10/2012 17:40 Calibration ID: 12066

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-237317/7	ye10014.d
Level 2	IC 680-237317/6	ye10013.d
Level 3	IC 680-237317/5	ye10012.d
Level 4	IC 680-237317/4	ye10011.d
Level 5	IC 680-237317/3	ye10010.d
Level 6	IC 680-237317/2	ye10009.d
Level 7	IC 680-237317/1	ye10008.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochloroacetic acid	0.7131 0.5387	0.6209 0.4621	0.6557	0.5383	+++++	Qua	0.0003	1.5262	1.3681						0.9991		0.9900
Monobromoacetic acid	7.7858 5.5138	6.0435 5.1721	5.8732	5.3894	+++++	Lin	-0.007	5.1491							0.9991		0.9900
Dichloroacetic acid	14.130 7.9566	9.4190 7.1949	8.5020	7.8967	+++++	Qua	-0.003	0.1215	0.0050						0.9986		0.9900
Trichloroacetic acid	19.996 13.155	12.556 11.818	12.316	13.554	+++++	QuaF		0.0687	0.0027						0.9994		0.9900
Dibromoacetic acid	20.333 16.064	15.433 14.429	15.764	16.144	+++++	Ave		16.361				12.5		20.0			
2,3-Dibromopropionic acid	7.9318 6.7813	7.4801 +++++	7.2221	8.3447	+++++	Ave		7.5520				8.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Savannah Job No.: 240-11319-1 Analy Batch No.: 237317

SDG No.:

Instrument ID: SGY GC Column: CLP II ID: 0.32(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/10/2012 16:46 Calibration End Date: 05/10/2012 17:40 Calibration ID: 12067

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	IC 680-237317/7	ye10014.d
Level 2	IC 680-237317/6	ye10013.d
Level 3	IC 680-237317/5	ye10012.d
Level 4	IC 680-237317/4	ye10011.d
Level 5	IC 680-237317/3	ye10010.d
Level 6	IC 680-237317/2	ye10009.d
Level 7	IC 680-237317/1	ye10008.d

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3	LVL 4	LVL 5		B	M1	M2								
Monochloroacetic acid	0.5160 0.4202	0.4477 0.3812	0.4830	0.3960	+++++	Ave		0.4407				11.8		20.0			
Monobromoacetic acid	4.7077 3.5620	3.9440 3.2419	4.1118	3.3895	+++++	Qua	-0.001	0.2624	0.0286						0.9991		0.9900
Dichloroacetic acid	9.9550 6.1888	7.1505 5.9508	6.3587	6.1386	+++++	Lin	-0.003	5.9281							0.9987		0.9900
Trichloroacetic acid	15.648 10.711	10.303 9.8949	10.143	10.837	+++++	Qua	0.0017	0.0859	0.0030						0.9996		0.9900
Dibromoacetic acid	19.098 14.439	14.487 12.995	14.799	14.471	+++++	Qua	0.0017	0.0616	0.0023						0.9997		0.9900
2,3-Dibromopropionic acid	7.9813 6.9306	7.5964 +++++	7.4260	8.2684	+++++	Ave		7.6405				6.7		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCVIS 680-238070/1 Calibration Date: 05/17/2012 20:29

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: DB-1701-p ID: 0.25(um) Calib End Date: 05/10/2012 17:40

Lab File ID: ye17036.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Qua	0.5881	0.6356		2.00	0.125	4.2	30.0
Monobromoacetic acid	Lin	5.963	5.726		1.00	0.0625	-0.5	30.0
Dichloroacetic acid	Qua	9.091	8.203		1.00	0.0625	-6.0	30.0
Trichloroacetic acid	QuaF	13.90	11.38		1.00	0.0625	-19.7	30.0
Dibromoacetic acid	Ave	16.36	14.72		1.00	0.0625	-10.0	30.0
2,3-Dibromopropionic acid	Ave	7.552	6.443		0.0427	0.0500	-14.7	30.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCVIS 680-238070/1 Calibration Date: 05/17/2012 20:29

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: CLP II ID: 0.32(mm) Calib End Date: 05/10/2012 17:40

Lab File ID: ye17036.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Ave	0.4407	0.4784		2.00	0.125	8.6	30.0
Monobromoacetic acid	Qua	3.826	4.056		1.00	0.0625	7.1	30.0
Dichloroacetic acid	Lin	6.849	6.177		1.00	0.0625	-5.5	30.0
Trichloroacetic acid	Qua	11.26	9.253		1.00	0.0625	-16.2	30.0
Dibromoacetic acid	Qua	15.05	13.59		1.00	0.0625	-10.8	30.0
2,3-Dibromopropionic acid	Ave	7.641	6.450		0.0422	0.0500	-15.6	30.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 680-238070/16 Calibration Date: 05/17/2012 22:42

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: DB-1701-p ID: 0.25(um) Calib End Date: 05/10/2012 17:40

Lab File ID: ye17051.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Qua	0.5881	0.6143		2.00	0.250	6.8	30.0
Monobromoacetic acid	Lin	5.963	5.766		1.00	0.125	6.1	30.0
Dichloroacetic acid	Qua	9.091	7.765		1.00	0.125	-6.5	30.0
Trichloroacetic acid	QuaF	13.90	12.42		1.00	0.125	-9.5	30.0
Dibromoacetic acid	Ave	16.36	16.60		1.00	0.125	1.5	30.0
2,3-Dibromopropionic acid	Ave	7.552	6.407		0.0530	0.0625	-15.2	30.0

FORM VII
GC SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 680-238070/16 Calibration Date: 05/17/2012 22:42

Instrument ID: SGY Calib Start Date: 05/10/2012 16:46

GC Column: CLP II ID: 0.32(mm) Calib End Date: 05/10/2012 17:40

Lab File ID: ye17051.d Conc. Units: ug/mL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Monochloroacetic acid	Ave	0.4407	0.4593		2.00	0.250	4.2	30.0
Monobromoacetic acid	Qua	3.826	3.268		1.00	0.125	-11.6	30.0
Dichloroacetic acid	Lin	6.849	5.583		1.00	0.125	-10.5	30.0
Trichloroacetic acid	Qua	11.26	8.878		1.00	0.125	-19.4	30.0
Dibromoacetic acid	Qua	15.05	12.54		1.00	0.125	-16.8	30.0
2,3-Dibromopropionic acid	Ave	7.641	5.612		0.0459	0.0625	-26.6	30.0

FORM IV
GC SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Lab Sample ID: MB 680-237588/21-A

Matrix: Water Date Extracted: 05/17/2012 07:35

Lab File ID:(1) ye17038.d Lab File ID:(2) ye17038.d

Date Analyzed:(1) 05/17/2012 20:47 Date Analyzed:(2) 05/17/2012 20:47

Instrument ID:(1) SGY Instrument ID:(2) SGY

GC Column:(1) DB-1701-p ID: 0.25(um) GC Column:(2) CLP II ID: 0.32(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
	LCS 680-237588/22-A	05/17/2012 20:56	05/17/2012 20:56
	680-79541-B-1-B MS	05/17/2012 21:22	05/17/2012 21:22
	680-79541-B-1-C MSD	05/17/2012 21:31	05/17/2012 21:31
MSA-DMW3S-051412	240-11319-6	05/17/2012 21:58	05/17/2012 21:58

FORM I

GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 680-237588/21-A

Matrix: Water | Lab File ID: ye17038.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: 552.2 | Date Extracted: 05/17/2012 07:35

Sample wt/vol: 40(mL) | Date Analyzed: 05/17/2012 20:47

Con. Extract Vol.: 4(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: DB-1701-p ID: 0.25(um)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 238070 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid	95		70-130

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Client Sample ID: Lab Sample ID: PIBLK 680-238070/2

Matrix: Water Lab File ID: ye17037.d

Analysis Method: 552.2 Date Collected:

Extraction Method: Date Extracted:

Sample wt/vol: Date Analyzed: 05/17/2012 20:38

Con. Extract Vol.: 1.0(mL) Dilution Factor: 1

Injection Volume: 1(uL) GC Column: DB-1701-p ID: 0.25(um)

% Moisture: GPC Cleanup:(Y/N) N

Analysis Batch No.: 238070 Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: PIBLK 680-238070/2

Matrix: Water | Lab File ID: ye17037.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: | Date Analyzed: 05/17/2012 20:38

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP II ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 238070 | Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	*Monochloroacetic acid*	*2.0*	*U*	*2.0*	*0.40*
79-08-3	*Monobromoacetic acid*	*1.0*	*U*	*1.0*	*0.75*
79-43-6	*Dichloroacetic acid*	*1.0*	*U*	*1.0*	*0.98*
76-03-9	*Trichloroacetic acid*	*1.0*	*U*	*1.0*	*0.38*
631-64-1	*Dibromoacetic acid*	*1.0*	*U*	*1.0*	*0.38*

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: PIBLK 680-238070/17

Matrix: Water | Lab File ID: ye17052.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: | Date Analyzed: 05/17/2012 22:51

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: DB-1701-p ID: 0.25(um)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 238070 | Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	Monochloroacetic acid	2.0	U	2.0	0.40
79-08-3	Monobromoacetic acid	1.0	U	1.0	0.75
79-43-6	Dichloroacetic acid	1.0	U	1.0	0.98
76-03-9	Trichloroacetic acid	1.0	U	1.0	0.38
631-64-1	Dibromoacetic acid	1.0	U	1.0	0.38

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM I
GC SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Savannah | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: PIBLK 680-238070/17

Matrix: Water | Lab File ID: ye17052.d

Analysis Method: 552.2 | Date Collected:

Extraction Method: | Date Extracted:

Sample wt/vol: | Date Analyzed: 05/17/2012 22:51

Con. Extract Vol.: 1.0(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: CLP II ID: 0.32(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 238070 | Units: ug/mL

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
79-11-8	*Monochloroacetic acid*	*2.0*	*U*	*2.0*	*0.40*
79-08-3	*Monobromoacetic acid*	*1.0*	*U*	*1.0*	*0.75*
79-43-6	*Dichloroacetic acid*	*1.0*	*U*	*1.0*	*0.98*
76-03-9	*Trichloroacetic acid*	*1.0*	*U*	*1.0*	*0.38*
631-64-1	*Dibromoacetic acid*	*1.0*	*U*	*1.0*	*0.38*

CAS NO.	SURROGATE	%REC	Q	LIMITS
600-05-5	2,3-Dibromopropionic acid			

FORM II
GC SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-1701-p ID: 0.25 (um) GC Column (2): CLP II ID: 0.32 (mm)

Client Sample ID	Lab Sample ID	23DPA1 #	23DPA2 #
MSA-DMW3S-051412	240-11319-6	106	90
	MB 680-237588/21-A	95	86
	LCS 680-237588/22-A	95	86
	680-79541-B-1-B MS	107	98
	680-79541-B-1-C MSD	85	78

	QC LIMITS
23DPA = 2,3-Dibromopropionic acid	70-130

Column to be used to flag recovery values

FORM II 552.2

FORM III
GC SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ye17039.d

Lab ID: LCS 680-237588/22-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Monochloroacetic acid	25.0	27.3	109	70-130	
Monobromoacetic acid	12.5	13.4	107	70-130	
Dichloroacetic acid	12.5	12.1	96	70-130	
Trichloroacetic acid	12.5	11.8	94	70-130	
Dibromoacetic acid	12.5	12.5	100	70-130	

Column to be used to flag recovery and RPD values

FORM III 552.2

FORM III
GC SEMI VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ye17042.d

Lab ID: 680-79541-B-1-B MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Monochloroacetic acid	25.0	4.8	30.8	120	70-130	
Monobromoacetic acid	12.5	1.6	15.1	115	70-130	
Dichloroacetic acid	12.5	4.6	18.7	113	70-130	
Trichloroacetic acid	12.5	5.3	20.4	117	70-130	
Dibromoacetic acid	12.5	12	26.6	120	70-130	

Column to be used to flag recovery and RPD values

FORM III 552.2

FORM III
GC SEMI VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: ye17043.d

Lab ID: 680-79541-B-1-C MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Monochloroacetic acid	25.0	26.8	104	14	30	70-130	
Monobromoacetic acid	12.5	13.2	99	13	30	70-130	
Dichloroacetic acid	12.5	16.4	95	13	30	70-130	
Trichloroacetic acid	12.5	17.2	91	17	30	70-130	
Dibromoacetic acid	12.5	23.2	93	14	30	70-130	

Column to be used to flag recovery and RPD values

FORM III 552.2

FORM VIII

GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Sample No.: CCVIS 680-238070/1 Date Analyzed: 05/17/2012 20:29

Instrument ID: SGY GC Column: DB-1701-p ID: 0.25(um)

Lab File ID (Standard): ye17036.d Heated Purge: (Y/N) N

Calibration ID: 12066

		TCP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		24756001	3.64				
UPPER LIMIT							
LOWER LIMIT							
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-237588/21-A		25468071	3.64				
LCS 680-237588/22-A		25202580	3.64				
680-79541-B-1-B MS		26388831	3.64				
680-79541-B-1-C MSD		26807056	3.64				
240-11319-6	MSA-DMW3S-051412	25836012	3.64				
CCV 680-238070/16		25516559	3.64				

TCP = 1,2,3-Trichloropropane

Area Limit = 70%-130% of internal standard area

Column used to flag values outside QC limits

FORM VIII 552.2

FORM VIII

GC SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Savannah Job No.: 240-11319-1

SDG No.:

Sample No.: CCVIS 680-238070/1 Date Analyzed: 05/17/2012 20:29

Instrument ID: SGY GC Column: CLP II ID: 0.32 (mm)

Lab File ID (Standard): ye17036.d Heated Purge: (Y/N) N

Calibration ID: 12067

		TCP					
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		25421800	3.48				
UPPER LIMIT							
LOWER LIMIT							
LAB SAMPLE ID	CLIENT SAMPLE ID						
MB 680-237588/21-A		28231355	3.48				
LCS 680-237588/22-A		27962313	3.48				
680-79541-B-1-B MS		30430289	3.48				
680-79541-B-1-C MSD		30535826	3.48				
240-11319-6	MSA-DMW3S-051412	30318098	3.48				
CCV 680-238070/16		29633972	3.48				

TCP = 1,2,3-Trichloropropane

Area Limit = 70%-130% of internal standard area

Column used to flag values outside QC limits

FORM VIII 552.2

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: A2HP6F Start Date: 05/17/2012 11:52

Analysis Batch Number: 44398 End Date: 05/18/2012 04:23

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
STD1 240-44398/4 IC		05/17/2012 11:52	1	P6F51704.D	RTX-5 0.53(mm)
STD2 240-44398/5 IC		05/17/2012 12:23	1	P6F51705.D	RTX-5 0.53(mm)
ICRT 240-44398/6		05/17/2012 12:54	1	P6F51706.D	RTX-5 0.53(mm)
STD4 240-44398/7 IC		05/17/2012 13:25	1	P6F51707.D	RTX-5 0.53(mm)
STD5 240-44398/8 IC		05/17/2012 13:56	1	P6F51708.D	RTX-5 0.53(mm)
ICV 240-44398/9		05/17/2012 14:27	1	P6F51709.D	RTX-5 0.53(mm)
STD1 240-44398/10 IC		05/17/2012 14:58	1		RTX-5 0.53(mm)
STD2 240-44398/11 IC		05/17/2012 15:29	1		RTX-5 0.53(mm)
STD3 240-44398/12 IC		05/17/2012 16:00	1		RTX-5 0.53(mm)
STD4 240-44398/13 IC		05/17/2012 16:31	1		RTX-5 0.53(mm)
STD5 240-44398/14 IC		05/17/2012 17:03	1		RTX-5 0.53(mm)
ICV 240-44398/15		05/17/2012 17:34	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 18:05	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 18:36	1		RTX-5 0.53(mm)
CCV 240-44398/19		05/17/2012 19:38	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 20:09	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 20:40	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 21:12	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 21:43	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 22:14	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 22:44	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 23:15	1		RTX-5 0.53(mm)
ZZZZZ		05/17/2012 23:46	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 00:17	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 00:48	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 01:19	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 01:50	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 02:21	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 02:52	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 03:23	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 03:53	1		RTX-5 0.53(mm)
CCV 240-44398/36		05/18/2012 04:23	1		RTX-5 0.53(mm)

DIESEL RANGE ORGANICS ANALYSIS RUN LOG

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: A2HP6F Start Date: 05/18/2012 11:21

Analysis Batch Number: 44529 End Date: 05/19/2012 02:21

LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	DILUTION FACTOR	LAB FILE ID	COLUMN ID
CCVRT 240-44529/5		05/18/2012 11:21	1	P6F51805.D	RTX-5 0.53(mm)
ZZZZZ		05/18/2012 12:01	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 12:40	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 13:20	1		RTX-5 0.53(mm)
CCV 240-44529/9		05/18/2012 13:59	1	P6F51809.D	RTX-5 0.53(mm)
ZZZZZ		05/18/2012 14:39	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 15:18	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 15:58	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 16:37	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 17:17	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 17:56	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 18:35	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 19:14	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 19:53	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 20:32	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 21:11	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 21:49	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 22:28	1		RTX-5 0.53(mm)
ZZZZZ		05/18/2012 23:07	1		RTX-5 0.53(mm)
240-11319-1	MSA-MW5-051412	05/18/2012 23:46	1	P6F51824.D	RTX-5 0.53(mm)
240-11319-6	MSA-DMW3S-051412	05/19/2012 00:24	1	P6F51825.D	RTX-5 0.53(mm)
MB 240-44281/17-A		05/19/2012 01:03	1	P6F51826.D	RTX-5 0.53(mm)
LCS 240-44281/18-A		05/19/2012 01:42	1	P6F51827.D	RTX-5 0.53(mm)
CCV 240-44529/28		05/19/2012 02:21	1	P6F51828.D	RTX-5 0.53(mm)

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 44398

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/17/2012 11:52 Calibration End Date: 05/17/2012 13:56 Calibration ID: 8780

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-44398/4	P6F51704.D
Level 2	STD2 240-44398/5	P6F51705.D
Level 3	ICRT 240-44398/6	P6F51706.D
Level 4	STD4 240-44398/7	P6F51707.D
Level 5	STD5 240-44398/8	P6F51708.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198437 175405	186914	193120	178770	Ave		186529.226				5.2		20.0			
n-Nonane	234271 222460	224689	235678	225392	Ave		228498.010				2.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICV 240-44398/9 Calibration Date: 05/17/2012 14:27

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51709.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Diesel	Ave	186529	191370		513	500	2.6	20.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCVRT 240-44529/5 Calibration Date: 05/18/2012 11:21

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51805.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Nonane	Ave	228498	233001		51.0	50.0	2.0	15.0
Diesel	Ave	186529	186028		499	500	-0.3	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-44529/9 Calibration Date: 05/18/2012 13:59

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51809.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Nonane	Ave	228498	219939		48.1	50.0	-3.7	15.0
Diesel	Ave	186529	175455		470	500	-5.9	15.0

FORM VII
DIESEL RANGE ORGANICS CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: CCV 240-44529/28 Calibration Date: 05/19/2012 02:21

Instrument ID: A2HP6F Calib Start Date: 05/17/2012 11:52

GC Column: RTX-5 ID: 0.53(mm) Calib End Date: 05/17/2012 13:56

Lab File ID: P6F51828.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE CF	CF	MIN CF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
n-Nonane	Ave	228498	248130		54.3	50.0	8.6	15.0
Diesel	Ave	186529	199303		534	500	6.8	15.0

FORM IV
DIESEL RANGE ORGANICS METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: MB 240-44281/17-A

Matrix: Water Date Extracted: 05/16/2012 12:53

Lab File ID:(1) P6F51826.D Lab File ID:(2)

Date Analyzed:(1) 05/19/2012 01:03 Date Analyzed:(2)

Instrument ID:(1) A2HP6F Instrument ID:(2)

GC Column:(1) RTX-5 ID: 0.53(mm) GC Column:(2) ID:

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	DATE ANALYZED 1	DATE ANALYZED 2
MSA-MW5-051412	240-11319-1	05/18/2012 23:46	
MSA-DMW3S-051412	240-11319-6	05/19/2012 00:24	
	LCS 240-44281/18-A	05/19/2012 01:42	

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-44281/17-A

Matrix: Water | Lab File ID: P6F51826.D

Analysis Method: 8015B | Date Collected:

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 1000(mL) | Date Analyzed: 05/19/2012 01:03

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	417	J	500	240

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	69		10-110

FORM II
DIESEL RANGE ORGANICS SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RTX-5 ID: 0.53 (mm)

Client Sample ID	Lab Sample ID	C91 #
MSA-MW5-051412	240-11319-1	60
MSA-DMW3S-051412	240-11319-6	63
	MB 240-44281/17-A	69
	LCS 240-44281/18-A	60

C9 = n-Nonane

QC LIMITS
10-110

Column to be used to flag recovery values

FORM II 8015B

FORM III
DIESEL RANGE ORGANICS LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Matrix: Water Level: Low Lab File ID: P6F51827.D

Lab ID: LCS 240-44281/18-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Diesel	2500	1970	79	36-124	

Column to be used to flag recovery and RPD values

FORM III 8015B

FORM VIII
DIESEL RANGE ORGANICS ANALYTICAL SEQUENCE

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Sample No.: CCVRT 240-44529/5 Date Analyzed: 05/18/2012 11:21

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm)

Lab File ID (Standard): P6F51805.D Heated Purge: (Y/N) N

Calibration ID: 8780

THE ANALYTICAL SEQUENCE OF BLANKS, SAMPLES, STANDARDS, MS/MSDs AND LCSs IS GIVEN BELOW:

				C9 RT #		
CONTINUING CALIBRATION SURROGATE				4.35		
UPPER LIMIT				4.45		
LOWER LIMIT				4.25		
LAB SAMPLE ID	CLIENT SAMPLE ID	DATE ANALYZED	LAB FILE ID			
CCVRT 240-44529/5		05/18/2012 11:21	P6F51805.D	4.35		
CCV 240-44529/9		05/18/2012 13:59	P6F51809.D	4.35		
240-11319-1	MSA-MW5-051412	05/18/2012 23:46	P6F51824.D	4.36		
240-11319-6	MSA-DMW3S-051412	05/19/2012 00:24	P6F51825.D	4.36		
MB 240-44281/17-A		05/19/2012 01:03	P6F51826.D	4.36		
LCS 240-44281/18-A		05/19/2012 01:42	P6F51827.D	4.36		
CCV 240-44529/28		05/19/2012 02:21	P6F51828.D	4.36		

C9 = n-Nonane

C9 RT Limit = ± 0.1 minutes of surrogate RT

Column used to flag values outside QC limits

FORM VIII 8015B

Case Narrative

TestAmerica West Sacramento Project Number G2E160436

WATER, 6850, Perchlorate
Sample(s): 1, 2, 3, 4
In accordance with the requirements of Method 6850, both a Laboratory Control Sample (LCS) and a Synthetic Matrix Check Sample (SMCS) were analyzed with the associated samples. Both are reported on the LCS data evaluation and recovery reports, and are differentiated from one another by their workorder number:

LCS: MTP6G1AC
SMCS: MTP6G1AD

WATER, 8330/8330A, RDX
Sample(s): 1, 2
There was insufficient sample volume to prepare a matrix spike/matrix spike duplicate (MS/MSD) pair with this batch.

There were no other anomalies associated with this project.

Sample Summary

TestAmerica West Sacramento Project Number G2E160436

WO#	Sample #	Client Sample ID	Sampling Date	Received Date
MTLAV	1	MSA-MW5-051412	5/14/2012 12:40 PM	5/16/2012 08:50 AM
MTLA5	2	MSA-DMW3S-051412	5/14/2012 02:35 PM	5/16/2012 08:50 AM
MTLCC	3	MSA-DMW3I-051412	5/14/2012 11:10 AM	5/16/2012 08:50 AM
MTLCD	4	MSA-DMW3D-051412	5/14/2012 12:35 PM	5/16/2012 08:50 AM

Notes(s):

- The analytical results of the samples listed above are presented on the following pages.
- All calculations are performed before rounding to avoid round-off errors in calculated results.
- Results noted as "ND" were not detected at or above the stated limit.
- This report must not be reproduced, except in full, without the written approval of the laboratory.
- Results for the following parameters are never reported on a dry weight basis: color, corrosivity, density, flashpoint, ignitability, layers, odor, paint filter test, pH, porosity, pressure, reactivity, redox potential, specific gravity, spot tests, solids, solubility, temperature, viscosity, and weight.

ANALYTICAL METHODS SUMMARY

G2E160436

PARAMETER	ANALYTICAL METHOD
Nitroaromatics and Nitramines by HPLC	SW846 8330/8330A
Perchlorate by 6850	SW846 6850

References:

SW846 "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 and its updates.

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 1

Inst ID: LC10 Batch ID: 04192012C
Test: SOP WS-LC-0009
Method: Method 8330
ICAL Date: See Calibration Report

Eluents: Water: M0104 2012
MeOH: K18E18
ACN: K43804
50:50 H2O:MeOH+0.4% H3PO4 4457-37E

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
19-APR-2012	08:43	RN	1	8330 PRIMER	A-000001	--	--	--	
19-APR-2012	09:23	RN	1	8330 PRIMER	A-000002	--	--	--	
19-APR-2012	10:27	RN	2	8330 PRIMER	A-000003	--	--	--	
19-APR-2012	11:08	RN	81	BLANK	A-000004	--	--	--	
19-APR-2012	11:48	RN	11	STD_01 HP8330L1_00001 5ng/mL	A-000005	--	--	--	
19-APR-2012	12:28	RN	12	STD_02 HP8330L2_00001 10ng/mL	A-000006	--	--	--	
19-APR-2012	13:08	RN	13	STD_03 HP8330L3_00001 20ng/mL	A-000007	--	--	--	
19-APR-2012	13:48	RN	14	STD_04 HP8330L4_00001 50ng/mL	A-000008	--	--	--	
19-APR-2012	14:28	RN	15	STD_05 HP8330L5_00001 100ng/mL	A-000009	--	--	--	
19-APR-2012	15:09	RN	16	STD_06 HP8330L6_00001200ng/mL	A-000010	--	--	--	
19-APR-2012	15:49	RN	17	STD_07 HP8330L7_00001 500ng/mL	A-000011	--	--	--	
19-APR-2012	16:29	RN	18	STD_08 HP8330L8_00001 1000ng/m	A-000012	--	--	--	
19-APR-2012	17:09	RN	81	BLANK	A-000013	--	--	--	
19-APR-2012	17:49	RN	19	STD_MRL 11GCSV0468 8330 5-50ng	A-000014	--	--	--	
19-APR-2012	18:30	RN	20	STD_ICV HPEGDNIC_000001 200ng/	A-000015	--	--	--	
19-APR-2012	19:10	RN	21	STD_ICV HP8330IC_00001 200ng/m	A-000016	--	--	--	
19-APR-2012	19:50	RN	22	EGDN LOD CHECK MB	A-000017	10 g	80 mL	1	
19-APR-2012	20:30	RN	23	EGDN LOD CHECK	A-000018	10 g	80 mL	1	
19-APR-2012	21:10	RN	31	MR0W01AA 2104025 MB	A-000019	10 g	80 mL	1	
19-APR-2012	21:50	RN	32	MR0W01AC 2104025 LCS	A-000020	10 g	80 mL	1	
19-APR-2012	22:30	RN	33	MRVL61AA 2104025 D060464-1	A-000021	9.94 g	80 mL	1	
19-APR-2012	23:10	RN	34	MRVL71AA 2104025 D060464-2	A-000022	10.3 g	80 mL	1	
19-APR-2012	23:51	RN	35	MRVL81AA 2104025 D060464-3	A-000023	9.84 g	80 mL	1	
20-APR-2012	00:31	RN	36	MRVL91AA 2104025 D060464-4	A-000024	10.28 g	80 mL	1	
20-APR-2012	01:11	RN	37	MRVMA1AA 2104025 D060464-5	A-000025	10.12 g	80 mL	1	
20-APR-2012	01:51	RN	38	MRVMC1AA 2104025 D060464-6	A-000026	9.9 g	80 mL	1	
20-APR-2012	02:31	RN	3	STD_05 HP8330L5_00001 100ng/mL	A-000027	--	--	--	
20-APR-2012	03:11	RN	39	MRVMD1AA 2104025 D060464-7	A-000028	10.19 g	80 mL	1	
20-APR-2012	03:52	RN	40	MRVME1AA 2104025 D060464-8	A-000029	10.05 g	80 mL	1	
20-APR-2012	04:32	RN	41	MRVMF1AA 2104025 D060464-9	A-000030	10.29 g	80 mL	1	
20-APR-2012	05:12	RN	42	MRVMG1AA 2104025 D060464-10	A-000031	9.91 g	80 mL	1	
20-APR-2012	05:52	RN	43	MRVMH1AA 2104025 D060464-11	A-000032	9.95 g	80 mL	1	

GC-LC Log 2011-12-14 ERS

Sequence Checked: [signature] 4-20-12

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 25

Inst ID: LC10 Batch ID: 05252012 Eluents: Water: MQ05252012
Test: SOP WS-LC-0009 MeOH: K18178
Method: Method 8330 ACN: K43884
ICAL Date: See Calibration Report 50:50 H2O:MeOH+0.4% H3PO4 3844-111A

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
25-MAY-2012	10:47	RN	1	8330 PRIMER	A-000001	--	--	--	
25-MAY-2012	11:27	RN	1	8330 PRIMER	A-000002	--	--	--	
25-MAY-2012	12:07	RN	2	STD 04 HP8330L4_00001 50ng/mL	A-000003	--	--	--	
25-MAY-2012	12:47	RN	11	8330 WIPE MB	A-000004	0 g	80 mL	1	
25-MAY-2012	13:28	RN	12	8330 WIPE IDOC-1	A-000005	0 g	80 mL	1	
25-MAY-2012	14:08	RN	13	8330 WIPE IDOC-2	A-000006	0 g	80 mL	1	
25-MAY-2012	14:48	RN	14	8330 WIPE IDOC-3	A-000007	0 g	80 mL	1	
25-MAY-2012	15:28	RN	15	8330 WIPE IDOC-4	A-000008	0 g	80 mL	1	
25-MAY-2012	16:08	RN	16	MTP8N1AE 2144103 MB	A-000009	10 g	80 mL	1	
25-MAY-2012	16:48	RN	17	MTP8N1AF 2144103 LCS	A-000010	10 g	80 mL	1	
25-MAY-2012	17:28	RN	18	MTK251AA 2144103 E160412-1	A-000011	10.04 g	80 mL	1	
25-MAY-2012	18:08	RN	19	MTK251AH 2144103 E160412-1S	A-000012	9.97 g	80 mL	1	
25-MAY-2012	18:48	RN	20	MTK251AJ 2144103 E160412-1D	A-000013	10.08 g	80 mL	1	
25-MAY-2012	19:28	RN	3	STD 05 HP8330L5_00001 100ng/mL	A-000014	--	--	--	
25-MAY-2012	20:08	RN	21	MTK271AA 2144103 E160412-2	A-000015	10.01 g	80 mL	1	
25-MAY-2012	20:48	RN	22	MTK291AA 2144103 E160412-3	A-000016	9.98 g	80 mL	1	
25-MAY-2012	21:28	RN	23	MTK3A1AA 2144103 E160412-4	A-000017	10.03 g	80 mL	1	
25-MAY-2012	22:08	RN	24	MTK3C1AA 2144103 E160412-5	A-000018	9.97 g	80 mL	1	
25-MAY-2012	22:48	RN	25	MTK3D1AA 2144103 E160412-6	A-000019	10 g	80 mL	1	
25-MAY-2012	23:28	RN	26	MTK3E1AA 2144103 E160412-7	A-000020	9.99 g	80 mL	1	
26-MAY-2012	00:09	RN	27	MTK3F1AA 2144103 E160412-8	A-000021	9.98 g	80 mL	1	
26-MAY-2012	00:49	RN	28	MTK3G1AA 2144103 E160412-9	A-000022	9.94 g	80 mL	1	RI@5x E'
26-MAY-2012	01:29	RN	29	MTNE81AA 2142031 MB	A-000023	1000 mL	20 mL	1	
26-MAY-2012	02:09	RN	30	MTNE81AC 2142031 LCS	A-000024	1000 mL	20 mL	1	↑scoRI 5/29/12
26-MAY-2012	02:49	RN	3	STD 05 HP8330L5_00001 100ng/mL	A-000025	--	--	--	
26-MAY-2012	03:29	RN	31	MTLAV1AC 2142031 E160436-1	A-000026	984.13 mL	20 mL	1	
26-MAY-2012	04:10	RN	32	MTLA51AC 2142031 E160436-2	A-000027	990.88 mL	20 mL	1	
26-MAY-2012	04:50	RN	33	MTL991AC 2142031 E170442-2	A-000028	1002.03 mL	20 mL	1	
26-MAY-2012	05:30	RN	34	MTNDJ1AA 2142031 E190416-1	A-000029	954.69 mL	20 mL	1	↓surr@RI 5/29/12
26-MAY-2012	06:10	RN	35	MTNDK1AA 2142031 E190416-2	A-000030	988.38 mL	20 mL	1	
26-MAY-2012	06:51	RN	36	MTP2F1AA 2144030 MB	A-000031	1000 mL	20 mL	1	
26-MAY-2012	07:31	RN	37	MTP2F1AC 2144030 LCS	A-000032	1000 mL	20 mL	1	

GC-LC Log 2011-12-14 ERS Sequence Checked: 5-29-12

TestAmerica West Sacramento
GC/LC INSTRUMENT LOG

Inst ID: LC10 Batch ID: 05252012 Test: SOP WS-LC-0009
Method : Method 8330
ICAL Date: See Calibration Report

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
26-MAY-2012	08:11	RN	38	MTM3V1AA 2144030 E180462-1	A-000033	983.96 mL	20 mL	1	
26-MAY-2012	08:52	RN	39	MTM311AA 2144030 E180462-2	A-000034	986.27 mL	20 mL	1	
26-MAY-2012	09:32	RN	40	MTM4A1AC 2144030 E180463-1	A-000035	1007.51 mL	20 mL	1	
26-MAY-2012	10:12	RN	4	STD 05 HP8330L5 00001 100ng/mL	A-000036	--	--	--	
26-MAY-2012	10:53	RN	41	MTM4E1AA 2144030 E180463-2	A-000037	986.9 mL	20 mL	1	
26-MAY-2012	11:33	RN	42	MTM4F1AA 2144030 E180463-3	A-000038	1003.11 mL	20 mL	1	
26-MAY-2012	12:13	RN	43	MTL6N1AA 2138109 MB	A-000039	1000 mL	20 mL	1	
26-MAY-2012	12:54	RN	44	MTL6N1AC 2138109 LCS	A-000040	1000 mL	20 mL	1	
26-MAY-2012	13:34	RN	45	MTKK41AC 2138109 E150444-3	A-000041	984.67 mL	20 mL	1	
26-MAY-2012	14:15	RN	46	MTKLF1AD 2138109 E150444-6	A-000042	979.26 mL	20 mL	1	
26-MAY-2012	14:55	RN	47	MTKLK1AC 2138109 E150444-7	A-000043	921.36 mL	20 mL	1	
26-MAY-2012	15:36	RN	48	MTKLK1AH 2138109 E150444-7S	A-000044	990.26 mL	20 mL	1	
26-MAY-2012	16:16	RN	49	MTKLK1AJ 2138109 E150444-7D	A-000045	976.95 mL	20 mL	1	
26-MAY-2012	16:56	RN	50	MTKLM1AD 2138109 E150444-8	A-000046	975.64 mL	20 mL	1	
26-MAY-2012	17:37	RN	4	STD 05 HP8330L5 00001 100ng/mL	A-000047	--	--	--	
26-MAY-2012	18:17	RN	51	MTJ9G1AA 2136084 MB	A-000048	1000 mL	20 mL	1	
26-MAY-2012	18:58	RN	52	MTJ9G1AC 2136084 LCS	A-000049	1000 mL	20 mL	1	
26-MAY-2012	19:39	RN	53	MTH8P1AC 2136084 E120407-3	A-000050	992.83 mL	20 mL	1	
26-MAY-2012	20:19	RN	54	MTH8X1AC 2136084 E120410-1	A-000051	997.39 mL	20 mL	1	
26-MAY-2012	20:59	RN	55	MTNFX1AA 2142035 MB	A-000052	1000 mL	20 mL	1	
26-MAY-2012	21:39	RN	56	MTNFX1AC 2142035 LCS	A-000053	1000 mL	20 mL	1	
26-MAY-2012	22:20	RN	57	MTK9H1AA 2142035 E160431-1	A-000054	747.87 mL	20 mL	1	↓surr
26-MAY-2012	23:00	RN	58	MTQ001AA 2145019 MB	A-000055	1000 mL	20 mL	1	
26-MAY-2012	23:40	RN	59	MTQ001AC 2145019 LCS	A-000056	1000 mL	20 mL	1	
27-MAY-2012	00:20	RN	60	MTM611AA 2145019 E180475-1	A-000057	883.82 mL	20 mL	1	
27-MAY-2012	01:01	RN	5	STD 05 HP8330L5 00001 100ng/mL	A-000058	--	--	--	
27-MAY-2012	01:41	RN	61	MTM621AA 2145019 E180475-2	A-000059	886.97 mL	20 mL	1	
27-MAY-2012	02:21	RN	62	MTP2G1AA 2144031 MB	A-000060	1000 mL	20 mL	1	
27-MAY-2012	03:01	RN	63	MTP2G1AC 2144031 LCS	A-000061	1000 mL	20 mL	1	
27-MAY-2012	03:42	RN	64	MTPD81AA 2144031 E220422-1	A-000062	947.51 mL	20 mL	1	
27-MAY-2012	04:22	RN	65	MTPD81AC 2144031 E220422-1S	A-000063	994.97 mL	20 mL	1	
27-MAY-2012	05:02	RN	66	MTPD81AD 2144031 E220422-1D	A-000064	1010.6 mL	20 mL	1	

Sequence Checked: 5.29.12

TestAmerica West Sacramento
GC/LC INSTRUMENT LOG

Inst ID: LC10 Batch ID: 05252012 Test: SOP WS-LC-0009
Method : Method 8330
ICAL Date: See Calibration Report

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
27-MAY-2012	05:43	RN	67	MTPD91AA 2144031 E220422-2	A-000065	1002.23 mL	20 mL	1	
27-MAY-2012	06:23	RN	68	MTPED1AA 2144031 E220422-3	A-000066	933.82 mL	20 mL	1	
27-MAY-2012	07:03	RN	5	STD 05 HP8330L5 00001 100ng/mL	A-000067	--	--	--	
27-MAY-2012	07:43	RN	71	MTN8G1AA 2143030 MB	A-000068	1000 mL	20 mL	1	
27-MAY-2012	08:24	RN	72	MTN8G1AC 2143030 LCS	A-000069	1000 mL	20 mL	1	
27-MAY-2012	09:04	RN	73	MTL8H1AA 2143030 E170439-1	A-000070	1003.75 mL	20 mL	1	
27-MAY-2012	09:44	RN	74	MTL8N1AA 2143030 E170439-2	A-000071	994.82 mL	20 mL	1	
27-MAY-2012	10:25	RN	75	MTL8P1AA 2143030 E170439-3	A-000072	1002.96 mL	20 mL	1	
27-MAY-2012	11:05	RN	76	MTNC71AA 2143030 E190413-1	A-000073	994.91 mL	20 mL	1	
27-MAY-2012	11:45	RN	77	MTNC81AA 2143030 E190413-2	A-000074	989.16 mL	20 mL	1	
27-MAY-2012	12:26	RN	78	MTNC91AA 2143030 E190413-3	A-000075	964.45 mL	20 mL	1	
27-MAY-2012	13:06	RN	79	MTNDA1AA 2143030 E190413-4	A-000076	998.81 mL	20 mL	1	
27-MAY-2012	13:46	RN	6	STD 05 HP8330L5 00001 100ng/mL	A-000077	--	--	--	

GC-LC Log 2011-12-14 ERS

Sequence Checked: 5-29-12

TestAmerica West Sacramento GC/LC INSTRUMENT LOG Page# 28

Inst ID: LC10 Batch ID: 05292012
Test: SOP WS-LC-0009
Method: Method 8330
ICAL Date: See Calibration Report

Eluents: Water: M04052012
MeOH: KV0618
ACN: K43804
50:50 H2O:MeOH+0.4% H3PO4 3849-111A

Date	Time	Init	ALS #	Sample ID	File ID	Vol or Wt	Extract Vol	Diln	Comments
29-MAY-2012	15:42	RN	1	8330 PRIMER	A-000001	--	--	--	
29-MAY-2012	16:23	RN	1	8330 PRIMER	A-000002	--	--	--	
29-MAY-2012	17:03	RN	2	STD_04 HP8330L4_00001 50ng/mL	A-000003	--	--	--	
29-MAY-2012	17:43	RN	11	MTK3G1AA 2144103 E160412-9 5X	A-000004	9.94 g	80 mL	5	
29-MAY-2012	18:23	RN	12	MTNDJ1AA 2142031 E190416-1 RI	A-000005	954.69 mL	20 mL	1	
29-MAY-2012	19:03	RN	13	MTNE81AC 2142031 LCS RI	A-000006	1000 mL	20 mL	1	
29-MAY-2012	19:43	RN	14	MTK9H1AA 2142035 E160431-1 RI	A-000007	747.87 mL	20 mL	1	↓surr only.
29-MAY-2012	20:23	RN	3	STD_05 HP8330L5_00001 100ng/mL	A-000008	--	--	--	

GC-LC Log 2011-12-14 ERS

Sequence Checked: MB 5/30/12

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

West Sacramento

GC/HPLC ICAL Checklist

Instrument ID: LC10 ICAL ID: 04192012C Method: 8330A/B

Analytes Included in curve (with dates): 8330 All + NG, PETN, 3,5DNA + EGDN

A. Included Sections of ICAL	Analyst	Reviewer	N/A
1. ICAL Summary included (for both columns if applicable).	✓	✓	
2. ICAL Runlog included.	✓	✓	
3. ICAL's are in chronological order.	✓	✓	
4. PEM meets requirements and is included for 8081.			✓
5. Alkane Marker included for 8015 TPH.			✓
6. ICAL Raw Data included for all analytes.	✓	✓	
B. ICAL Summary			
1. All analytes meet %RSD or linear regression requirements.	✓	✓	
2. ICAL meets requirements stated in SOP.	✓	✓	
2. Any levels dropped are reviewed and appropriate.			✓
3. All analytes in ICAL are in the ICAL summary.	✓	✓	
4. RFs are calculated correctly. Perform Manual calculation.	✓	✓	
C. ICAL Analysis			
1. Manual Integrations reviewed and appropriate.			✓
2. All peaks correctly identified.	✓	✓	
3. No analytes have saturated peaks.	✓	✓	
4. RT windows set correctly (8015 TPH).			✓
5. ICV meets requirements and is run after the ICAL.	✓	✓	
6. Standards used in ICAL are current.	✓	✓	
7. ICAL is copied to source method.	✓	✓	

Curve Valid for:	Yes	No	Criteria
Standard SOP	✓		RSD ≤20%, r≥ 0.995 (intercept <1/2RL for 8081,8082, NQ, 8310) and (<RL for 8330) and r>0.990 (intercept <RL for 8015), ICV≤15%, PEM ≤15%
DOD QSM V3	✓		RSD ≤20%, r≥ 0.995, ICV≤20%, PEM ≤15%
AFCEE 3.1	✓		RSD ≤20%, r≥ 0.995, ICV≤15%, PEM ≤15%
AFCEE 4.0	✓		RSD ≤20%, r≥ 0.995, ICV≤20% (8081, 8082, 8015) and ICV≤25% (8330,8310), PEM ≤15%

Analyst: [signature] Date: 4/20/12

Reviewer: [signature] Date: 4/23/12

Comments:
MRL for EGDN was analyzed after samples had already been analyzed. As RPDs were passing + S/N was greater than 5:1 on ICAL and on RL Verif analyzed after samples there is no further action.

TestAmerica West Sacramento

INITIAL CALIBRATION DATA

Start Cal Date : 19-APR-2012 11:48
End Cal Date : 19-APR-2012 16:29
Quant Method : ESTD
Origin : Disabled
Target Version : 4.14
Integrator : Falcon
Method file : \\terastation\share\GCdata\LC10.I\04192012C.B\8330AB.M
Last Edit : 20-Apr-2012 11:10 tap
Curve Type : Average

Calibration File Names:
Level 1: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000005.d
Level 2: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000006.d
Level 3: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000007.d
Level 4: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000008.d
Level 5: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000009.d
Level 6: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000010.d
Level 7: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000011.d
Level 8: \\terastation\share\GCdata\LC10.I\04192012C.B\A-000012.d

Compound	5.000 Level 1	10.000 Level 2	20.000 Level 3	50.000 Level 4	100.000 Level 5	200.000 Level 6	RRF	% RSD
	500.000 Level 7	1000.000 Level 8						
2 HMX	126	128	127	127	130	128		
	121	106					124	6.381
3 RDX	114	103	95.55000	91.70000	92.85000	87.62000		
	79.85000	64.39000					91.13250	16.312
4 [illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]		
	[illegible]	[illegible]					[illegible]	[illegible]
5 [illegible]	100	89.35000	85.50000	97.00000	95.61000	90.92600		
	82.43200	58.57300					89.18537	11.173
6 1,3,5-Trinitrobenzene	178	172	168	167	171	167		
	157	136					164	7.806
7 1,3-Dinitrobenzene	177	177	172	171	176	171		
	159	136					167	8.317
8 3,5-Dinitroaniline	121	116	114	113	114	112		
	105	89.54500					111	8.747
9 TETRYL	103	104	100	99	102	102		
	99	95.04200					101	2.796

TestAmerica West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_MRL 11GCSV0468 8330 5-50ng/mL Instrument: LC10
Analyzed : 19-APR-2012 17:49 File ID: 04192012C.B/A-000014.d
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	5.00	5.199	0.000	584	5.516	10					
2	RDX	5.00	7.412	0.000	586	6.430	29					
3	Picric ACID	10.0	8.485	0.000	4854	54.42	440	8.485	0.000	7095	51.27	410
4	1,3,5-Trinitrobenz	5.00	9.679	0.000	517	5.578	12					
5	1,3-Dinitrobenzene	5.00	12.209	0.000	953	5.693	14					
6	3,5-Dinitroaniline	5.00	12.919	0.000	515	5.593	12					
7	TETRYL	5.00	13.195	0.000	538	5.347	6.9					
8	Nitrobenzene	5.00	13.822	0.000	440	5.754	15					
9	2,4,6-Trinitrotolu	5.00	15.235	0.000	535	5.264	5.3					
10	4-AM-2,6-DNT	5.00	15.722	0.000	464	5.704	14					
11	3,4-Dinitrotoluene	5.00	16.189	0.000	1219	20.74	310	16.189	0.000	2344	21.46	330
12	2-AM-4,6-DNT	5.00	16.675	0.000	513	5.692	14					
13	2,6-Dinitrotoluene	5.00	18.192	0.000	371	5.788	16					
14	2,4-Dinitrotoluene	5.00	18.802	0.000	566	5.368	7.4					
15	2-Nitrotoluene	5.00	21.882	0.000	261	5.554	11					
16	4-Nitrotoluene	5.00	23.415	0.000	333	5.843	17					
17	3-Nitrotoluene	5.00	25.185	0.000	336	5.985	20					
18	PETN	5.00						26.975	0.000	1023	26.09	420
19	Nitroglycerin	5.00						14.365	0.000	1566	23.61	370
20	EGDN	5.00										

MRL passes S/N > 5:1
RM 4/20/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/20/2012 10:27

TestAmerica West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_ICV HP8330IC_00001 200ng/mL Instrument: LC10
Analyzed : 19-APR-2012 19:10 File ID: 04192012C.B/A-000016.d
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

			Side A				Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	200	5.203	0.000	26867	216.7	8.4					
2	RDX	200	7.427	0.000	18249	200.2	0.10					
3	Picric ACID	500	8.427	0.000	45768	513.2	2.6	8.427	0.000	67817	490.0	-2.0
4	1,3,5-Trinitrobenz	200	9.667	0.000	34032	207.0	3.5					
5	1,3-Dinitrobenzene	200	12.197	0.000	33740	201.6	0.80					
6	3,5-Dinitroaniline	200	12.903	0.000	23692	214.1	7.1					
7	TETRYL	200	13.197	0.000	21422	212.9	6.5					
8	Nitrobenzene	200	13.840	0.000	15980	209 0	4.5					
9	2,4,6-Trinitrotolu	200	15.233	0 000	21337	209.9	5.0					
10	4-AM-2,6-DNT	200	15.723	0.000	16240	199.6	-0.20					
11	3,4-Dinitrotoluene	200	na	spiked								
12	2-AM-4,6-DNT	200	16.673	0.000	18187	201.8	0.90					
13	2,6-Dinitrotoluene	200	18.147	0 000	13083	204.1	2.1					
14	2,4-Dinitrotoluene	200	18 783	0.000	21617	205.0	2.5					
15	2-Nitrotoluene	200	21 862	0 000	9463	201.4	0.70					
16	4-Nitrotoluene	200	23.417	0.000	11656	204.5	2.3					
17	3-Nitrotoluene	200	25.130	0.000	11587	206.4	3.2					
18	PETN	200						26.993	0.000	8623	219.9	10
19	Nitroglycerin	200						14.360	0.000	14437	217.6	8.8
20	EGDN	200										

ICV passes ±15%.
RM 4/20/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/20/2012 10:24

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_03 HP8330L3_00001 20ng/mL Instrument: LC10
Analyzed : 20-APR-2012 10:35 File ID: 04192012C.B/A-000039.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

			Side A					Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	20.0	5.204	0.000	2056	16.58	-17					
2	RDX	20.0	7.428	0.000	1630	17.89	-11					
3	Picric ACID	50.0	8.494	0.000	3725	41.77	-16	8.494	0.000	5642	40.77	-18
4	1,3,5-Trinitrobenz	20.0	9.671	0.000	2816	17.13	-14					
5	1,3-Dinitrobenzene	20.0	12.201	0.000	2870	17.14	-14					
6	3,5-Dinitroaniline	20.0	12.511	0.000	1925	17.39	-13					
7	TETRYL	20.0	13.191	0.000	1645	16.35	-18					
8	Nitrobenzene	20.0	13.844	0.000	1237	16.18	-19					
9	2,4,6-Trinitrotolu	20.0	15.238	0.000	1692	16.65	-17					
10	4-AM-2,6-DNT	20.0	15.744	0.000	1374	16.89	-16					
11	3,4-Dinitrotoluene	20.0	16.171	0.000	949	16.15	-19	16.171	0.000	1828	16.74	-16
12	2-AM-4,6-DNT	20.0	16.678	0.000	1521	16.88	-16					
13	2,6-Dinitrotoluene	20.0	18.134	0.000	1074	16.75	-16					
14	2,4-Dinitrotoluene	20.0	18.781	0.000	1763	16.72	-16					
15	2-Nitrotoluene	20.0	21.844	0.000	743	15.81	-21					
16	4-Nitrotoluene	20.0	23.421	0.000	900	15.79	-21					
17	3-Nitrotoluene	20.0	25.121	0.000	870	15.50	-23					
18	PETN	20.0						27.014	0.000	441	11.25	-44
19	Nitroglycerin	20.0						14.351	0.000	1120	16.88	-16
20	EGDN	20.0						8.094	0.000	1445	15.34	-23

NA

NA

MRL for EGDN only
CAP 4/20/12
passes S/$N > 5:1
TAM 4/20/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 04/20/2012 11:10

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 25-MAY-2012 19:28 File ID: 05252012.B/A-000014.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

			Side A				Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.211	0.000	13050	105.2	5.2					
2	RDX	100	7.438	0.000	9232	101.3	1.3					
3	Picric ACID	200	8.474	0.000	19531	219.0	9.5	8.474	0.000	29145	210.6	5.3
4	1,3,5-Trinitrobenz	100	9.671	0.000	17206	104.7	4.7					
5	1,3-Dinitrobenzene	100	12.198	0.000	17888	106.8	6.8					
6	3,5-Dinitroaniline	100	12.898	0.000	11575	104.6	4.6					
7	TETRYL	100	13.184	0.000	10370	103.1	3.1					
8	Nitrobenzene	100	13.834	0.000	8152	106.6	6.6					
9	2,4,6-Trinitrotolu	100	15.208	0.000	10614	104.4	4.4					
10	4-AM-2,6-DNT	100	15.701	0.000	8404	103.3	3.3					
11	3,4-Dinitrotoluene	100	16.161	0.000	6144	104.6	4.6	16.161	0.000	11279	103.2	3.2
12	2-AM-4,6-DNT	100	16.641	0.000	9300	103.2	3.2					
13	2,6-Dinitrotoluene	100	18.114	0.000	6683	104.2	4.2					
14	2,4-Dinitrotoluene	100	18.748	0.000	10963	104.0	4.0					
15	2-Nitrotoluene	100	21.818	0.000	4804	102.2	2.2					
16	4-Nitrotoluene	100	23.381	0.000	5852	102.7	2.7					
17	3-Nitrotoluene	100	25.104	0.000	5803	103 4	3.4					
18	PETN	100						26.958	0.000	4002	102.1	2.1
19	Nitroglycerin	100						14.344	0.000	7050	106.3	6.3
20	EGDN	100						8.101	0.000	11068	117.5	18

RDN 5/29/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 05/25/2012 20:04

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 26-MAY-2012 02:49 File ID: 05252012.B/A-000025.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.209	0.000	13071	105.4	5.4					
2	RDX	100	7.439	0.000	9287	101.9	1.9					
3	Picric ACID	200	8.479	0.000	19599	219.8	9.9	8.479	0.000	29150	210.6	5.3
4	1,3,5-Trinitrobenz	100	9.672	0.000	17257	105.0	5.0					
5	1,3-Dinitrobenzene	100	12.202	0.000	17951	107.2	7.2					
6	3,5-Dinitroaniline	100	12.902	0.000	11607	104.9	4.9					
7	TETRYL	100	13.186	0.000	10368	103 0	3.0					
8	Nitrobenzene	100	13.839	0.000	8042	105.2	5.2					
9	2,4,6-Trinitrotolu	100	15.212	0.000	10625	104.5	4.5					
10	4-AM-2,6-DNT	100	15.706	0.000	8436	103.7	3.7					
11	3,4-Dinitrotoluene	100	16.166	0.000	6190	105.3	5.3	16.162	0.000	11141	102.0	2.0
12	2-AM-4,6-DNT	100	16.652	0.000	9332	103.5	3.5					
13	2,6-Dinitrotoluene	100	18.116	0.000	6687	104.3	4.3					
14	2,4-Dinitrotoluene	100	18.749	0.000	10992	104.2	4.2					
15	2-Nitrotoluene	100	21.812	0.000	4723	100.5	0.50					
16	4-Nitrotoluene	100	23.392	0 000	5782	101.4	1.4					
17	3-Nitrotoluene	100	25.109	0.000	5734	102.1	2.1					
18	PETN	100						26.949	0.000	3903	99.54	-0.46
19	Nitroglycerin	100						14.346	0.000	6928	104.4	4.4
20	EGDN	100						8.102	0.000	11069	117.6	18

RM 5/29/12

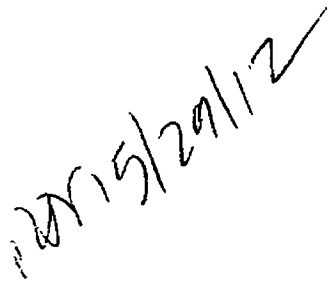
DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 05/26/2012 03:25

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 26-MAY-2012 10:12 File ID: 05252012.B/A-000036.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.209	0.000	13047	105.2	5.2					
2	RDX	100	7.435	0.000	9202	101.0	1.0					
3	Picric ACID	200	8.468	0.000	19502	218.7	9.4	8.468	0.000	28993	209.5	4.8
4	1,3,5-Trinitrobenz	100	9.662	0.000	17177	104.5	4.5					
5	1,3-Dinitrobenzene	100	12.188	0.000	17829	106.5	6.5					
6	3,5-Dinitroaniline	100	12.888	0.000	11527	104.2	4.2					
7	TETRYL	100	13.175	0.000	10368	103.0	3.0					
8	Nitrobenzene	100	13.825	0.000	8128	106.3	6.3					
9	2,4,6-Trinitrotolu	100	15.198	0.000	10609	104.4	4.4					
10	4-AM-2,6-DNT	100	15.688	0.000	8398	103.2	3.2					
11	3,4-Dinitrotoluene	100	16.148	0.000	6141	104.5	4.5	16.148	0.000	11680	106.9	6.9
12	2-AM-4,6-DNT	100	16.635	0.000	9281	103.0	3.0					
13	2,6-Dinitrotoluene	100	18.102	0.000	6664	104.0	4.0					
14	2,4-Dinitrotoluene	100	18.735	0.000	10961	104.0	4.0					
15	2-Nitrotoluene	100	21.792	0.000	4813	102.4	2.4					
16	4-Nitrotoluene	100	23.372	0.000	5859	102.8	2.8					
17	3-Nitrotoluene	100	25.088	0.000	5788	103.1	3.1					
18	PETN	100						26.955	0.000	3812	97.22	-2.8
19	Nitroglycerin	100						14.328	0.000	7491	112.9	13
20	EGDN	100						8.095	0.000	11107	118.0	18



DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 05/26/2012 10:48

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_04 HP8330L4_00001 50ng/mL Instrument: LC10
Analyzed : 29-MAY-2012 17:03 File ID: 05292012.B/A-000003.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	50.0	5.210	0.000	6350	51.21	2.4					
2	RDX	50.0	7.457	0.000	4637	50.88	1.8					
3	Picric ACID	100	8.483	0.000	9819	110.1	10	8.486	0.000	14561	105.2	5.2
4	1,3,5-Trinitrobenz	50.0	9.687	0.000	8449	51.39	2.8					
5	1,3-Dinitrobenzene	50.0	12.220	0.000	8753	52.29	4.6					
6	3,5-Dinitroaniline	50.0	12.917	0.000	5805	52.45	4.9					
7	TETRYL	50.0	13.203	0.000	5108	50.77	1.5					
8	Nitrobenzene	50.0	13.863	0.000	3968	51.89	3.8					
9	2,4,6-Trinitrotolu	50.0	15.230	0.000	5177	50.94	1.9					
10	4-AM-2,6-DNT	50.0	15.717	0.000	4195	51.57	3.1					
11	3,4-Dinitrotoluene	50.0	16.187	0.000	2953	50.25	0.50	16.186	0.000	5254	48.10	-3.8
12	2-AM-4,6-DNT	50.0	16.660	0.000	4627	51.34	2.7					
13	2,6-Dinitrotoluene	50.0	18.137	0.000	3254	50.76	1.5					
14	2,4-Dinitrotoluene	50.0	18.767	0.000	5355	50.79	1.6					
15	2-Nitrotoluene	50.0	21.837	0.000	2339	49.77	-0.46					
16	4-Nitrotoluene	50.0	23.430	0.000	2844	49.90	-0.20					
17	3-Nitrotoluene	50.0	25.127	0.000	2784	49.59	-0.82					
18	PETN	50.0						27.010	0.000	1873	47.77	-4.5
19	Nitroglycerin	50.0						14.370	0.000	3212	48.42	-3.2
20	EGDN	50.0						8.116	0.000	5166	54.86	9.7

RM 5/30/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 05/29/2012 17:38

Test America West Sacramento
Dual Column Continuing Calibration Report

Sample : STD_05 HP8330L5_00001 100ng/mL Instrument: LC10
Analyzed : 29-MAY-2012 20:23 File ID: 05292012.B/A-000008.D
Operator : RN Sublist: 1_CAL

Column: Phenomenex HydroRP C18: 25cm x 4.6mm x 4um
Side A: 250nm (changes to 265nm)
Side B: 358nm (changes to 205nm)

		Side A						Side B				
	Compound	StdAmt	RT	RTDiff	Response	Conc ng	%D	RT	RTDiff	Response	Conc ng	%D
1	HMX	100	5.217	0.000	12841	103.6	3.6					
2	RDX	100	7.457	0.000	9205	101.0	1.0					
3	Picric ACID	200	8.287	0.000	19321	216.6	8.3	NA				
4	1,3,5-Trinitrobenz	100	9.681	0.000	17110	104.1	4.1					
5	1,3-Dinitrobenzene	100	12.217	0.000	17708	105.8	5.8					
6	3,5-Dinitroaniline	100	12.937	0.000	11448	103.4	3.4					
7	TETRYL	100	13.211	0.000	10350	102.9	2.9					
8	Nitrobenzene	100	13.854	0.000	8108	106.0	6.0					
9	2,4,6-Trinitrotolu	100	15.227	0.000	10490	103.2	3.2					
10	4-AM-2,6-DNT	100	15.754	0.000	8315	102.2	2.2					
11	3,4-Dinitrotoluene	100	16.184	0.000	6137	104.4	4.4	16.187	0.000	10830	99.15	-0.85
12	2-AM-4,6-DNT	100	16.694	0.000	9149	101.5	1.5					
13	2,6-Dinitrotoluene	100	18.141	0.000	6632	103.4	3.4					
14	2,4-Dinitrotoluene	100	18.774	0.000	10896	103.3	3.3					
15	2-Nitrotoluene	100	21.844	0.000	4752	101.1	1.1					
16	4-Nitrotoluene	100	23.404	0.000	5852	102.7	2.7					
17	3-Nitrotoluene	100	25.137	0.000	5764	102.7	2.7					
18	PETN	100						27.004	0.000	3870	98.70	-1.3
19	Nitroglycerin	100						14.380	0.000	6984	105.3	5.3
20	EGDN	100						8.290	0.000	28650	304.2	200 NA

TDM 5/30/12

DualCalc.Mac Rev 1.02 11/27/2011 ERS Printed : 05/29/2012 20:59

METHOD BLANK REPORT

HPLC

Client Lot #...: G2E160436 **Work Order #...:** MTNE81AA **Matrix.....:** WATER
MB Lot-Sample #: G2E210000-031

Prep Date.....: 05/21/12
Analysis Date..: 05/26/12 **Prep Batch #...:** 2142031
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
RDX	ND	0.10	ug/L	SW846 8330/8330A

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	107	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC

Client Lot #...: G2E160436 **Work Order #...:** MTNE81AC **Matrix.....:** WATER
LCS Lot-Sample#: G2E210000-031
Prep Date.....: 05/21/12 **Analysis Date..:** 05/29/12
Prep Batch #...: 2142031
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
RDX	**118**	**(68 - 122)**	**SW846 8330/8330A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	104	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC

Client Lot #...: G2E160436 Work Order #...: MTNE81AC Matrix.....: WATER
LCS Lot-Sample#: G2E210000-031
Prep Date.....: 05/21/12 Analysis Date..: 05/29/12
Prep Batch #...: 2142031
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
RDX	**1.00**	**1.18**	**ug/L**	**118**	**SW846 8330/8330A**

SURROGATE	PERCENT RECOVERY	RECOVERY LIMITS
3,4-Dinitrotoluene	104	(79 - 111)

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

G2E160436

P.68

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Sequence Table

Data File	Sample Name	Position	Level	Sample Type	Acq. Date & Time
25MAY12-perc-003.d	Blank No IS	P2-A5		Sample	5/25/2012 16:21
25MAY12-perc-004.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/25/2012 16:37
25MAY12-perc-005.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL Rat o failed. not used.	P2-B2	1	Sample	5/25/2012 16:53
25MAY12-perc-006.d	LC6850L2_00001 12LCMS0065, 0.30ng/mL	P2-B3	2	Calibration	5/25/2012 17:10
25MAY12-perc-007.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-B4	3	Calibration	5/25/2012 17:26
25MAY12-perc-008.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-B5	4	Calibration	5/25/2012 17:42
25MAY12-perc-009.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-B6	5	Calibration	5/25/2012 17:58
25MAY12-perc-010.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-B7	6	Calibration	5/25/2012 18:14
25MAY12-perc-011.d	LC6850L7_00001 12LCMS0070, 10ng/mL	P2-B8	7	Calibration	5/25/2012 18:31
25MAY12-perc-012.d	LC6850L8_00001 12LCMS0071, 20ng/mL	P2-B9	8	Calibration	5/25/2012 18:47
25MAY12-perc-013.d	LC6850L9_00001 Blank + IS	P2-C1		Sample	5/25/2012 19:03
25MAY12-perc-014.d	LC6850IC_00001 12LCMS0073, 5.0ng/mL	P2-C2	ICV	QC	5/25/2012 19:19
25MAY12-perc-015.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/25/2012 19:35
25MAY12-perc-016.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/25/2012 19:52
25MAY12-perc-017.d	6850-L IDOC 5/21/12 JR IDOC-MB, 4.00mL/4.00mL	P1-A1		Sample	5/25/2012 20:08
25MAY12-perc-018.d	6850-L IDOC 5/21/12 JR IDOC-1, 4.00mL/4.00mL	P1-A2		Sample	5/25/2012 20:24
25MAY12-perc-019.d	6850-L IDOC 5/21/12 JR IDOC-2, 4.00mL/4.00mL	P1-A3		Sample	5/25/2012 20:40
25MAY12-perc-020.d	6850-L IDOC 5/21/12 JR IDOC-3, 4.00mL/4.00mL	P1-A4		Sample	5/25/2012 20:57
25MAY12-perc-021.d	6850-L IDOC 5/21/12 JR IDOC-4, 4.00mL/4.00mL	P1-A5		Sample	5/25/2012 21:13
25MAY12-perc-022.d	G2E240000-MB, 2145075, 4.00mL/4.00mL, 6850-DOD-L RX	P1-A6		Sample	5/25/2012 21:29
25MAY12-perc-023.d	G2E240000-LCS, 2145075, 4.00mL/4.00mL	P1-A7	LCS_0.5	QC	5/25/2012 21:45
25MAY12-perc-024.d	G2E240000-SMCS, 2145075, 4.00mL/4.00mL	P1-A8	LCS_0.5	QC	5/25/2012 22:02
25MAY12-perc-025.d	G2E020423-2, 2145075, 4.00mL/4.00mL	P1-A9		Sample	5/25/2012 22:18
25MAY12-perc-026.d	G2E020423-2MS, 2145075, 4.00mL/4.00mL	P1-B1	MS_0.5	QC	5/25/2012 22:34
25MAY12-perc-027.d	G2E020423-2SD, 2145075, 4.00mL/4.00mL	P1-B2	MS_0.5	QC	5/25/2012 22:50
25MAY12-perc-028.d	G2E020423-3, 2145075, 4.00mL/4.00mL	P1-B3		Sample	5/25/2012 23:06

5/29/12

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373-5600 Page 1117 of 1607
06/13/2012 35 of 282

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

P.69

25MAY12-perc-029.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/25/2012 23:23
25MAY12-perc-030.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/25/2012 23:39
25MAY12-perc-031.d	LC6850L1_00001 12LCMS0064, 0.15ng/mL	P2-C3	LODV	QC	5/25/2012 23:55
25MAY12-perc-032.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 00:11
25MAY12-perc-033.d	G2E170000-MB, 2138157, 4.00mL/4.00mL, 6850-L	P1-B4		Sample	5/26/2012 00:27
25MAY12-perc-034.d	G2E170000-LCS, 2138157, 4.00mL/4.00mL	P1-B5	LCS_5	QC	5/26/2012 00:44
25MAY12-perc-035.d	G2E170000-SMCS, 2138157, 4.00mL/4.00mL	P1-B6	LCS_5	QC	5/26/2012 01:00
25MAY12-perc-036.d	G2E120412-1, 2138157, 4.00mL/4.00mL	P1-B7		Sample	5/26/2012 01:16
25MAY12-perc-037.d	G2E120412-2, 2138157, 4.00mL/4.00mL	P1-B8		Sample	5/26/2012 01:32
25MAY12-perc-038.d	G2E120412-3, 2138157, 4.00mL/4.00mL	P1-B9		Sample	5/26/2012 01:49
25MAY12-perc-039.d	G2E120412-3MS, 2138157, 4.00mL/4.00mL	P1-C1	MS_5	QC	5/26/2012 02:05
25MAY12-perc-040.d	G2E120412-3SD, 2138157, 4.00mL/4.00mL	P1-C2	MS_5	QC	5/26/2012 02:21
25MAY12-perc-041.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/26/2012 02:37
25MAY12-perc-042.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 02:53
25MAY12-perc-043.d	G2E120412-4, 2138157, 4.00mL/4.00mL	P1-C3		Sample	5/26/2012 03:10
25MAY12-perc-044.d	G2E120412-5, 2138157, 4.00mL/4.00mL	P1-C4		Sample	5/26/2012 03:26
25MAY12-perc-045.d	G2E120412-6, 2138157, 4.00mL/4.00mL, Retro failed. RT.	P1-C5		Sample	5/26/2012 03:42
25MAY12-perc-046.d	G2E120413-1, 2138157, 4.00mL/4.00mL	P1-C6		Sample	5/26/2012 03:58
25MAY12-perc-047.d	G2E120413-2, 2138157, 4.00mL/4.00mL MS 5/29/12	P1-C7		Sample	5/26/2012 04:15
25MAY12-perc-048.d	G2E120413-3, 2138157, 4.00mL/4.00mL	P1-C8		Sample	5/26/2012 04:31
25MAY12-perc-049.d	G2E120413-4, 2138157, 4.00mL/4.00mL	P1-C9		Sample	5/26/2012 04:47
25MAY12-perc-050.d	G2E120413-5, 2138157, 4.00mL/4.00mL	P1-D1		Sample	5/26/2012 05:03
25MAY12-perc-051.d	G2E120413-6, 2138157, 4.00mL/4.00mL	P1-D2		Sample	5/26/2012 05:19
25MAY12-perc-052.d	LC6850L4_00001 12LCMS0067, 1.0ng/mL	P2-C5	CCV4	QC	5/26/2012 05:36
25MAY12-perc-053.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/26/2012 05:52
25MAY12-perc-054.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 06:08
25MAY12-perc-055.d	G2E230000-MB, 2144091, 4.00mL/4.00mL, 6850-L	P1-D3		Sample	5/26/2012 06:24
25MAY12-perc-056.d	G2E230000-LCS, 2144091,4.00mL/4.00mL	P1-D4	LCS_5	QC	5/26/2012 06:40
25MAY12-perc-057.d	G2E230000-SMCS, 2144091, 4.00mL/4.00mL	P1-D5	LCS_5	QC	5/26/2012 06:57

Instrument A5; Agilent 6410 Mass Spectrometer with Agilent 1200 series Binary SL HPLC.

TestAmerica West Sacramento (916) 373-5600

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

25MAY12-perc-058.d	G2E150453-1, 2144091, 4.00mL/4.00mL	P1-D6		Sample	5/26/2012 07:13
25MAY12-perc-059.d	G2E150453-2, 2144091, 4.00mL/4.00mL	P1-D7		Sample	5/26/2012 07:29
25MAY12-perc-060.d	G2E150453-3, 2144091, 4.00mL/4.00mL	P1-D8		Sample	5/26/2012 07:45
25MAY12-perc-061.d	G2E150453-3MS, 2144091, 4.00mL/4.00mL	P1-D9	MS_5	QC	5/26/2012 08:02
25MAY12-perc-062.d	G2E150453-3SD, 2144091, 4.00mL/4.00mL	P1-E1	MS_5	QC	5/26/2012 08:18
25MAY12-perc-063.d	G2E150453-4, 2144091, 4.00mL/4.00mL	P1-E2		Sample	5/26/2012 08:34
25MAY12-perc-064.d	LC6850L6_00001 12LCMS0069, 5.0ng/mL	P2-C7	CCV6	QC	5/26/2012 08:50
25MAY12-perc-065.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 09:06
25MAY12-perc-066.d	G2E160436-1, 2144091, 4.00mL/4.00mL	P1-E3		Sample	5/26/2012 09:23
25MAY12-perc-067.d	G2E160436-2, 2144091, 4.00mL/4.00mL	P1-E4		Sample	5/26/2012 09:39
25MAY12-perc-068.d	G2E160436-3, 2144091, 4.00mL/4.00mL	P1-E5		Sample	5/26/2012 09:55
25MAY12-perc-069.d	G2E160436-4, 2144091, 4.00mL/4.00mL	P1-E6		Sample	5/26/2012 10:11
25MAY12-perc-070.d	G2E170442-1, 2144091, 4.00mL/4.00mL	P1-E7		Sample	5/26/2012 10:28
25MAY12-perc-071.d	G2E170442-2, 2144091, 4.00mL/4.00mL	P1-E8		Sample	5/26/2012 10:44
25MAY12-perc-072.d	G2E170442-3, 2144091, 4.00mL/4.00mL	P1-E9		Sample	5/26/2012 11:00
25MAY12-perc-073.d	G2E170442-4, 2144091, 4.00mL/4.00mL	P1-F1		Sample	5/26/2012 11:16
25MAY12-perc-074.d	G2E170442-5, 2144091, 4.00mL/4.00mL	P1-F2		Sample	5/26/2012 11:32
25MAY12-perc-075.d	G2E190412-1, 2144091, 4.00mL/4.00mL	P1-F3		Sample	5/26/2012 11:49
25MAY12-perc-076.d	LC6850L5_00001 12LCMS0068, 2.0ng/mL	P2-C6	CCV5	QC	5/26/2012 12:05
25MAY12-perc-077.d	LC6850L3_00001 12LCMS0066, 0.50ng/mL	P2-C4	CCV3	QC	5/26/2012 12:21
25MAY12-perc-078.d	LC6850L9_00001 Blank + IS	P2-B1		Sample	5/26/2012 12:37

TestAmerica West Sacramento (916) 373-5600 Page 119 of 1607
06/13/2012 37 of 282

TestAmerica Inc.
Perchlorate-Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

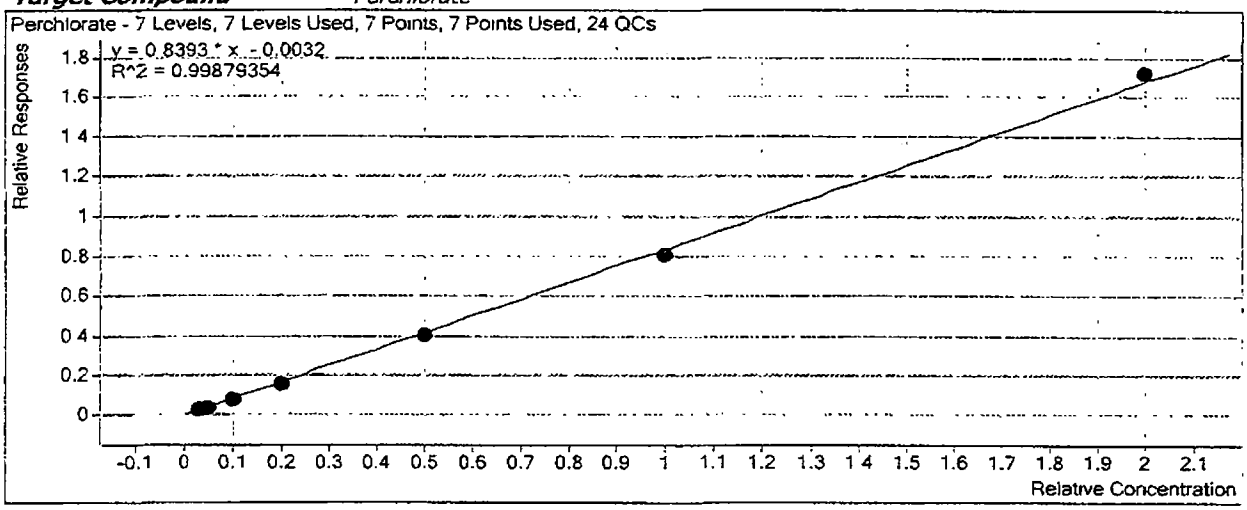
Batch Info

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml		
Analysis Time	5/29/2012 7:59 AM	**Analyst Name**	lores
Report Time	5/29/2012 8:01 AM	**Reporter Name**	lores
Last Calib Update	5/29/2012 7:59 AM	**Batch State**	Processed

Calibration Info **Linear fit, Origin ignored, 1/x weighting**

MR 5/29/12

Target Compound *Perchlorate*



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
25MAY12-perc-006.d	2	☑	3823	0.8051	0.3000
25MAY12-perc-007.d	3	☑	6403	0.7616	0.5000
25MAY12-perc-008.d	4	☑	14047	0.8196	1.0000
25MAY12-perc-009.d	5	☑	24455	0.7840	2.0000
25MAY12-perc-010.d	6	☑	59273	0.8073	5.0000
25MAY12-perc-011.d	7	☑	102959	0.8076	10.0000
25MAY12-perc-012.d	8	☑	205795	0.8610	20.0000
25MAY12-perc-015.d	CCV3	☑	5975	0.7954	0.5000
25MAY12-perc-030.d	CCV3	☑	5861	0.8218	0.5000
25MAY12-perc-053.d	CCV3	☑	6272	0.7910	0.5000
25MAY12-perc-077.d	CCV3	☑	6738	0.8300	0.5000
25MAY12-perc-052.d	CCV4	☑	9008	0.7626	1.0000
25MAY12-perc-029.d	CCV5	☑	15471	0.7561	2.0000
25MAY12-perc-076.d	CCV5	☑	22817	0.8138	2.0000
25MAY12-perc-041.d	CCV6	☑	49558	0.8003	5.0000
25MAY12-perc-064.d	CCV6	☑	53461	0.8091	5.0000
25MAY12-perc-014.d	ICV	☑	61203	0.8361	5.0000
25MAY12-perc-023.d	LCS_0.5	☑	4856	0.7518	0.5000
25MAY12-perc-024.d	LCS_0.5	☑	4953	0.7492	0.5000
25MAY12-perc-034.d	LCS_5	☑	54299	0.8227	5.0000
25MAY12-perc-035.d	LCS_5	☑	53161	0.7836	5.0000
25MAY12-perc-056.d	LCS_5	☑	51098	0.7965	5.0000
25MAY12-perc-057.d	LCS_5	☑	52798	0.7866	5.0000
25MAY12-perc-016.d	LODV	☑	1679	0.7790	0.1500
25MAY12-perc-031.d	LODV	☑	1601	0.7860	0.1500
25MAY12-perc-026.d	MS_0.5	☑	4067	0.8169	0.5000
25MAY12-perc-027.d	MS_0.5	☑	4063	0.8728	0.5000
25MAY12-perc-039.d	MS_5	☑	51669	0.8149	5.0000
25MAY12-perc-040.d	MS_5	☑	52050	0.8177	5.0000
25MAY12-perc-061.d	MS_5	☑	50720	0.8221	5.0000
25MAY12-perc-062.d	MS_5	☑	48757	0.8156	5.0000
25MAY12-perc-005.d	1	☑	2026	0.8773	0.1500

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Target Compound	*Perchlorate-(35Cl1804)*				
Calibration STD	**Level**	**Enabled**	**Response**	**RF**	**Exp Conc**
25MAY12-perc-006.d	2	☑	158294	15829.3561	10.0000
25MAY12-perc-007.d	3	☑	168150	16814.9561	10.0000
25MAY12-perc-008.d	4	☑	171394	17139.3584	10.0000
25MAY12-perc-009.d	5	☑	155967	15596.7391	10.0000
25MAY12-perc-010.d	6	☑	146850	14684.9926	10.0000
25MAY12-perc-011.d	7	☑	127486	12748.6088	10.0000
25MAY12-perc-012.d	8	☑	119503	11950.3067	10.0000
25MAY12-perc-015.d	CCV3	☑	150243	15024.2837	10.0000
25MAY12-perc-030.d	CCV3	☑	142641	14264.0870	10.0000
25MAY12-perc-053.d	CCV3	☑	158587	15858.6795	10.0000
25MAY12-perc-077.d	CCV3	☑	162359	16235.8507	10.0000
25MAY12-perc-052.d	CCV4	☑	118132	11813.2347	10.0000
25MAY12-perc-029.d	CCV5	☑	102315	10231.4788	10.0000
25MAY12-perc-076.d	CCV5	☑	140178	14017.7676	10.0000
25MAY12-perc-041.d	CCV6	☑	123842	12384.2002	10.0000
25MAY12-perc-064.d	CCV6	☑	132155	13215.5129	10.0000
25MAY12-perc-014.d	ICV	☑	146394	14639.3669	10.0000
25MAY12-perc-023.d	LCS_0.5	☑	129192	12919.1605	10.0000
25MAY12-perc-024.d	LCS_0.5	☑	132235	13223.4827	10.0000
25MAY12-perc-034.d	LCS_5	☑	131996	13199.6171	10.0000
25MAY12-perc-035.d	LCS_5	☑	135682	13568.1666	10.0000
25MAY12-perc-056.d	LCS_5	☑	128303	12830.2872	10.0000
25MAY12-perc-057.d	LCS_5	☑	134239	13423.8776	10.0000
25MAY12-perc-016.d	LODV	☑	143673	14367.3070	10.0000
25MAY12-perc-031.d	LODV	☑	135814	13581.4040	10.0000
25MAY12-perc-026.d	MS_0.5	☑	99583	9958.2564	10.0000
25MAY12-perc-027.d	MS_0.5	☑	93105	9310.4673	10.0000
25MAY12-perc-039.d	MS_5	☑	126817	12681.7398	10.0000
25MAY12-perc-040.d	MS_5	☑	127317	12731.6938	10.0000
25MAY12-perc-061.d	MS_5	☑	123391	12339.0564	10.0000
25MAY12-perc-062.d	MS_5	☑	119558	11955.8221	10.0000
25MAY12-perc-005.d	1	☑	153921	15392.0503	10.0000

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

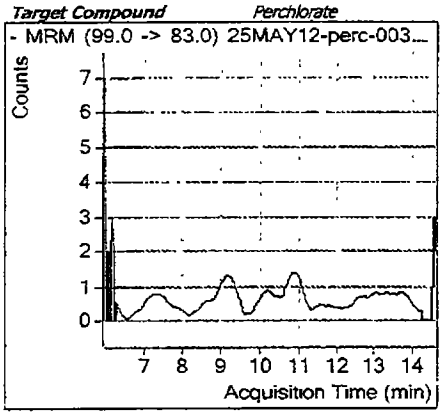
Acquisition Date - Time	5/25/2012 16:21
Analyst	lores
Data File	25MAY12-perc-003 d
Acquisition Method	PercMRM_2.m
Sample Name	Blank No IS
Sample Identification	BLANK
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-A5
Exp. Concentration	
Injection Volume	50

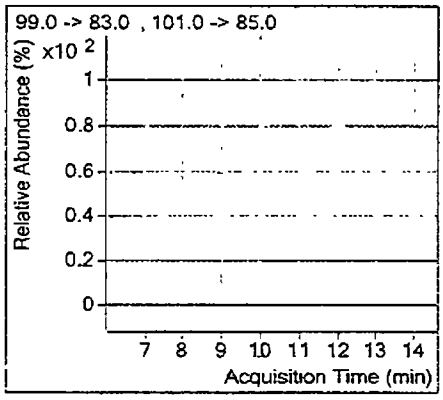
Perchlorate = ND

MR 5/29/12

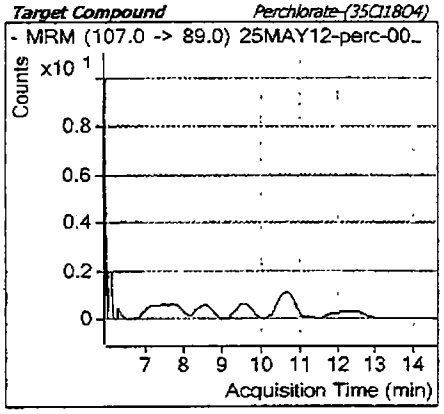
Compound Graphics

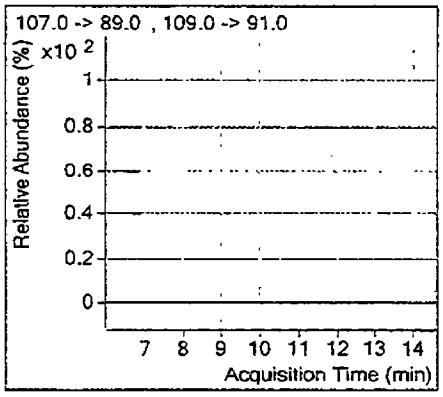
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 16:37
Analyst	lbres
Data File	25MAY12-perc-004.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

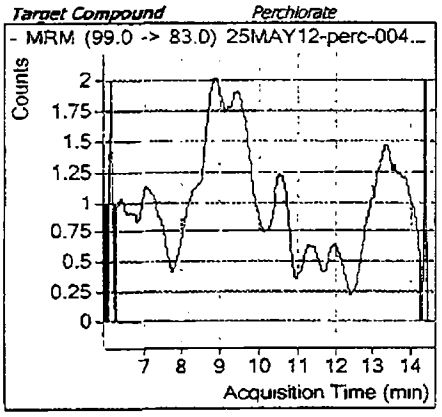
Quantitation Results

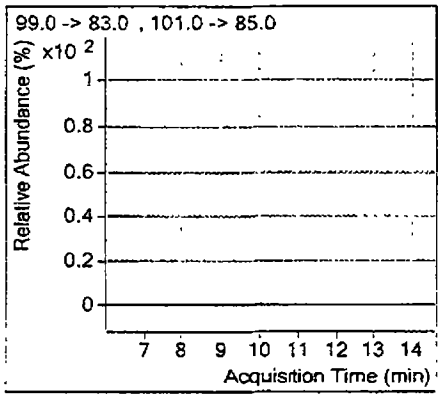
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.736	154142	107	89		Perchlorate = ND	1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	49927	109	91	3.09	2.30	3.80	In Control

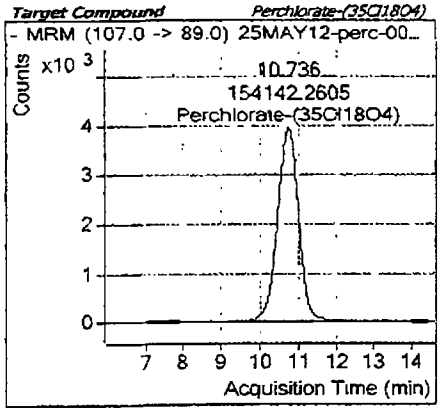
Compound Graphics

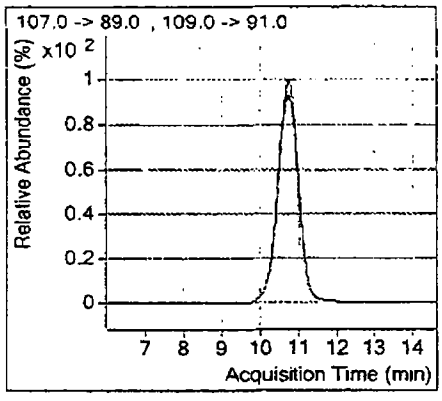
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MS 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 16:53
Analyst	lores
Data File	25MAY12-perc-005.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L1_00001 12LCMS0064, 0.15ng/mL
Sample Identification	Std001
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B2
Exp. Concentration	0.15
Injection Volume	50

Quantitation Results

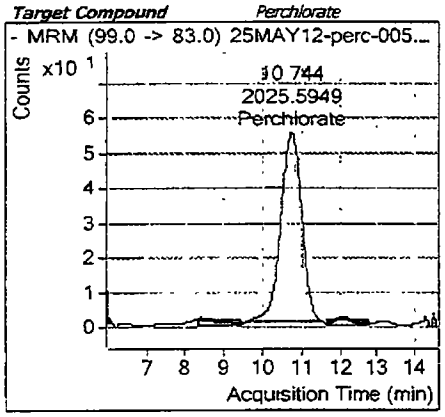
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.744	2026	99	83		0.19481	0.19481	1
Perchlorate-(35Cl18O4)	ISTD	10.726	153921	107	89				1

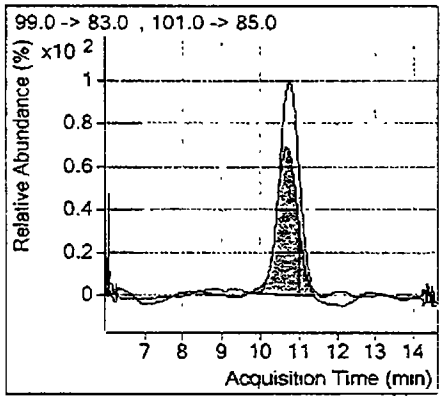
Ratio failed. not used.

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	490	101	85	4.14	2.30	3.80	High
Perchlorate-(35Cl18O4)	48367	109	91	3.18	2.30	3.80	In Control

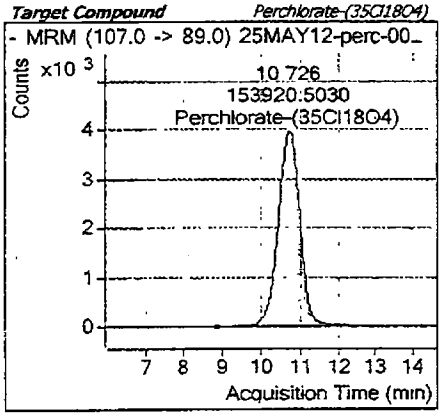
Compound Graphics

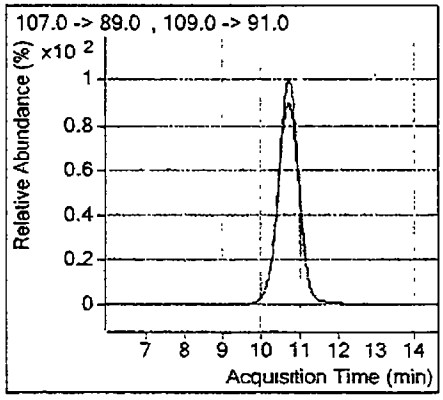
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17:10
Analyst	lores
Data File	25MAY12-perc-006 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L2_00001 12LCMS0065, 0 30ng/mL
Sample Identification	Std002
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B3
Exp. Concentration	0.30
Injection Volume	50

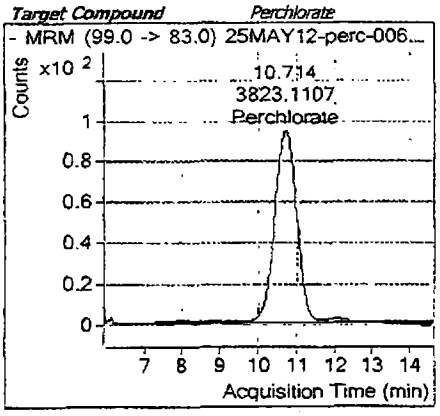
Quantitation Results

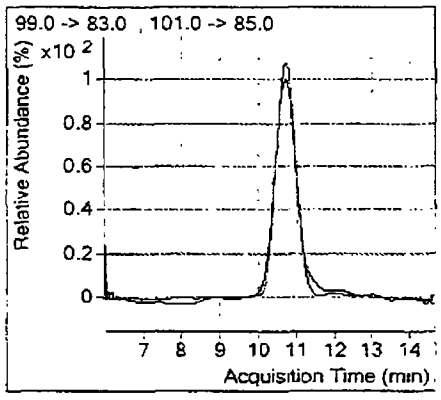
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.714	3823	99	83	0.32577	0.32577	1
Perchlorate-(35Cl18O4)	ISTD	10.719	158294	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1429	101	85	2.68	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	49706	109	91	3.18	2.30	3.80	In Control

Compound Graphics

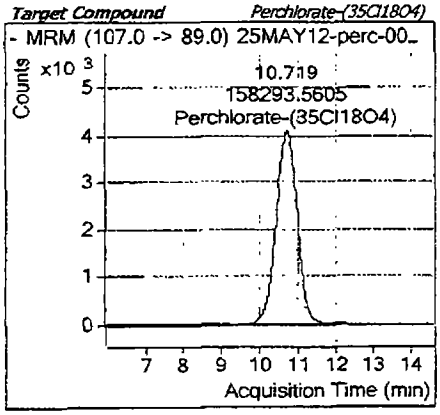
Target Compound *Perchlorate*

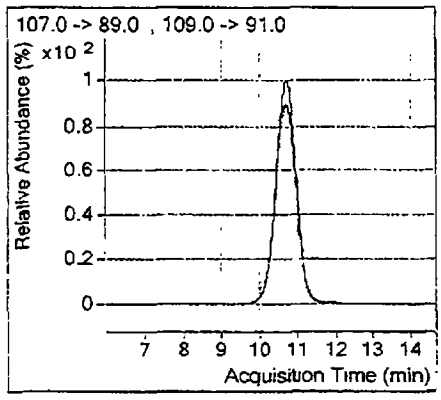




pr 5/29/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17.26
Analyst	lores
Data File	25MAY12-perc-007 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	Std003
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B4
Exp. Concentration	0 50
Injection Volume	50

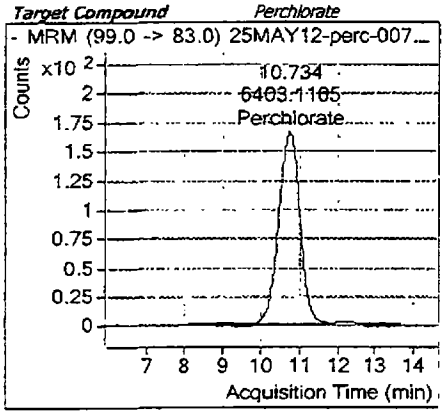
Quantitation Results

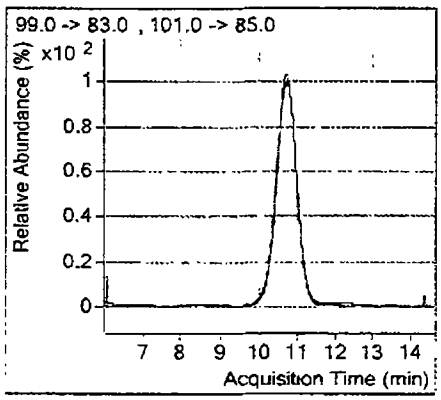
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10 734	6403	99	83	0.49171	0.49171	1
Perchlorate-(35Cl18O4)	ISTD	10 712	168150	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2313	101	85	2.77	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	52056	109	91	3.23	2 30	3.80	In Control

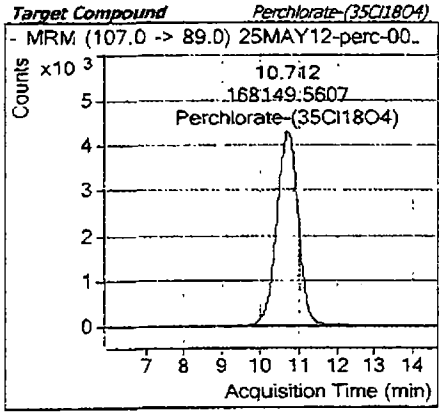
Compound Graphics

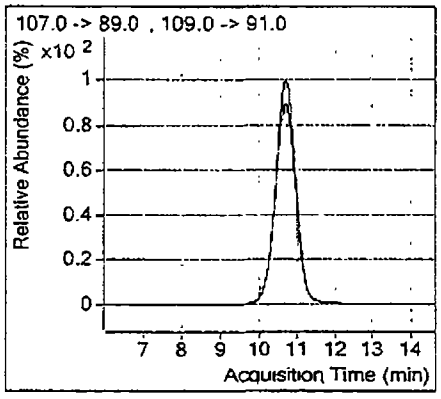
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





MB 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\AS-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17:42
Analyst	lores
Data File	25MAY12-perc-008.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L4_00001 12LCMS0067, 1.0ng/mL
Sample Identification	Std004
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B5
Exp. Concentration	1.00
Injection Volume	50

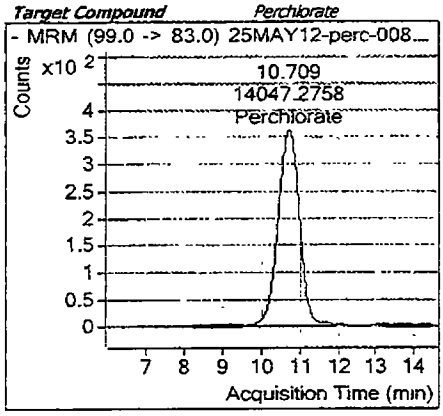
Quantitation Results

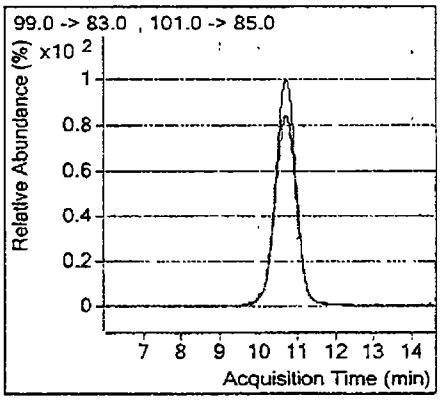
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.709	14047	99	83	1.01449	1.01449	1
Perchlorate-(35Cl18O4)	ISTD	10.702	171394	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	4226	101	85	3.32	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	53101	109	91	3.23	2.30	3.80	In Control

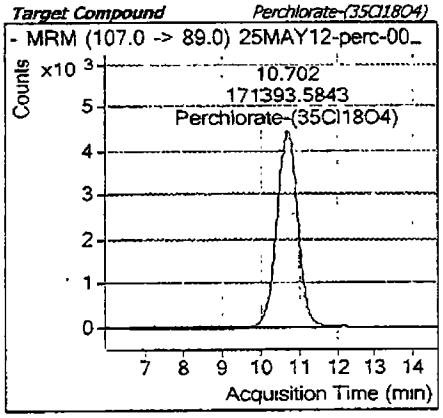
Compound Graphics

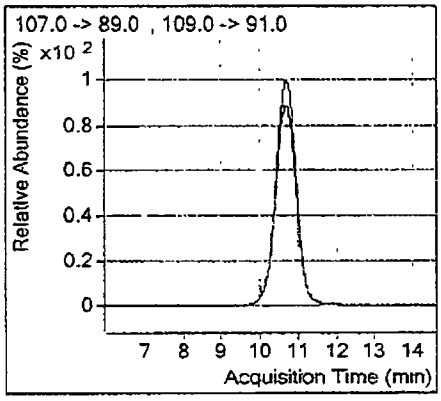
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 17:58
Analyst	lores
Data File	25MAY12-perc-009.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L5_00001 12LCMS0068, 2 0ng/mL
Sample Identification	Std005
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B6
Exp. Concentration	2 00
Injection Volume	50

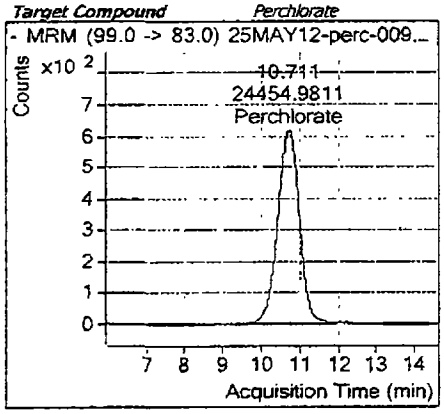
Quantitation Results

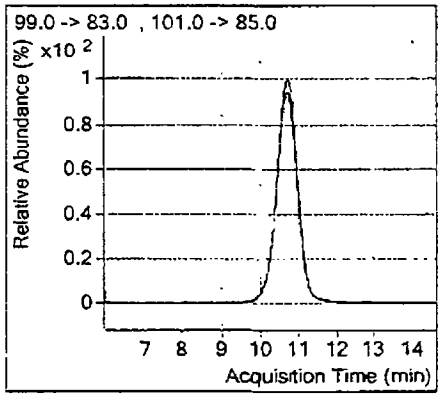
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.711	24455	99	83	1.90610	1.90610	1
Perchlorate-(35Cl18O4)	ISTD	10.698	155967	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	8119	101	85	3 01	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	49426	109	91	3.16	2.30	3.80	In Control

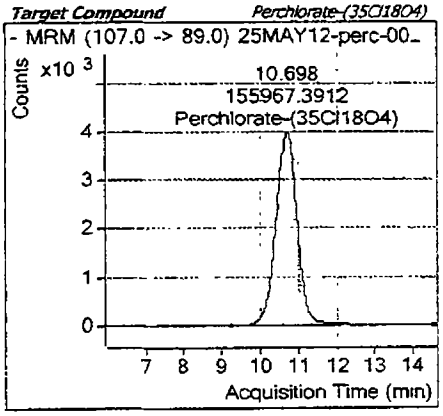
Compound Graphics

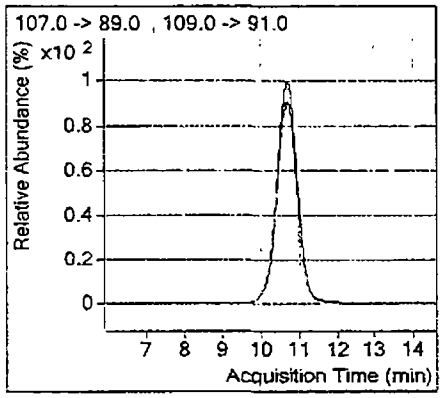
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





pr 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D \Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 18.14
Analyst	lores
Data File	25MAY12-perc-010.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5.0ng/mL
Sample Identification	Std006
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B7
Exp. Concentration	5.00
Injection Volume	50

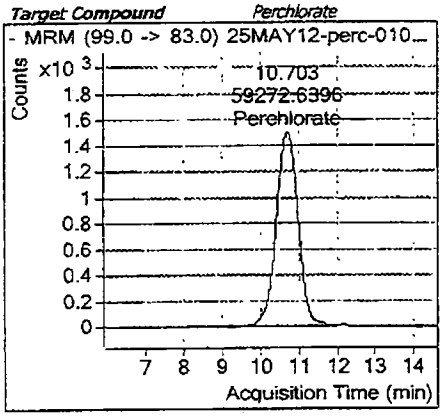
Quantitation Results

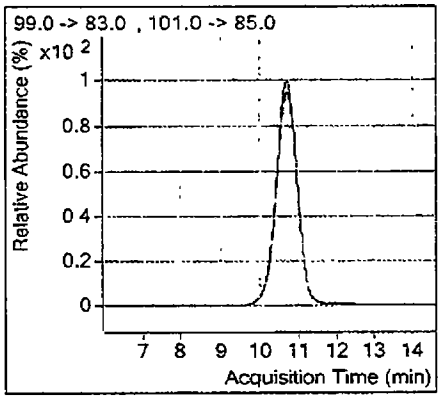
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10 703	59273	99	83	4.84687	4.84687	1
Perchlorate-(35Cl18O4)	ISTD	10 692	146850	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	19542	101	85	3.03	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	45952	109	91	3.20	2 30	3.80	In Control

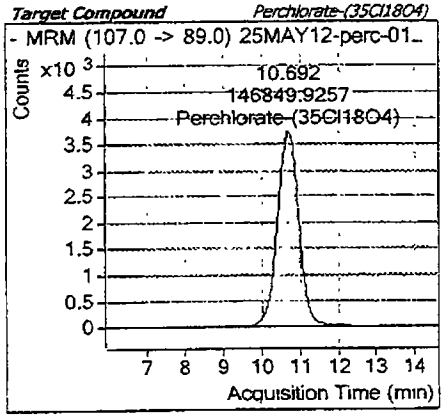
Compound Graphics

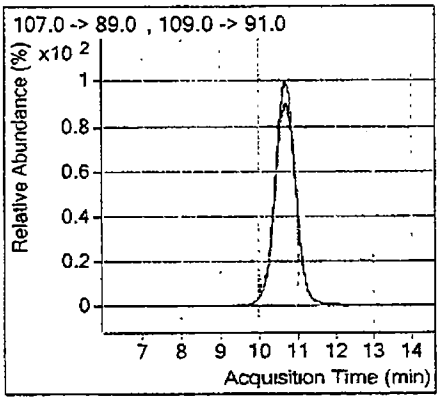
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 18:31
Analyst	lores
Data File	25MAY12-perc-011 d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L7_00001 12LCMS0070, 10ng/mL
Sample Identification	Std007
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B8
Exp. Concentration	10.00
Injection Volume	50

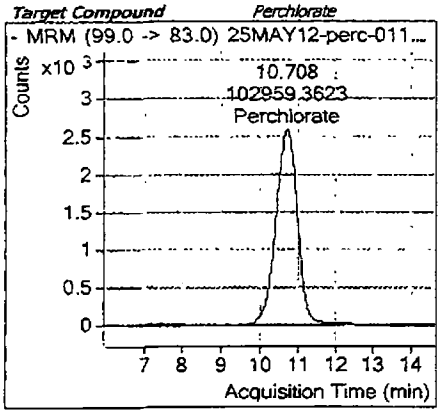
Quantitation Results

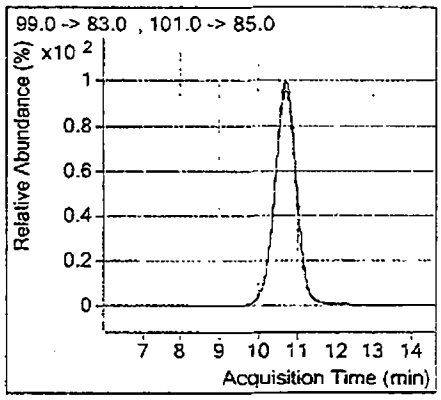
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.708	102959	99	83	9.65998	9.65998	1
Perchlorate-(35Cl18O4)	ISTD	10.697	127486	107	89			1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	34363	101	85	3.00	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	40228	109	91	3.17	2.30	3.80	In Control

Compound Graphics

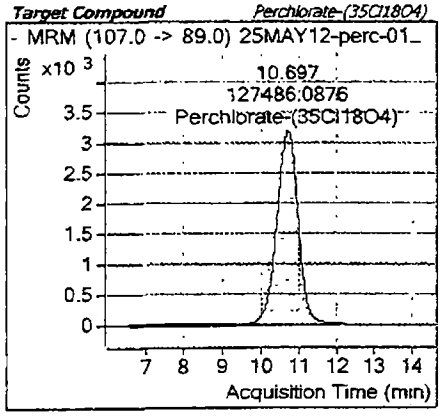
Target Compound *Perchlorate*

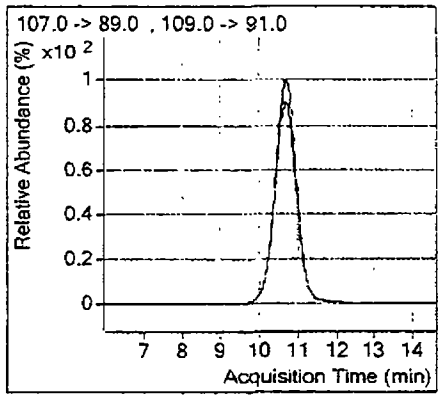




m 5/29/12

Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D \Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 18:47
Analyst	lores
Data File	25MAY12-perc-012.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L8_00001 12LCMS0071, 20ng/mL
Sample Identification	Std008
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45'55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Calibration
Sample Position	P2-B9
Exp. Concentration	20.00
Injection Volume	50

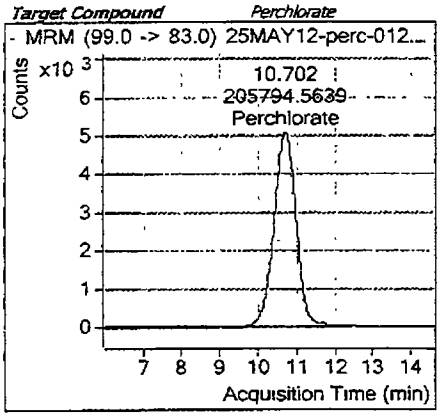
Quantitation Results

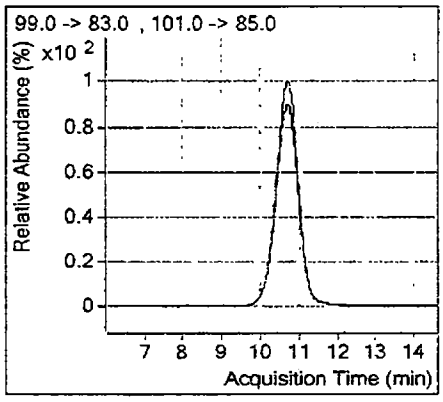
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.702	205795	99	83		20.55508	20.55508	1
Perchlorate-(35Cl18O4)	ISTD	10.694	119503	107	89				1

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	65190	101	85	3.16	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	39283	109	91	3.04	2.30	3.80	In Control

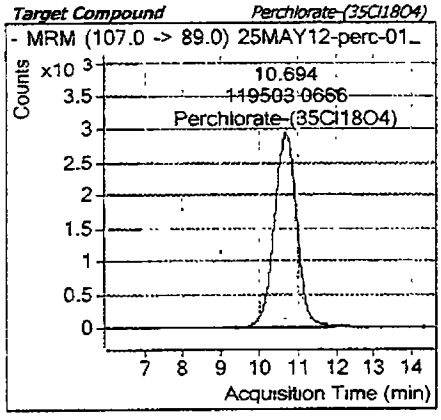
Compound Graphics

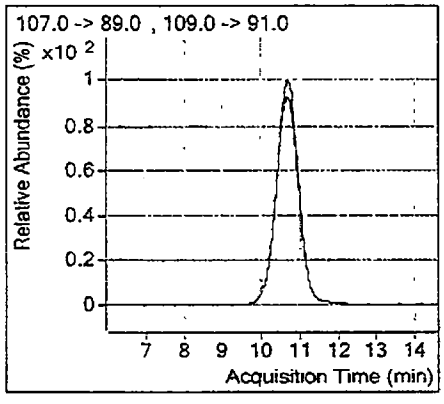
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 19:03
Analyst	lores
Data File	25MAY12-perc-013.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-C1
Exp. Concentration	
Injection Volume	50

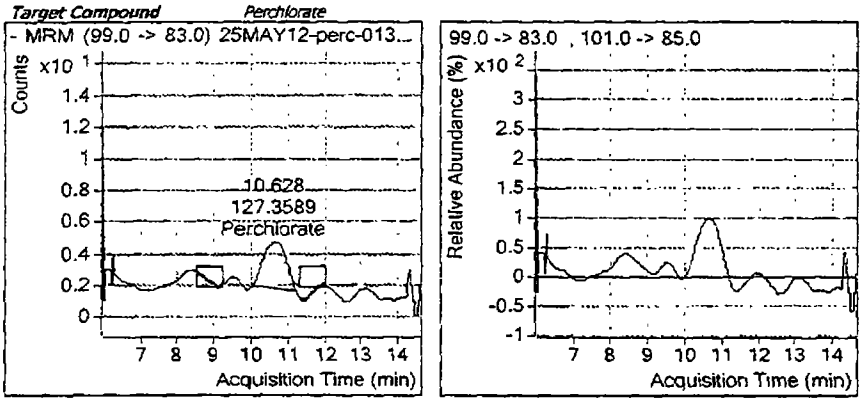
Quantitation Results

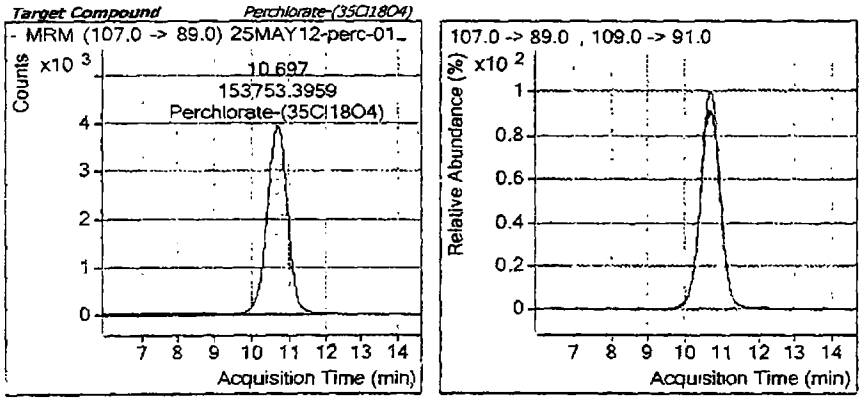
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.628	127	99	83	0.04789	0.04789	1
Perchlorate-(35Cl18O4)	ISTD	10.697	153753	107	89			1

Result is < MDL => ND

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	49094	109	91	3.13	2.30	3.80	In Control

Compound Graphics





mr 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/25/2012 19.19
Analyst	lores
Data File	25MAY12-perc-014.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850IC_00001 12LCMS0073, 5.0ng/mL
Sample Identification	ICV
Sample Information	IC-Pak Anion HR 75x4 6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C2
Exp. Concentration	5 00
Injection Volume	50

Quantitation Results

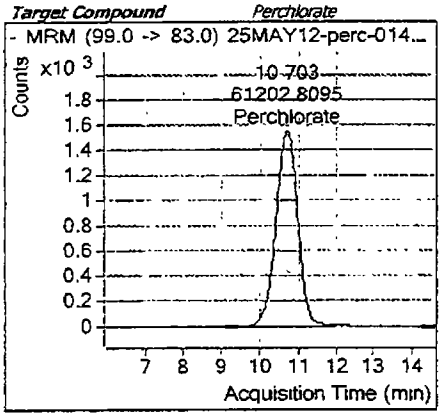
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10 703	61203	99	83	5.01894	5.01894	1
Perchlorate-(35Cl18O4)	ISTD	10 693	146394	107	89			1
							0.4 % Deviation	

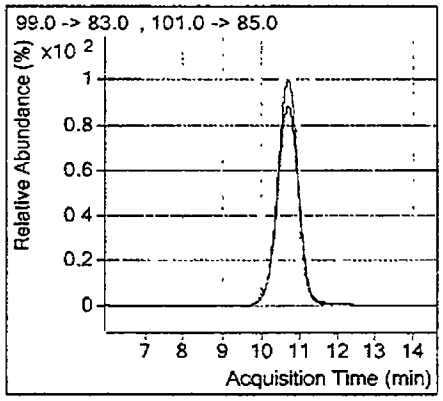
Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	18751	101	85	3 26	2 30	3.80	In Control
Perchlorate-(35Cl18O4)	43991	109	91	3 33	2 30	3.80	In Control

Compound Graphics

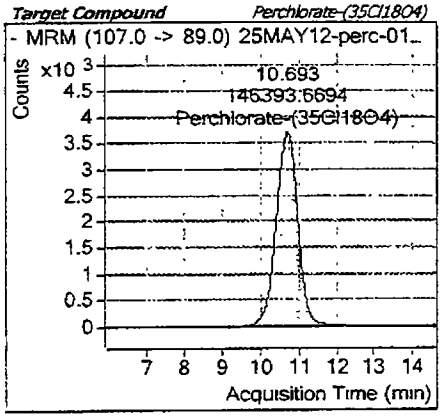
MS 5/29/12

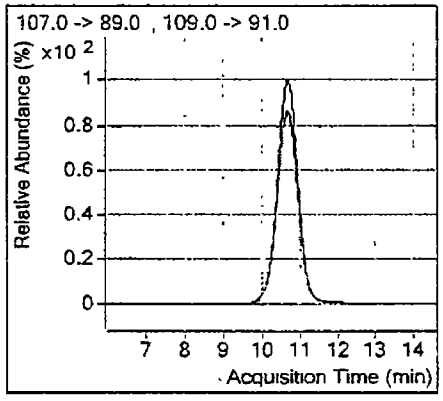
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





CCAL Data

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 05:36
Analyst	lores
Data File	25MAY12-perc-052.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L4_00001 12LCMS0067, 1.0ng/mL
Sample Identification	CCV 4
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45.gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C5
Exp. Concentration	1.00
Injection Volume	50

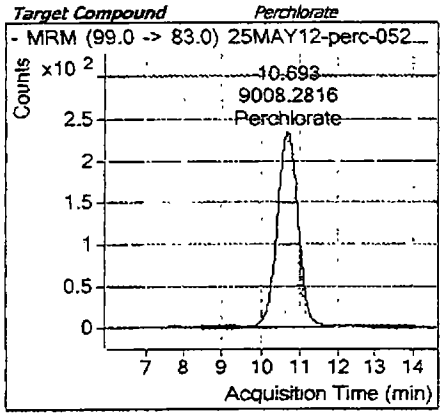
Quantitation Results

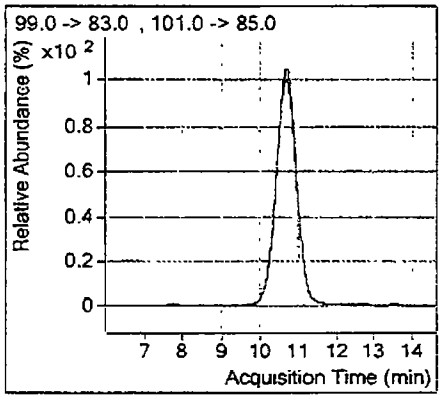
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.693	9008	99	83	0.94654	0.94654	1
Perchlorate-(35Cl18O4)	ISTD	10.687	118132	107	89			1
							-5.3 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	3216	101	85	2.80	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	37540	109	91	3.15	2.30	3.80	In Control

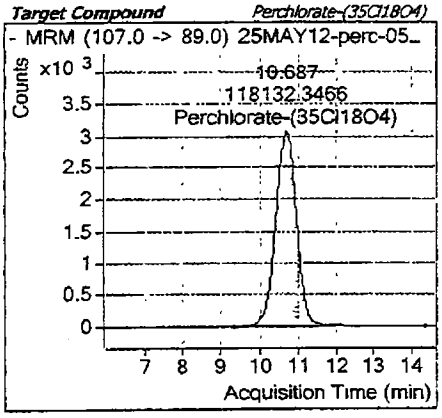
Compound Graphics

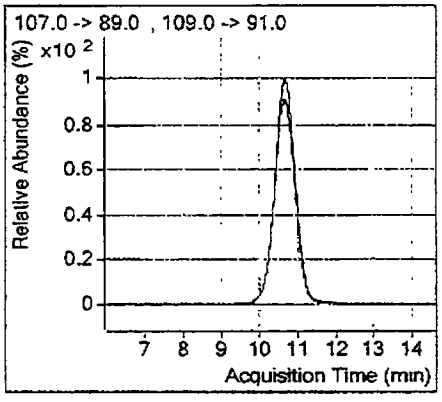
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 05:52
Analyst	lores
Data File	25MAY12-perc-053.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coil=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

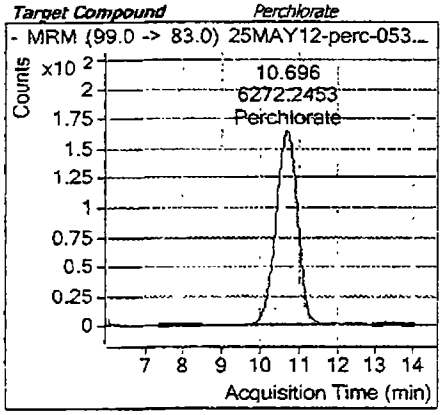
Quantitation Results

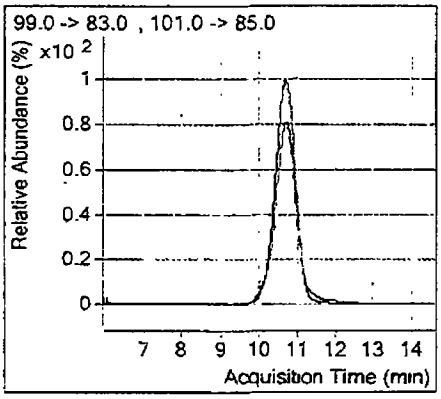
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.696	6272	99	83	0.50924	0.50924	1
Perchlorate-(35Cl18O4)	ISTD	10.690	158587	107	89			1
							1.8 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	1875	101	85	3.35	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	50254	109	91	3.16	2.30	3.80	In Control

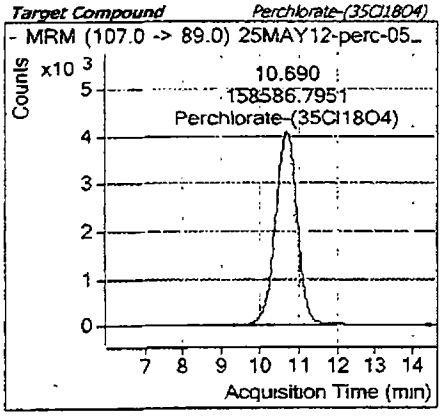
Compound Graphics

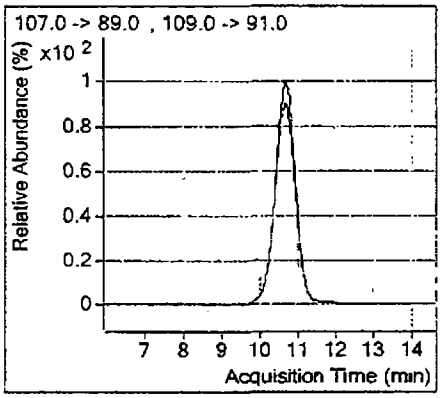
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/29/12

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

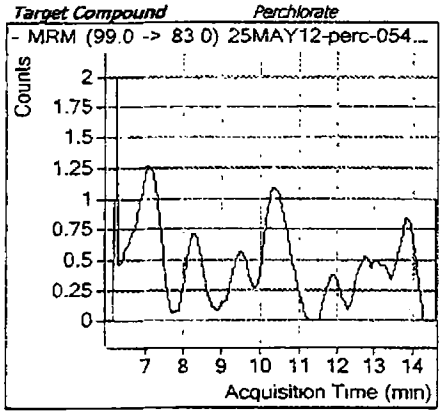
Acquisition Date - Time	5/26/2012 06:08
Analyst	lores
Data File	25MAY12-perc-054.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

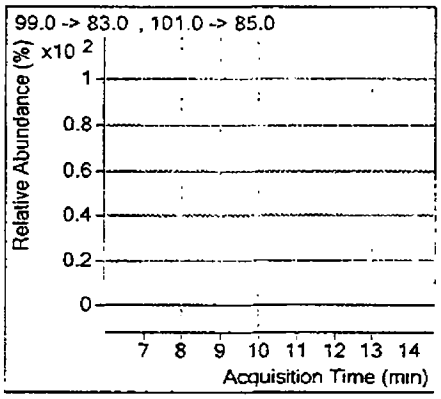
Quantitation Results

Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.694	156225	107	89			Perchlorate = ND	1
Qualifier Ion			**Area**	**Precursor**	**Product**	**Ratio**	**Min**	**Max**	
Perchlorate-(35Cl18O4)			48371	109	91	3.23	2.30	3.80	In Control

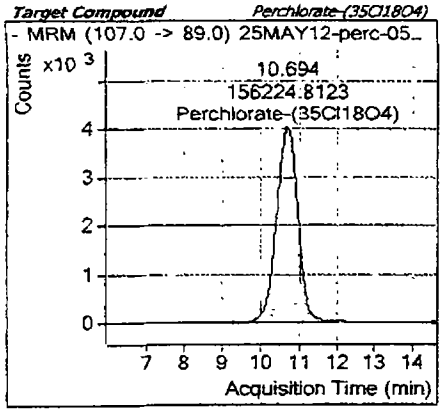
Compound Graphics

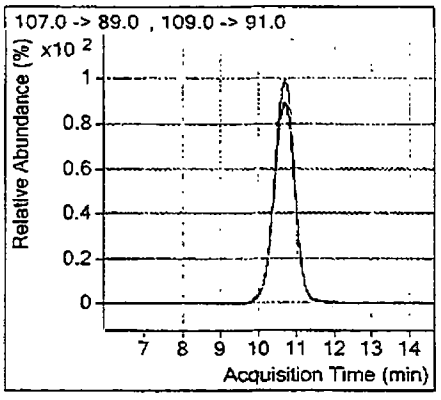
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM1030S1VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 08:50
Analyst	lores
Data File	25MAY12-perc-064.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L6_00001 12LCMS0069, 5 0ng/mL
Sample Identification	CCV 6
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C7
Exp. Concentration	5.00
Injection Volume	50

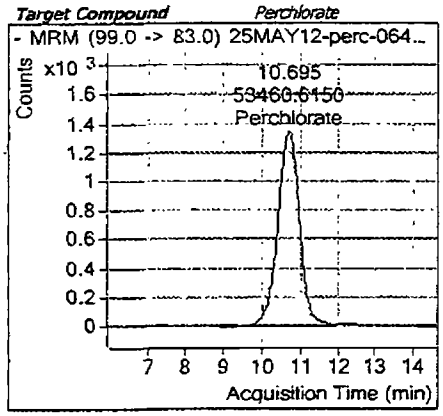
Quantitation Results

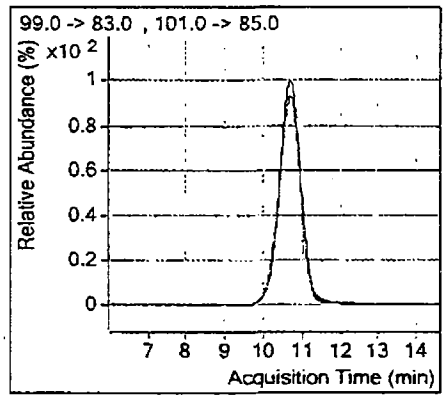
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.695	53461	99	83		4.85761	4.85761	1
Perchlorate-(35Cl18O4)	ISTD	10.690	132155	107	89				1
								-2.8 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	17069	101	85	3.13	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	40655	109	91	3.25	2.30	3.80	In Control

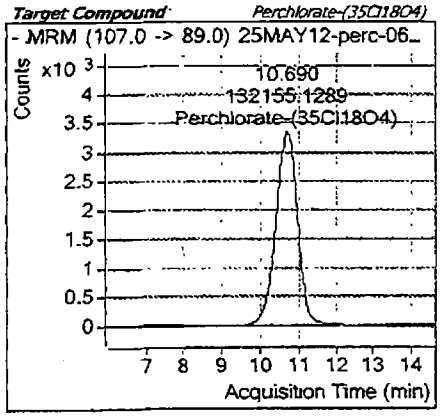
Compound Graphics

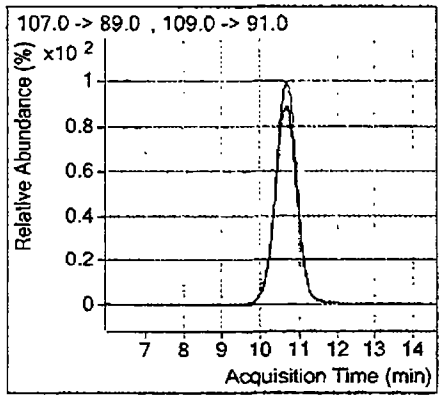
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

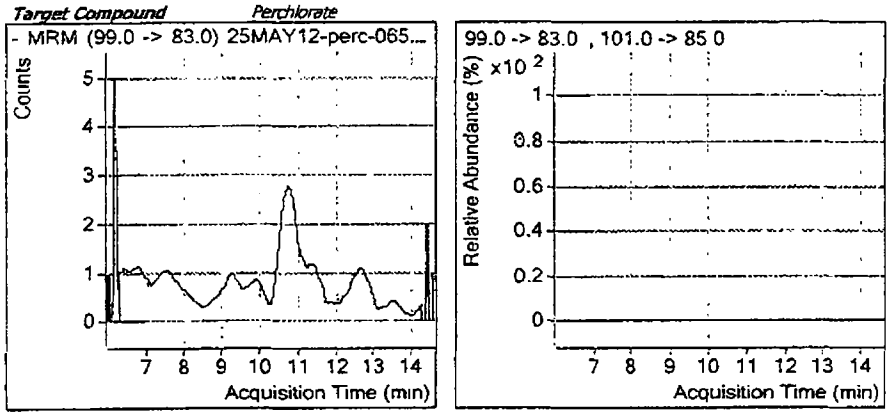
Acquisition Date - Time	5/26/2012 09:06
Analyst	lores
Data File	25MAY12-perc-065.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

Quantitation Results

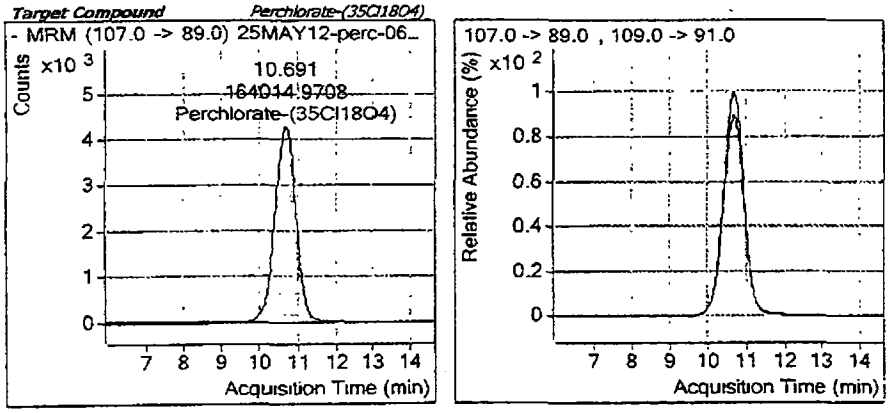
Name	Type	RT	Area	Precursor	Product		Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10 691	164015	107	89				1
								Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	51448	109	91	3 19	2.30	3.80	In Control

Compound Graphics



m 5/29/12



TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 12:05
Analyst	lores
Data File	25MAY12-perc-076.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L5_00001 12LCMS0068, 2.0ng/mL
Sample Identification	CCV 5
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45.55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C6
Exp. Concentration	2.00
Injection Volume	50

Quantitation Results

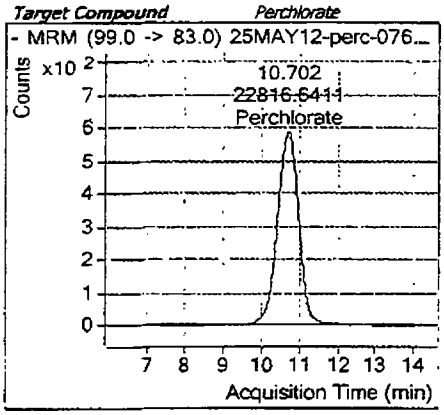
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.702	22817	99	83	1.97727	1.97727	1
Perchlorate-(35Cl18O4)	ISTD	10.700	140178	107	89			1

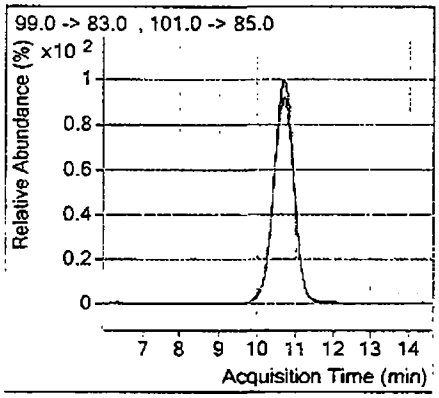
-1.1 % Deviation

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	7240	101	85	3.15	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	44293	109	91	3.16	2.30	3.80	In Control

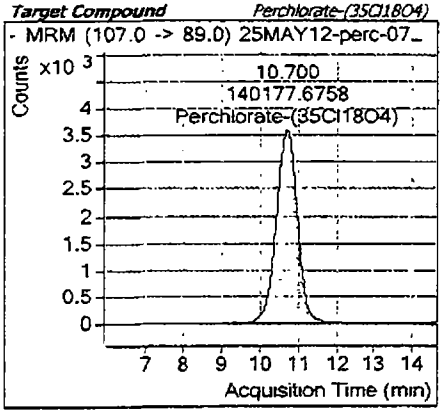
Compound Graphics

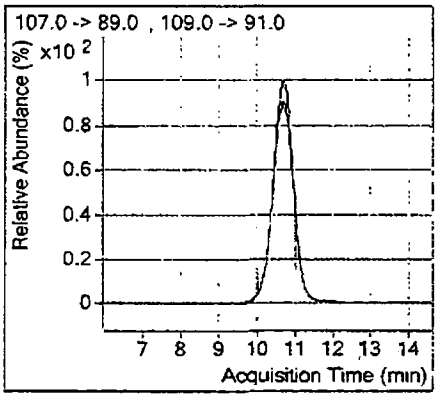
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





5/29/12

Batch Data Path D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

Acquisition Date - Time	5/26/2012 12:21
Analyst	lores
Data File	25MAY12-perc-077.d
Acquisition Method	PercMRM_2 m
Sample Name	LC6850L3_00001 12LCMS0066, 0.50ng/mL
Sample Identification	MRL
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45 55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	QC
Sample Position	P2-C4
Exp. Concentration	0.50
Injection Volume	50

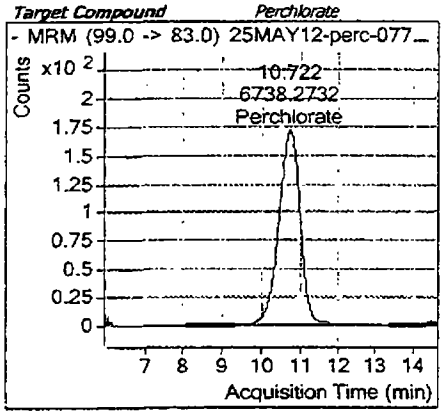
Quantitation Results

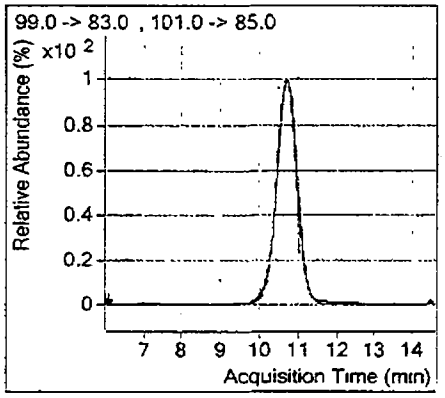
Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate	Target	10.722	6738	99	83	0.53249	0.53249	1
Perchlorate-(35Cl18O4)	ISTD	10.706	162359	107	89			1
							6.5 % Deviation	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate	2238	101	85	3.01	2.30	3.80	In Control
Perchlorate-(35Cl18O4)	51457	109	91	3.16	2.30	3.80	In Control

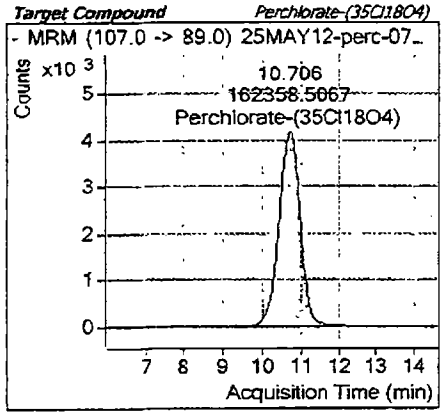
Compound Graphics

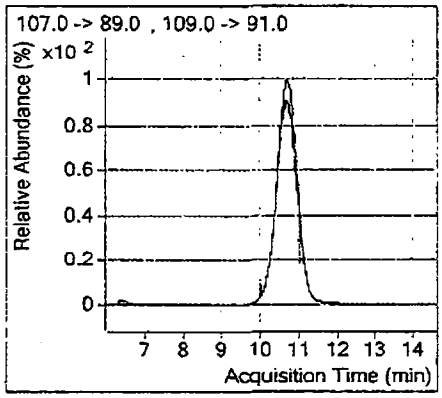
Target Compound *Perchlorate*





Target Compound *Perchlorate-(35Cl18O4)*





m 5/29/12

TestAmerica Inc.
Perchlorate Analysis by LC/MS/MS; Method 8321 / 6850 / 331 / DOD Handbook

Batch Data Path	D:\Masshunter\A5-data\Perc_2RNM103051VE 02\25MAY2012\QuantResults\25May2012-Perchlorate.batch.xml

Analysis Information

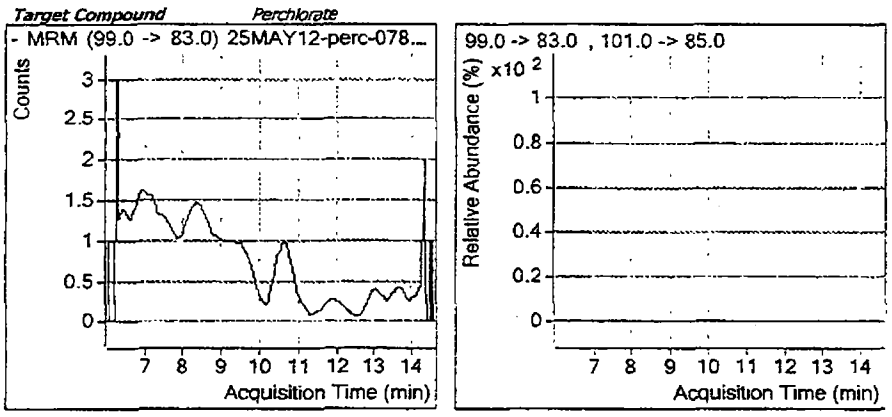
Acquisition Date - Time	5/26/2012 12:37
Analyst	lores
Data File	25MAY12-perc-078.d
Acquisition Method	PercMRM_2.m
Sample Name	LC6850L9_00001 Blank + IS
Sample Identification	Blank + IS
Sample Information	IC-Pak Anion HR 75x4.6mm T=40°C iso 45:55 Coll=30 frag=130 src=1750v neb=45 gas T=350 fl=12
Sample Type	Sample
Sample Position	P2-B1
Exp. Concentration	
Injection Volume	50

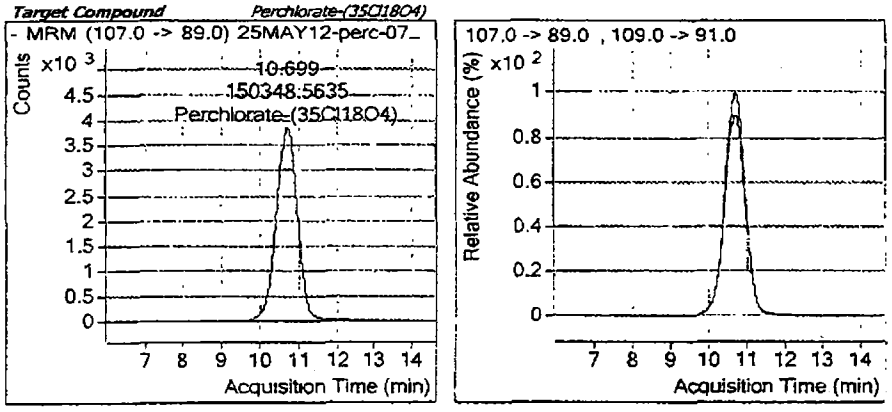
Quantitation Results

Name	Type	RT	Area	Precursor	Product	Final Conc.	Injection Conc.	Dilution
Perchlorate-(35Cl18O4)	ISTD	10.699	150349	107	89			1
							Perchlorate = ND	

Qualifier Ion	Area	Precursor	Product	Ratio	Min	Max	
Perchlorate-(35Cl18O4)	47603	109	91	3.16	2.30	3.80	In Control

Compound Graphics





m 5/29/12

Tune Data

QQQ Checktune Report

Instrument Name	Instrument 1	**MS Model**	G6410A
Tune Date & Time	2012-05-25 15:40		
Data Path	D:\MassHunter\Tune\QQQ\atunes.tune.xml		
Ion Source	ESI		
Ionization Mode	ESI		

Negative Results

Analyzer: MS1 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.98	112.99	0.10	-0.01	Pass	0.70	0.70	0.10	0.00	Pass	86546	0	Pass
301.98	302.00	0.10	-0.02	Pass	0.70	0.70	0.10	0.00	Pass	392590	0	Pass
601.95	601.98	0.10	-0.03	Pass	0.67	0.70	0.10	-0.03	Pass	940251	0	Pass
1033.92	1033.99	0.10	-0.07	Pass	0.71	0.70	0.10	0.01	Pass	447346	0	Pass
1333.90	1333.97	0.10	-0.07	Pass	0.69	0.70	0.10	-0.01	Pass	722428	0	Pass
1633.89	1633.95	0.10	-0.06	Pass	0.71	0.70	0.10	0.01	Pass	619352	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Unit***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.01	112.99	0.10	0.02	Pass	0.69	0.70	0.10	-0.01	Pass	282498	0	Pass
302.01	302.00	0.10	0.01	Pass	0.70	0.70	0.10	0.00	Pass	318694	0	Pass
602.00	601.98	0.10	0.02	Pass	0.69	0.70	0.10	-0.01	Pass	451104	0	Pass
1034.01	1033.99	0.10	0.02	Pass	0.70	0.70	0.10	0.00	Pass	223337	0	Pass
1333.98	1333.97	0.10	0.01	Pass	0.69	0.70	0.10	-0.01	Pass	595245	0	Pass
1633.93	1633.95	0.10	-0.02	Pass	0.69	0.70	0.10	-0.01	Pass	421872	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.99	112.99	0.30	0.00	Pass	1.20	1.20	0.60	0.00	Pass	102684	0	Pass
301.94	302.00	0.30	-0.06	Pass	1.27	1.20	0.60	0.07	Pass	563519	0	Pass
601.91	601.98	0.30	-0.07	Pass	1.31	1.20	0.60	0.11	Pass	1429537	0	Pass
1033.86	1033.99	0.30	-0.13	Pass	1.32	1.20	0.60	0.12	Pass	823222	0	Pass
1333.85	1333.97	0.30	-0.12	Pass	1.30	1.20	0.60	0.10	Pass	1607847	0	Pass
1633.86	1633.95	0.30	-0.09	Pass	1.22	1.20	0.60	0.02	Pass	1563189	0	Pass

QQQ Checktune Report

Analyzer: MS2 ***Polarity: Negative*** ***Width: Wide***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
113.04	112.99	0.30	0.05	Pass	1.15	1.20	0.60	-0.05	Pass	364747	0	Pass
301.99	302.00	0.30	-0.01	Pass	1.22	1.20	0.60	0.02	Pass	464568	0	Pass
601.95	601.98	0.30	-0.03	Pass	1.25	1.20	0.60	0.05	Pass	722144	0	Pass
1033.94	1033.99	0.30	-0.05	Pass	1.25	1.20	0.60	0.05	Pass	421079	0	Pass
1333.91	1333.97	0.30	-0.06	Pass	1.28	1.20	0.60	0.08	Pass	1047746	0	Pass
1633.92	1633.95	0.30	-0.03	Pass	1.26	1.20	0.60	0.06	Pass	860815	0	Pass

Analyzer: MS1 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.89	112.99	0.50	-0.10	Pass	2.77	2.50	1.25	0.27	Pass	127753	0	Pass
301.88	302.00	0.50	-0.12	Pass	2.81	2.50	1.25	0.31	Pass	770025	0	Pass
601.87	601.98	0.50	-0.11	Pass	2.85	2.50	1.25	0.35	Pass	1800085	0	Pass
1033.87	1033.99	0.50	-0.12	Pass	2.84	2.50	1.25	0.34	Pass	1200008	0	Pass
1333.90	1333.97	0.50	-0.07	Pass	2.73	2.50	1.25	0.23	Pass	2482797	0	Pass
1633.93	1633.95	0.50	-0.02	Pass	2.63	2.50	1.25	0.13	Pass	2574122	0	Pass

Analyzer: MS2 ***Polarity: Negative*** ***Width: Widest***

m/z	m/z Exp	Tolerance	Delta	Result	FWHM	FWHM Exp	Tolerance	Delta	Result	Abundance	Minimum1	Result
112.91	112.99	0.50	-0.08	Pass	2.57	2.50	1.25	0.07	Pass	464950	0	Pass
301.94	302.00	0.50	-0.06	Pass	2.55	2.50	1.25	0.05	Pass	673492	0	Pass
601.93	601.98	0.50	-0.05	Pass	2.55	2.50	1.25	0.05	Pass	1215486	0	Pass
1034.00	1033.99	0.50	0.01	Pass	2.44	2.50	1.25	-0.06	Pass	857398	0	Pass
1333.94	1333.97	0.50	-0.03	Pass	2.49	2.50	1.25	-0.01	Pass	2175643	0	Pass
1634.01	1633.95	0.50	0.06	Pass	2.42	2.50	1.25	-0.08	Pass	2018742	0	Pass

' NOTE: 1) Actual abundances depend on many factors and are instrument specific

To change the minimum abundance, edit the values on the "Options" sheet

TestAmerica West Sacramento (916) 373-5600

Page 1158 of 1607

06/13/2012 76 of 282

METHOD BLANK REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E160436 Work Order #...: MTP6G1AA Matrix.....: WATER
MB Lot-Sample #: G2E230000-091

Prep Date.....: 05/23/12
Analysis Date..: 05/26/12 Prep Batch #...: 2144091
Dilution Factor: 1

PARAMETER	RESULT	REPORTING LIMIT	UNITS	METHOD
Perchlorate	ND	1.0	ug/L	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E160436 **Work Order #...:** MTP6G1AC **Matrix.....:** WATER
LCS Lot-Sample#: G2E230000-091
Prep Date.....: 05/23/12 **Analysis Date..:** 05/26/12
Prep Batch #...: 2144091
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	**96**	**(80 - 120)**	**SW846 6850**

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E160436 Work Order #...: MTP6G1AC Matrix.....: WATER
LCS Lot-Sample#: G2E230000-091
Prep Date.....: 05/23/12 Analysis Date..: 05/26/12
Prep Batch #...: 2144091
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.78	ug/L	96	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E160436 Work Order #...: MTP6G1AD Matrix.....: WATER
LCS Lot-Sample#: G2E230000-091
Prep Date.....: 05/23/12 Analysis Date..: 05/26/12
Prep Batch #...: 2144091
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	METHOD
Perchlorate	94	(80 - 120)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

LABORATORY CONTROL SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E160436 Work Order #...: MTP6G1AD Matrix.....: WATER
LCS Lot-Sample#: G2E230000-091
Prep Date.....: 05/23/12 Analysis Date..: 05/26/12
Prep Batch #...: 2144091
Dilution Factor: 1

PARAMETER	SPIKE AMOUNT	MEASURED AMOUNT	UNITS	PERCENT RECOVERY	METHOD
Perchlorate	5.00	4.72	ug/L	94	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE EVALUATION REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E160436 **Work Order #...:** MTKML1AC-MS **Matrix.....:** WATER
MS Lot-Sample #: G2E150453-003 MTKML1AD-MSD
Date Sampled...: 05/11/12 **Date Received..:** 05/15/12
Prep Date.....: 05/23/12 **Analysis Date..:** 05/26/12
Prep Batch #...: 2144091
Dilution Factor: 1

PARAMETER	PERCENT RECOVERY	RECOVERY LIMITS	RPD	RPD LIMITS	METHOD
Perchlorate	99	(80 - 120)			SW846 6850
	98	(80 - 120)	0.78	(0-15)	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

MATRIX SPIKE SAMPLE DATA REPORT

HPLC - Mass. Spec.

Client Lot #...: G2E160436 Work Order #...: MTKML1AC-MS Matrix.....: WATER
MS Lot-Sample #: G2E150453-003 MTKML1AD-MSD
Date Sampled...: 05/11/12 Date Received..: 05/15/12
Prep Date.....: 05/23/12 Analysis Date..: 05/26/12
Prep Batch #...: 2144091
Dilution Factor: 1

PARAMETER	SAMPLE AMOUNT	SPIKE AMT	MEASRD AMOUNT	UNITS	PERCNT RECVRY	RPD	METHOD
Perchlorate	ND	5.00	4.94	ug/L	99		SW846 6850
	ND	5.00	4.90	ug/L	98	0.78	SW846 6850

NOTE(S):

Calculations are performed before rounding to avoid round-off errors in calculated results.

Bold print denotes control parameters

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT Lockheed-MSA	JOB NUMBER SDG 240-11319-1	
SUBJECT Sample Calculation		
BASED ON	DRAWING NUMBER	
BY Ann Cognetta / CHECKED BY	APPROVED BY	DATE June 27, 2012

I. VOC; Sample MSA-MW5-051412-37; cis 1,2-dichloroethene

$$\frac{1477437}{1573952} * 90.9 * \frac{10\ ug/L}{0.3490} = 2444.9\ ug/L$$

II. SVOC; Sample MSA-DMW3I-051412; 1,4-dioxane

$$\frac{716127}{314669} * 10 * \frac{2mL}{990mL} * \frac{4\ ng/uL}{0.7827} * 1000 = 235.0\ ug/L$$

III. GRO; Sample MSA-MW5-051412

$$\frac{99870001}{299875.299} * 5 = 1665.2\ ug/L$$

IV DRO; Sample MSA-DMW35-051412

$$\frac{25895709}{186529.226} * \frac{5mL}{1050mL} * 1000 = 661.1\ ug/L$$

Sample Calculation

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412-37 Lab Sample ID: 240-11319-2

Matrix: Water Lab File ID: UXM6303.D

Analysis Method: 8260C Date Collected: 05/14/2012 10:55

Sample wt/vol: 5(mL) Date Analyzed: 05/25/2012 14:39

Soil Aliquot Vol: Dilution Factor: 90.9

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45325 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
56-23-5	Carbon tetrachloride	91	U	91	12
108-90-7	Chlorobenzene	91	U	91	14
75-00-3	Chloroethane	91	U	91	26
67-66-3	Chloroform	91	U	91	15
74-87-3	Chloromethane	91	U	91	27
156-59-2	cis-1,2-Dichloroethene	2400		91	15
10061-01-5	cis-1,3-Dichloropropene	91	U	91	13
124-48-1	Dibromochloromethane	91	U	91	16
74-95-3	Dibromomethane	91	U	91	25
75-71-8	Dichlorodifluoromethane	91	U	91	28
108-20-3	Diisopropyl ether	910	U	910	140
100-41-4	Ethylbenzene	91	U	91	15
637-92-3	Ethyl-t-butyl ether (ETBE)	450	U	450	10
87-68-3	Hexachlorobutadiene	91	U	91	27
98-82-8	Isopropylbenzene	91	U	91	12
1634-04-4	Methyl tert-butyl ether	450	U	450	15
75-09-2	Methylene Chloride	91	U	91	30
179601-23-1	m-Xylene & p-Xylene	180	U	180	22
91-20-3	Naphthalene	91	U	91	22
104-51-8	n-Butylbenzene	91	U	91	11
103-65-1	n-Propylbenzene	91	U	91	13
95-47-6	o-Xylene	91	U	91	13
99-87-6	p-Isopropyltoluene	91	U	91	11
135-98-8	sec-Butylbenzene	91	U	91	12
100-42-5	Styrene	91	U	91	10
994-05-8	Tert-amyl-methyl ether (TAME)	450	U	450	6.1
75-65-0	tert-Butyl alcohol	4500	U	4500	350
98-06-6	tert-Butylbenzene	91	U	91	12
127-18-4	Tetrachloroethene	91	U *	91	26
108-88-3	Toluene	91	U	91	12
156-60-5	trans-1,2-Dichloroethene	53	J	91	17
10061-02-6	trans-1,3-Dichloropropene	91	U	91	17
79-01-6	Trichloroethene	91	U	91	15
75-69-4	Trichlorofluoromethane	91	U	91	19
108-05-4	Vinyl acetate	180	U	180	17
75-01-4	Vinyl chloride	410		91	20

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File: \\Ncchrom\ChromData\A3UX16\20120525-10278.b\UXM6303.D
Lims ID: 240-11319-A-2 Client ID: MSA-MW5-051412-37
Inject. Date: 25-May-2012 14:39:30 Dil. Factor: 90.9000
Sample Type: Client
Sample ID: 240-0010278-010
Misc. Info.: M20525A,8260LLUX16,,1644
Operator: 1644 Instrument ID: A3UX16
Vol. Injected: 1.0000 ALS Bottle#: 9
Lims Batch ID: 45325 Lims Sample ID: 10
Detector: MS SCAN

Method: \\Ncchrom\ChromData\A3UX16\20120525-10278.b\8260_16.m
Last Update: 26-May-2012 12:37:55 Calib Date: 09-May-2012 18:43:30
Quant Method: Internal Standard Quant By: Initial Calibration
Last ICal File: \\Ncchrom\ChromData\A3UX16\20120509-9809.b\UXM5665.D
Limit Group: MSV 8260DOD ICAL
Integrator: RTE ID Type: Deconvolution ID
Process Host: CORP-CTX-15

First Level Reviewer: williamsla Date: 25-May-2012 14:58:23

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 141 1-Chlorooctane	1		0.000					
* 1 Fluorobenzene	96	5.702	5.702	0.0	98	1573952	10.0	
* 2 Chlorobenzene-d5	117	8.393	8.393	0.0	90	1156128	10.0	
* 3 1,4-Dichlorobenzene-d4	152	10.635	10.635	0.0	96	627179	10.0	
$ 142 2,5-Dibromotoluene	1		0.000					
$ 5 Dibromofluoromethane (Surr)	113	5.120	5.109	0.011	58	391507	9.79	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	5.405	5.405	0.0	0	565366	11.2	
$ 7 Toluene-d8 (Surr)	98	7.077	7.077	0.0	95	1593665	10.2	
$ 131 4-Bromofluorobenzene (Surr)	95	9.508	9.508	0.0	90	549599	9.18	
134 Chlorodifluoromethane TIC	1		0.000					
133 Benzyl chloride	126		0.000					
136 Hexachloroethane TIC	1		0.000					
140 C6-C10	1		0.000					
139 C6-C12	1		0.000					
138 Butyl Methacrylate TIC	1		0.000					
12 Dichlorodifluoromethane	85		1.670					
13 Chloromethane	50		1.824					
14 Vinyl chloride	62	1.954	1.954	0.0	83	321319	4.52	
15 Bromomethane	94		2.298					
16 Chloroethane	64		2.393					
17 Dichlorofluoromethane	67		2.595					
18 Trichlorofluoromethane	101		2.654					
25 Methylal	45		2.856					
19 Ethyl ether	59		2.927					
20 Acrolein	56		3.033					
21 1,1-Dichloroethene	96		3.152					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		3.176					
22 Acetone	43		3.176					
24 Iodomethane	142		3.283					
26 Carbon disulfide	76		3.354					
27 Acetonitrile	41	3.437	3.425	0.012	70	5261	0.7418	

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
29 3-Chloro-1-propene	76		3.472					
28 Methyl acetate	43		3.484					
30 Methylene Chloride	84		3.579					
31 2-Methyl-2-propanol	59		3.674					
32 Acrylonitrile	53		3.792					
33 trans-1,2-Dichloroethene	96	3.840	3.840	0.0	85	30439	0.5845	
34 Methyl tert-butyl ether	73		3.840					
35 Hexane	86		4.089					
36 1,1-Dichloroethane	63		4.207					
37 Vinyl acetate	86		4.243					
38 Isopropyl ether	87		4.267					
39 2-Chloro-1,3-butadiene	53		4.290					
40 Tert-butyl ethyl ether	59		4.587					
41 2-Butanone (MEK)	43		4.706					
42 cis-1,2-Dichloroethene	96	4.717	4.706	0.011	74	1477437	26.9	
43 2,2-Dichloropropane	77		4.717					
44 Propionitrile	54		4.753					
45 Ethyl acetate	43		4.765					
46 Methacrylonitrile	41		4.895					
47 Chlorobromomethane	128		4.919					
48 Tetrahydrofuran	42		4.966					
49 Chloroform	83		4.978					
50 1,1,1-Trichloroethane	97		5.156					
51 Cyclohexane	56		5.215					
52 1,1-Dichloropropene	75		5.298					
53 Carbon tetrachloride	117		5.310					
54 Isobutyl alcohol	41		5.346					
56 1,2-Dichloroethane	62		5.464					
55 Benzene	78		5.476					
57 Tert-amyl methyl ether	73		5.559					
61 Ethyl acrylate	55		5.605					
58 n-Heptane	100		5.690					
59 n-Butanol	56		5.903					
60 Trichloroethene	130		6.022					
63 Methylcyclohexane	83	6.211	6.212	-0.001	90	19078	0.3492	
62 1,2-Dichloropropane	63		6.212					
64 Methyl methacrylate	41		6.283					
66 1,4-Dioxane	88		6.306					
65 Dibromomethane	93		6.306					
67 Dichlorobromomethane	83		6.437					
68 2-Nitropropane	41		6.627					
69 2-Chloroethyl vinyl ether	63		6.686					
70 cis-1,3-Dichloropropene	75		6.828					
71 4-Methyl-2-pentanone (MIBK)	43		6.947					
72 Toluene	91		7.137					
73 trans-1,3-Dichloropropene	75		7.314					
74 Ethyl methacrylate	69		7.386					
75 1,1,2-Trichloroethane	97		7.480					
76 1,3-Dichloropropane	76		7.635					
77 Tetrachloroethene	164		7.646					
78 2-Hexanone	43		7.694					
81 1-Chlorohexane	91		7.788					

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43409

SDG No.:

Instrument ID: A3UX16 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/09/2012 16:50 Calibration End Date: 05/09/2012 18:43 Calibration ID: 8614

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0181 0.0174	0.0168	0.0177	0.0177	0.0194	Ave		0.0178				4.7		15.0			
Acrylonitrile	0.1490 0.1387	0.1316	0.1465	0.1448	0.1465	Ave		0.1429				4.6		15.0			
Methyl tert-butyl ether	0.6991 0.7388	0.6445	0.7170	0.7045	0.7607	Ave		0.7108			0.1000	5.6		15.0			
trans-1,2-Dichloroethene	0.3247 0.3331	0.3115	0.3413	0.3269	0.3476	Ave		0.3309			0.1000	3.9		15.0			
Hexane	0.0397 0.0512	0.0343	0.0407	0.0432	0.0497	Ave		0.0431				15.0		15.0			
1,1-Dichloroethane	0.6254 0.6679	0.6197	0.6585	0.6494	0.6816	Ave		0.6504			0.1000	3.7		15.0			
Vinyl acetate	0.0327 0.0428	0.0332	0.0366	0.0381	0.0440	Ave		0.0379				12.0		15.0			
2-Butanone	0.1740 0.1347	0.1309	0.1420	0.1355	0.1436	Ave		0.1434			0.0500	11.0		15.0			
cis-1,2-Dichloroethene	0.3366 0.3461	0.3446	0.3556	0.3479	0.3633	Ave		0.3490			0.1000	2.7		15.0			
2,2-Dichloropropane	0.2222 0.2905	0.2280	0.2554	0.2602	0.2941	Ave		0.2584				12.0		15.0			
Bromochloromethane	0.1381 0.1470	0.1360	0.1474	0.1506	0.1535	Ave		0.1454				4.8		15.0			
Tetrahydrofuran	0.1117 0.0863	0.0970	0.0944	0.0842	0.0925	Ave		0.0944				10.0		15.0			
Chloroform	0.5276 0.5351	0.4911	0.5175	0.5152	0.5505	Ave		0.5228				3.9		15.0			
1,1,1-Trichloroethane	0.3487 0.4394	0.3554	0.3763	0.4020	0.4407	Ave		0.3937			0.1000	10.0		15.0			
Cyclohexane	0.5218 0.7519	0.5837	0.6294	0.6832	0.7258	Ave		0.6493			0.1000	14.0		15.0			
1,1-Dichloropropene	0.3364 0.3821	0.3547	0.3491	0.3627	0.3860	Ave		0.3618				5.3		15.0			
Carbon tetrachloride	0.2463 0.3514	0.2420	0.2831	0.3062	0.3407	Lin1	-0.167	0.3472			0.1000				0.9970		0.9950
1,2-Dichloroethane	0.4421 0.4298	0.4100	0.4186	0.4137	0.4494	Ave		0.4273			0.1000	3.7		15.0			
Benzene	1.1834 1.2032	1.1025	1.1381	1.1389	1.2065	Ave		1.1621			0.5000	3.6		15.0			
Trichloroethene	0.2725 0.2825	0.2714	0.2654	0.2626	0.2924	Ave		0.2745			0.2000	4.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3I-051412 | Lab Sample ID: 240-11319-7

Matrix: Water | Lab File ID: 20523036.D

Analysis Method: 8270C | Date Collected: 05/14/2012 11:10

Extract. Method: 3520C | Date Extracted: 05/19/2012 09:14

Sample wt/vol: 990(mL) | Date Analyzed: 05/23/2012 18:39

Con. Extract Vol.: 2(mL) | Dilution Factor: 10

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44986 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
123-91-1	1,4-Dioxane	230		10	4.9

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	54		28-110
367-12-4	2-Fluorophenol (Surr)	52		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	62		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	50		27-111
4165-62-2	Phenol-d5 (Surr)	55		10-110
1718-51-0	Terphenyl-d14 (Surr)	67		37-119

Report Date: 24-May-2012 10:59:55 Chrom Revision: 2.0 08-Feb-2012 11:07:54

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A4HP7\20120523-10193.b\20523036.D		
Lims ID:	240-11319-J-7-A	Client ID:	MSA-DMW3I-051412
Inject. Date:	23-May-2012 18:39:30	Dil. Factor:	10.0000
Sample Type:	Client		
Sample ID:	240-0010193-036		
Misc. Info.:	240-11319-J-7-A		
Operator:	001710	Instrument ID:	A4HP7
Vol. Injected:	1.0000	ALS Bottle#:	36
Lims Batch ID:	44986	Lims Sample ID:	36
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A4HP7\20120523-10193.b\8270_hp7.m		
Last Update:	24-May-2012 10:59:32	Calib Date:	11-May-2012 11:47:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A4HP7\20120511-9869.b\20511010.D		
Limit Group:	MSS 8270C ICAL		
Integrator:	RTE	ID Type:	Deconvolution ID
Process Host:	CORP-CTX-15		

First Level Reviewer: gruberj Date: 24-May-2012 10:57:44

Compound	Sig	RT	ADJ RT	DLT RT	Q	Response	On-Col Amt ng/ul	Flags
* 1 1,4-Dichlorobenzene-d4	152	3.198	3.204	-0.006	89	314664	4.00	
* 2 Naphthalene-d8	136	4.086	4.086	0.0	99	1101933	4.00	
* 3 Acenaphthene-d10	164	5.343	5.343	0.0	77	609598	4.00	
* 4 Phenanthrene-d10	188	6.413	6.413	0.0	93	1044957	4.00	
* 5 Chrysene-d12	240	8.349	8.349	0.0	75	990609	4.00	
* 6 Perylene-d12	264	9.526	9.526	0.0	93	854452	4.00	
$ 7 2-Fluorophenol	112	2.348	2.348	0.0	94	90447	0.7736	
$ 8 Phenol-d5	99	2.931	2.931	0.0	92	114157	0.8258	
$ 9 Nitrobenzene-d5	82	3.573	3.578	-0.005	92	58873	0.4957	
$ 10 2-Fluorobiphenyl (Surr)	172	4.846	4.846	0.0	99	117057	0.5444	
$ 11 2,4,6-Tribromophenol	330	5.910	5.910	0.0	88	20429	0.9319	
$ 12 Terphenyl-d14	244	7.552	7.552	0.0	98	139940	0.6700	
24 1,4-Dioxane	88	1.422	1.422	0.0	90	716127	11.6	M

QC Flag Legend

Review Flags
M - Manually Integrated

Sample Calculation

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 43665

SDG No.:

Instrument ID: A4HP7 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/11/2012 09:17 Calibration End Date: 05/11/2012 11:47 Calibration ID: 8680

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-43665/6	20511006.D
Level 2	STD2 240-43665/5	20511005.D
Level 3	STD3 240-43665/4	20511004.D
Level 4	STD4 240-43665/3	20511003.D
Level 5	STD5 240-43665/2	20511002.D
Level 6	STD6 240-43665/10	20511010.D
Level 7	STD7 240-43665/9	20511009.D
Level 8	STD8 240-43665/8	20511008.D
Level 9	STD9 240-43665/7	20511007.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.8214	0.7424 0.8345	0.8429 0.7791	0.7470 0.8123	0.6817	Ave		0.7827				7.1		15.0			
N-Nitrosodimethylamine	1.3517	1.1966 1.3430	1.1696 1.3633	1.2470 1.2652	1.0985	Ave		1.2544				7.6		15.0			
Pyridine	2.2974	1.9328 2.3707	1.9078 2.3286	1.9502 2.3534	1.8306	Ave		2.1214				11.0		15.0			
Ethyl methacrylate	1.6866	1.3892 1.6940	1.4486 1.6548	1.5423 1.6320	1.3388	Ave		1.5483				9.1		15.0			
Benzaldehyde	1.5333 0.8741	1.2294 +++++	1.1836 +++++	1.2281 +++++	1.1826	Ave		1.2052				17.0	*	15.0			
3-Chloropropionitrile	1.4897	1.2595 1.4622	1.3006 1.4937	1.3044 1.3859	1.2124	Ave		1.3636				8.0		15.0			
Malononitrile	2.2448	1.9935 1.8577	2.0845 1.6532	2.1475 1.3326	2.0596	Qua	-0.921	2.8087	-0.057						0.9970		0.9900
Phenol	1.8841	1.8281 1.8717	1.6617 1.9458	1.8052 1.8512	1.7580	Ave		1.8257				4.7		15.0			
Aniline	2.4151	2.2639 2.3911	2.0794 2.6720	2.3016 2.4648	2.2573	Ave		2.3556				7.4		15.0			
Bis(2-chloroethyl)ether	1.6894	1.5295 1.6002	1.6300 1.6117	1.5935 1.5697	1.4387	Ave		1.5829				4.7		15.0			
2-Chlorophenol	1.5079	1.4241 1.4922	1.3577 1.5327	1.4941 1.4601	1.4438	Ave		1.4641				3.8		15.0			
1,3-Dichlorobenzene	1.5599	1.5840 1.5209	1.5347 1.5599	1.5653 1.5199	1.4890	Ave		1.5417				2.0		15.0			
1,4-Dichlorobenzene	1.5862	1.5357 1.5490	1.5652 1.6083	1.5720 1.5963	1.5055	Ave		1.5648				2.2		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

FORM I
GASOLINE RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-MW5-051412 | Lab Sample ID: 240-11319-1

Matrix: Water | Lab File ID: YF052143.D

Analysis Method: 8015B | Date Collected: 05/14/2012 12:40

Sample wt/vol: 5(mL) | Date Analyzed: 05/22/2012 13:16

Soil Aliquot Vol: | Dilution Factor: 5

Soil Extract Vol.: | GC Column: RTX-VRX ID: 0.45(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 44711 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
8006-61-9	Total Petroleum Hydrocarbons (C6-C10)	1700	B	500	130

CAS NO.	SURROGATE	%REC	Q	LIMITS
98-08-8	Trifluorotoluene (Surr)	60		10-150

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\YPID\20120521-10136.b\YF052143.D		
Lims ID:	240-11319-B-1	Client ID:	MSA-MW5-051412
Inject. Date:	22-May-2012 13:16:56	Dil. Factor:	5.0000
Sample Type:	Client		
Sample ID:	240-0010136-043		
Misc. Info.:			
Operator:	4275	Instrument ID:	YPID
Vol. Injected:	1.0000	ALS Bottle#:	1
Lims Batch ID:	44711	Lims Sample ID:	43
Detector 1 :	GC ELC2B		
Detector 2 :	GC FID1A		
Method:	\\Ncchrom\ChromData\YPID\20120521-10136.b\Y80158021.m		
Last Update:	22-May-2012 14:43:43	Calib Date:	21-Feb-2012 16:37:39
Quant Method:	Internal/External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\YPID\20120221-7767.b\YF022110.D		
Limit Group:	GCV 8015B GRO ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-17		

Compound	Det	RT	ADJ RT	DLT RT	Response	On-Col Amt ug/l	Flags
* 15 Fluorobenzene	1	0.000	8.477	-8.477	0	0	
$ 16 Trifluorotoluene (Surr)	2	9.750	9.757	-0.007	2518781	5.99	
A 5 C6-C10	2	11.794	4.805 - 18.784		99870001	333.0	

Sample Calculation

FORM VI
GASOLINE RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 33435

SDG No.:

Instrument ID: YPID GC Column: RTX-VRX ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 02/10/2012 16:17 Calibration End Date: 02/10/2012 19:27 Calibration ID: 6924

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-33435/12	YF021012.D
Level 2	STD2 240-33435/13	YF021013.D
Level 3	STD3 240-33435/14	YF021014.D
Level 4	STD4 240-33435/15	YF021015.D
Level 5	STD5 240-33435/16	YF021016.D
Level 6	STD6 240-33435/17	YF021017.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2 LVL 6	LVL 3	LVL 4		B	M1	M2								
Total Petroleum Hydrocarbons (C6-C10)	318103 289067	320460 294590	282575	294457	Ave		299875.299				5.2		20.0			
C6-C12	375472 318195	363940 323226	316555	324196	Ave		336930.834				7.7		20.0			
Trifluorotoluene (Surr)	384133 460736	375012 483108	395882	424093	Ave		420494.083				10.0		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Sample Calculation

FORM I
DIESEL RANGE ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11319-1

SDG No.:

Client Sample ID: MSA-DMW3S-051412 | Lab Sample ID: 240-11319-6

Matrix: Water | Lab File ID: P6F51825.D

Analysis Method: 8015B | Date Collected: 05/14/2012 14:35

Extraction Method: 3510C | Date Extracted: 05/16/2012 12:53

Sample wt/vol: 1050(mL) | Date Analyzed: 05/19/2012 00:24

Con. Extract Vol.: 5(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | GC Column: RTX-5 ID: 0.53(mm)

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 44529 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
STL00141	Total Petroleum Hydrocarbons (C10-C32)	660	B	480	230

CAS NO.	SURROGATE	%REC	Q	LIMITS
111-84-2	n-Nonane	63		10-110

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A2HP6F\20120518-10091.b\P6F51825.D		
Lims ID:	240-11319-L-6-A	Client ID:	MSA-DMW3S-051412
Inject. Date:	19-May-2012 00:24:55	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0010091-025		
Misc. Info.:			
Operator:	2398	Instrument ID:	A2HP6F
Vol. Injected:	1.0000	ALS Bottle#:	25
Lims Batch ID:	44529	Lims Sample ID:	25
Detector:	GC FID1A		
Method:	\\Ncchrom\ChromData\A2HP6F\20120518-10091.b\TPH6F.m		
Last Update:	22-May-2012 13:17:56	Calib Date:	17-May-2012 17:03:17
Quant Method:	External Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A2HP6F\20120517-10062.b\P6F51714.D		
Limit Group:	GC TPH DIESEL ICAL		
Integrator:	Falcon		
Process Host:	CORP-CTX-17		

RT	EXP RT	DLT RT	Response	On-Col Amt ng/ul	Flags
$ 8 n-Nonane					
4.358	4.353	0.005	14435822	63.2	
A 15 Diesel					
9.519	5.319 - 13.720		23328758	125.1	
A 17 C10-C32					
10.110	5.319 - 14.902		25895709	138.8	

Sample Calculation

FORM VI
DIESEL RANGE ORGANICS INITIAL CALIBRATION DATA
EXTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11319-1 Analy Batch No.: 44398

SDG No.:

Instrument ID: A2HP6F GC Column: RTX-5 ID: 0.53(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/17/2012 11:52 Calibration End Date: 05/17/2012 13:56 Calibration ID: 8780

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-44398/4	P6F51704.D
Level 2	STD2 240-44398/5	P6F51705.D
Level 3	ICRT 240-44398/6	P6F51706.D
Level 4	STD4 240-44398/7	P6F51707.D
Level 5	STD5 240-44398/8	P6F51708.D

ANALYTE	CF				CURVE TYPE	COEFFICIENT			#	MIN CF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 5	LVL 2	LVL 3	LVL 4		B	M1	M2								
Diesel	198437 175405	186914	193120	178770	Ave		186529.226				5.2		20.0			
n-Nonane	234271 222460	224689	235678	225392	Ave		228498.010				2.6		20.0			

Note: The m1 coefficient is the same as Ave CF for an Ave curve type.

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE: JUNE 28, 2012**

FROM: **TERRI L. SOLOMON** **COPIES: DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – SELECT TOTAL AND DISSOLVED METALS, TOTAL RADIUM, RADIUM-228**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – 240-11319-1

SAMPLES: 4/Aqueous/

MSA-DMW3D-051412	MSA-DMW3I-051412
MSA-DMW3S-051412	MSA-MW5-051412

Overview

The sample set for Martin State Airport – Groundwater, SDG 240-11319-1, consists of four (4) aqueous environmental samples. No field duplicate pairs were included within this SDG.

All samples were analyzed for select total and dissolved metals including antimony, arsenic, barium, beryllium, cadmium, chromium, cobalt, copper, lead, mercury, molybdenum, nickel, selenium, silver, thallium, tungsten, vanadium and zinc. Samples MSA-DMW3D-051412 and MSA-DMW3I-051412 were also analyzed for Total Radium and Radium-228. The samples were collected by Tetra Tech on May 14, 2012 and analyzed by Test America. Metals analyses were conducted using SW-846 method 6020. Mercury analyses were conducted using SW-846 method 7470A. Radium analyses were conducted using EPA methods 903.0 and 904.0.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, initial and continuing calibration verification results, laboratory method / preparation blank results, ICP interference results, laboratory control sample recoveries, matrix spike / matrix spike duplicate recoveries, laboratory duplicate results, ICP serial dilution results, internal standard recoveries, yield recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

None.

Minor Problems

- The contract required detection limit (CRDL) percent recovery for lead was > 110% quality control limit affecting all samples. The positive results < 2X CRDL for lead were qualified biased high, "K", or "J", as a result of conflicting noncompliances.

- The following contaminants were detected in the laboratory method/preparation blanks at the following maximum concentrations:

Analyte	Maximum Concentration	Action Level
Molybdenum[(1)]	0.467 ug/L	2.335 ug/L
Thallium[(1)]	0.223 ug/L	1.115 ug/L
Tungsten[(1)]	0.479 ug/L	2.395 ug/L
Mercury[(2)]	0.148 ug/L	0.74 ug/L
Barium[(3)]	1.17 ug/L	5.85 ug/L
Copper[(3)]	0.560 ug/L	2.8 ug/L
Zinc[(3)]	14.7 ug/L	73.5 ug/L

(1) Maximum concentration present in a method blank.
(2) Maximum concentration present in a method blank affecting all samples except MSA-DMW3D-051412 (dissolved).
(3) Maximum concentration present in a preparation blank.

An action level of 5X the maximum contaminant level has been used to evaluate sample data for blank contamination. Sample aliquot and dilution factors, if applicable, were taken into consideration when evaluating for blank contamination. Positive results less than the blank action level reported for copper, mercury, molybdenum, thallium and zinc were qualified "B" as a result of laboratory blank contamination.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

Nondetected results were reported to the MDL.

The uncertainty for the radium results are reported at 2–sigma (95% confidence). The EDD does not contain the uncertainty result.

Total Radium is a combination of Radium-226 and Radium-224.

Executive Summary

Laboratory Performance: Several analytes were present in the laboratory method / preparation blanks.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:
1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW5-051412		
SDG: 240-11319-1	LAB_ID	240-11319-8			240-11319-7			240-11319-6			240-11319-1		
FRACTION: M	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.19	J	P	0.13	J	P	0.38	J	P	0.13	U	
ARSENIC		2.9	J	P	4.3	J	P	13			2	J	P
BARIUM		95			12			89			19		
BERYLLIUM		0.82	J	P	0.2	U		0.2	U		0.2	U	
CADMIUM		5.3			280			0.13	U		0.13	U	
CHROMIUM		11			4.3			2.8			1	J	P
COBALT		44			230			0.76	J	P	0.32	J	P
COPPER		93			18			2.2	B	A	4.8		
LEAD		5.3			0.94	J	CP	4.1			0.92	J	CP
MERCURY		0.12	U		0.15	B	A	0.12	U		0.12	U	
MOLYBDENUM		0.63	B	A	0.12	B	A	5	J	P	1.6	B	A
NICKEL		55			74			0.97	J	P	1.4	J	P
SELENIUM		0.57	U		2.8	J	P	0.57	U		0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.22	B	A	0.14	U		0.14	U	
TUNGSTEN		0.37	U		0.37	U		14			0.37	U	
VANADIUM		15	J	P	7.3	J	P	2	J	P	2.4	J	P
ZINC		280			290			13	B	A	10	B	A

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW5-051412		
SDG: 240-11319-1	LAB_ID	240-11319-8			240-11319-7			240-11319-6			240-11319-1		
FRACTION: MF	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
ANTIMONY		0.13	U		0.13	U		0.18	J	P	0.13	U	
ARSENIC		0.55	J	P	3.9	J	P	13			1.5	J	P
BARIUM		68			11			97			16		
BERYLLIUM		0.73	J	P	0.2	U		0.2	U		0.2	U	
CADMIUM		4.9			65			0.13	U		0.13	U	
CHROMIUM		0.71	U		2.2			1.3	J	P	0.71	U	
COBALT		46			220			0.87	J	P	0.13	J	P
COPPER		82			12			0.35	B	A	0.29	U	
LEAD		1.5	K	C	0.77	J	CP	0.18	U		0.18	U	
MERCURY		0.12	U		0.12	U		0.12	U		0.12	U	
MOLYBDENUM		0.093	U		0.093	U		5.8	J	P	1.4	B	A
NICKEL		55			70			0.57	J	P	0.57	J	P
SELENIUM		0.57	U		2.4	J	P	0.57	U		0.57	U	
SILVER		0.08	U		0.08	U		0.08	U		0.08	U	
THALLIUM		0.14	U		0.14	U		0.14	U		0.14	U	
TUNGSTEN		0.37	U		0.37	U		18			0.37	U	
VANADIUM		0.44	U		5.9	J	P	2	J	P	0.44	U	
ZINC		250			260			2.3	U		2.3	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412		
SDG: 240-11319-1	LAB_ID	9MTLR510			9MTLR410		
FRACTION: RAD	SAMP_DATE	5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	PCI/L			PCI/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
RADIUM-228		1.99			9.06		
TOTAL RADIUM		1.82			0.996		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW3D-051412 Lab Sample ID: 240-11319-8

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 12:35

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.19	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	2.9	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	95	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.82	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	5.3	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	11	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	44	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	93	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	5.3	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	0.63	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	55	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	15	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	280	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW3D-051412 Lab Sample ID: 240-11319-8

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 12:35

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW3I-051412 Lab Sample ID: 240-11319-7

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 11:10

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.13	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	4.3	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	12	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	280	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	4.3	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	230	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	18	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.94	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	0.12	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	74	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.8	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	0.22	2.0	0.14	ug/L	J		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	7.3	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	290	20	2.3	ug/L		B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW3I-051412 Lab Sample ID: 240-11319-7

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 11:10

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.15	0.20	0.12	ug/L	J		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 14:35

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.38	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	13	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	89	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.8	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	0.76	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	2.2	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	4.1	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	5.0	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	0.97	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	14	10	0.37	ug/L			1	6020
7440-62-2	Vanadium	2.0	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	13	20	2.3	ug/L	J	B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 14:35

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MSA-MW5-051412 Lab Sample ID: 240-11319-1

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 12:40

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	2.0	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	19	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	1.0	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	0.32	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	4.8	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.92	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	1.6	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	1.4	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7440-62-2	Vanadium	2.4	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	10	20	2.3	ug/L	J	B	1	6020

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MSA-MW5-051412 Lab Sample ID: 240-11319-1

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 12:40

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW3D-051412 Lab Sample ID: 240-11319-8

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 12:35

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	0.55	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	68	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	0.73	1.0	0.20	ug/L	J		1	6020
7440-43-9	Cadmium	4.9	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	46	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	82	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	1.5	1.0	0.18	ug/L			1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	55	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	250	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW3I-051412 Lab Sample ID: 240-11319-7

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 11:10

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	3.9	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	11	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	65	1.0	0.13	ug/L			1	6020
7440-47-3	Chromium	2.2	2.0	0.71	ug/L			1	6020
7440-48-4	Cobalt	220	1.0	0.058	ug/L			1	6020
7440-50-8	Copper	12	2.0	0.29	ug/L		B	1	6020
7439-92-1	Lead	0.77	1.0	0.18	ug/L	J		1	6020
7439-98-7	Molybdenum	10	10	0.093	ug/L	U		1	6020
7440-02-0	Nickel	70	2.0	0.20	ug/L			1	6020
7782-49-2	Selenium	2.4	5.0	0.57	ug/L	J		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	5.9	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	260	20	2.3	ug/L		B	1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-DMW3S-051412 Lab Sample ID: 240-11319-6

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 14:35

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.18	2.0	0.13	ug/L	J		1	6020
7440-38-2	Arsenic	13	5.0	0.40	ug/L			1	6020
7440-39-3	Barium	97	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	1.3	2.0	0.71	ug/L	J		1	6020
7440-48-4	Cobalt	0.87	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	0.35	2.0	0.29	ug/L	J	B	1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	5.8	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	0.57	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	2.0	20	0.44	ug/L	J		1	6020
7440-66-6	Zinc	20	20	2.3	ug/L	U		1	6020
7440-33-7	Tungsten	18	10	0.37	ug/L			1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MSA-MW5-051412 Lab Sample ID: 240-11319-1

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG ID.:

Matrix: Water Date Sampled: 05/14/2012 12:40

Reporting Basis: WET Date Received: 05/15/2012 09:00

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	2.0	2.0	0.13	ug/L	U		1	6020
7440-38-2	Arsenic	1.5	5.0	0.40	ug/L	J		1	6020
7440-39-3	Barium	16	5.0	0.19	ug/L		B	1	6020
7440-41-7	Beryllium	1.0	1.0	0.20	ug/L	U		1	6020
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020
7440-48-4	Cobalt	0.13	1.0	0.058	ug/L	J		1	6020
7440-50-8	Copper	2.0	2.0	0.29	ug/L	U		1	6020
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020
7439-98-7	Molybdenum	1.4	10	0.093	ug/L	J	B	1	6020
7440-02-0	Nickel	0.57	2.0	0.20	ug/L	J		1	6020
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020
7440-28-0	Thallium	2.0	2.0	0.14	ug/L	U		1	6020
7440-62-2	Vanadium	20	20	0.44	ug/L	U		1	6020
7440-66-6	Zinc	20	20	2.3	ug/L	U		1	6020
7440-33-7	Tungsten	10	10	0.37	ug/L	U		1	6020
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

FORM I

SAMPLE RESULTS

Date: 12-Jun-12

Lab Name: TestAmerica **SDG:** 45009 **Collection Date:** 5/14/2012 12:35:00 PM

Lot-Sample No.: J2E160478-2 **Report No. :** 51983 **Received Date:** 5/16/2012 10:30:00 AM

Client Sample ID: MSA-DMW3D-051412 (240-11319-8) **COC No. :** **Matrix:** WATER AQ

240-11319-1 Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield	CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2142060	EPA 904.0			**Work Order:** MTLR51AC			**Report DB ID:** 9MTLR510						
RA-228	1.99E+00		3.8E-01	4.5E-01	5.32E-01	pCi/L	89%		*(3.7)*	6/1/12 04:52 p		1.0009	GPC4B
						2.36E-01	1.00E+00		*(8.8)*			L	
Batch: 2157047	EPA 903.0			**Work Order:** MTLR53AA			**Report DB ID:** 9MTLR530						
TOTAL ALPHA RA	1.82E+00		3.5E-01	5.1E-01	2.04E-01	pCi/L	89%		*(8.9)*	6/8/12 12:02 p		0.5005	GPC10B
						8.06E-02	5.00E-01		*(7.2)*			L	

No. of Results: 2 **Comments:**

TestAmerica rptSTLRchSample V6.2.20 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM I

SAMPLE RESULTS

Date: 12-Jun-12

Lab Name: TestAmerica **SDG:** 45009 **Collection Date:** 5/14/2012 11:10:00 AM

Lot-Sample No.: J2E160478-1 **Report No. :** 51983 **Received Date:** 5/16/2012 10:30:00 AM

Client Sample ID: MSA-DMW3I-051412 (240-11319-7) **COC No. :** **Matrix:** WATER AQ

240-11319-1 Ordered by Client Sample ID, Batch No.

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, Lc	Yield	CRDL(RL)	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2142059	EPA 903.0			**Work Order:**	MTLR42AA		**Report DB ID:**	9MTLR420					
TOTAL ALPHA RA	9.96E-01		2.5E-01	3.3E-01	1.32E-01	pCi/L	100%		*(7.6)*	6/4/12 11:55 a		0.5011	GPC10B
						4.47E-02	5.00E-01		*(6.)*			L	
Batch: 2142060	EPA 904.0			**Work Order:**	MTLR41AC		**Report DB ID:**	9MTLR410					
RA-228	9.06E+00		8.5E-01	1.3E+00	7.85E-01	pCi/L	68%		*(11.5)*	6/1/12 04:52 p		0.9509	GPC4A
						3.53E-01	1.00E+00		*(13.5)*			L	

No. of Results: 2 **Comments:**

Page 1373 of 1607

06/14/2012

TestAmerica rptSTLRchSample V5.2.20 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

APPENDIX C
SUPPORT DOCUMENTATION

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MSA Groundwater

Report Number: 240-11319-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

The 6850 Perchlorate and Explosives - RDX analyses were performed at the TestAmerica West Sacramento Laboratory. The Total Alpha Radium and Radium 228 analyses were performed at the TestAmerica Richland Laboratory.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/15/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the coolers at receipt was 3.0, 3.4, and 4.6 C.

Insufficient volume was received to perform the GRO analysis requested on the COC for the following sample: 240-11319-6. The GRO analysis was not logged. The client was contacted and the sample was recollected for this analysis. Results for the GRO on this sample are included on a different report.

VOLATILE ORGANIC COMPOUNDS (GC MS)

Samples MSA-MW5-051412-37 (240-11319-2), MSA-MW5-051412-31 (240-11319-3), MSA-MW5-051412-25 (240-11319-4), TB-051412 (240-11319-5), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for volatile organic compounds (GC MS) in accordance with EPA SW-846 Method 8260C. The samples were analyzed on 05/25/2012.

The laboratory control sample (LCS) for batch 45325 exceeded control limits for the following analytes: Tetrachloroethene. This analyte was biased high in the LCS and was not detected in the associated samples; therefore, the data has been reported.

Samples MSA-MW5-051412-37 (240-11319-2)[90.9X], MSA-MW5-051412-31 (240-11319-3)[100X], MSA-MW5-051412-25 (240-11319-4)[100X], MSA-DMW3S-051412 (240-11319-6)[166.67X] and MSA-DMW3I-051412 (240-11319-7)[333.33X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

The continuing calibration verification (CCV) for 1,1,2-Trichloro-1,2,2-trifluoroethane and Tetrachloroethene associated with batch 45325 recovered above the upper control limit. The samples associated with this CCV were non-detects for the affected analytes; therefore, the data have been reported.

The continuing calibration verification (CCV) for analytical batch 45325 recovered below the lower control limitfor Bromomethane and Cloroethane. The samples associated with this CCV were non-detects for the affected analytes. A low level CCV, at the reporting limit, was analyzed and the affected compounds were detected; therefore the data is acceptable and reportable per the laboratory Standard Operating Procedure.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)
Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270C. The samples were prepared on 05/19/2012 and analyzed on 05/23/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

Nitrobenzene-d5 (Surr) and Terphenyl-d14 (Surr) failed the surrogate recovery criteria low for 240-11354-AS-2-A MS.

1,4-Dioxane exceeded the rpd limit for the MSD of sample 240-11354-2 in batch 240-44986.

Refer to the QC report for details.

Samples MSA-DMW3S-051412 (240-11319-6)[5X] and MSA-DMW3I-051412 (240-11319-7)[10X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the SVOCs analyses. All other quality control parameters were within the acceptance limits.

GASOLINE RANGE ORGANICS (GRO)
Sample MSA-MW5-051412 (240-11319-1) was analyzed for gasoline range organics (GRO) in accordance with EPA SW-846 Method 8015B - GRO. The samples were analyzed on 05/22/2012.

Total Petroleum Hydrocarbons (C6-C10) was detected in method blank MB 240-44711/22 at a level exceeding the reporting limit. If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Sample MSA-MW5-051412 (240-11319-1)[5X] required dilution prior to analysis. The reporting limits have been adjusted accordingly.

No other difficulties were encountered during the GRO analysis. All other quality control parameters were within the acceptance limits.

HALOACETIC ACIDS (HAAS)
Sample MSA-DMW3S-051412 (240-11319-6) was analyzed for Haloacetic Acids (HAAs) in accordance with EPA Method 552.2. The samples were prepared and analyzed on 05/17/2012.

No difficulties were encountered during the haloacetic acids analysis. All quality control parameters were within the acceptance limits.

DIESEL RANGE ORGANICS (DRO)
Samples MSA-MW5-051412 (240-11319-1) and MSA-DMW3S-051412 (240-11319-6) were analyzed for diesel range organics (DRO) in accordance with EPA SW-846 Method 8015B - DRO. The samples were prepared on 05/16/2012 and analyzed on 05/18/2012 and 05/19/2012.

Surrogates are added during the extraction process prior to dilution. When the sample dilution is 5X or greater, surrogate recoveries are diluted out and no corrective action is required.

Total Petroleum Hydrocarbons (C10-C32) was detected in method blank MB 240-44281/17-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

Insufficient sample volume was available to perform a matrix spike/matrix spike duplicate (MS/MSD) associated with batch 44281.

No other difficulties were encountered during the DRO analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)
Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Method 6020. The samples were prepared on 05/18/2012 and analyzed on 05/21/2012.

No difficulties were encountered during the metals analyses. All quality control parameters were within the acceptance limits.

TOTAL RECOVERABLE METALS (ICPMS)
Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for total recoverable metals (ICPMS) in accordance with EPA SW-846 Method

6020. The samples were prepared on 05/18/2012 and analyzed on 05/21/2012.

Several analytes were detected in method blank MB 240-44621/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analyses. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY

Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/16/2012 and 05/21/2012 and analyzed on 05/17/2012 and 05/22/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

TOTAL MERCURY

Samples MSA-MW5-051412 (240-11319-1), MSA-DMW3S-051412 (240-11319-6), MSA-DMW3I-051412 (240-11319-7) and MSA-DMW3D-051412 (240-11319-8) were analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/16/2012 and analyzed on 05/17/2012.

No difficulties were encountered during the mercury analyses. All quality control parameters were within the acceptance limits.

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11319-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-11319-1	MSA-MW5-051412	Water	05/14/2012 1240	05/15/2012 0900
240-11319-2	MSA-MW5-051412-37	Water	05/14/2012 1055	05/15/2012 0900
240-11319-3	MSA-MW5-051412-31	Water	05/14/2012 1140	05/15/2012 0900
240-11319-4	MSA-MW5-051412-25	Water	05/14/2012 1230	05/15/2012 0900
240-11319-5TB	TB-051412	Water	05/14/2012 0000	05/15/2012 0900
240-11319-6	MSA-DMW3S-051412	Water	05/14/2012 1435	05/15/2012 0900
240-11319-7	MSA-DMW3I-051412	Water	05/14/2012 1110	05/15/2012 0900
240-11319-8	MSA-DMW3D-051412	Water	05/14/2012 1235	05/15/2012 0900

Chain of Custody Record

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratory location: _____

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other _____

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Aparavage	Site Contact: Stu Cameron	Lab Contact:	COC No: 009939
Address: 20251 Century Blvd Ste 200	Telephone: (301)528-5552	Telephone: (703) 342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Aparavage@tetratech.com	Analysis Turnaround Time (in BUS days)		
Phone: (301)528-5552		TAT if different from below _____ ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MSA-GW Sampling	Method of Shipment/Carrier:			
Project Number: 112IC04021-03	Shipping/Tracking No:			
PO #				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite (Y/N)	VOCs	Total Metals	Dissolved Metals	1,4-Dioxane	Perchlorate	RDX	GRO + DRO	Radium 224, 226, + 228	Halo Acetic Acids	Sample Specific Notes / Special Instructions:
MSA-MW5-051412	5/14/12	1240		X					2	2			7					X	X	X	X	X	X			
MSA-MW5-051412-37		1055								3							X									
MSA-MW5-051412-31		1140								3							X									
MSA-MW5-051412-25		1230								3							X									
TB-051412										2							X									
MSA-DMW3S-051412		1435							2	3			7	2			X	X	X	X	X	X	X		X	
MSA-DMW3I-051412		1110							5	3			3				X	X	X	X	X			X		
MSA-DMW3D-051412		~~1250~~ 1235							5	3			3				X	X	X	X	X			X		

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	5-14-12 / 1607	Paul Gayleard	TestAmerica	5/14/12 / 1608
Paul Gayleard	TestAmerica	5/14/12 / 1700			
			Received in Laboratory by: Mike Gamlone	TAL	5/15/12 9:07

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TAL 0018-1 (04/10)

HOLDTIME

SDG 240-11319-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
EXP	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/21/2012	5/26/2012	7	5	12
EXP	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/21/2012	5/26/2012	7	5	12
HG	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HG	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HG	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HG	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
M	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
M	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
M	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
M	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
HGF	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HGF	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
HGF	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/21/2012	5/22/2012	7	1	8
HGF	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/16/2012	5/17/2012	2	1	3
MF	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
MF	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
MF	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
MF	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/18/2012	5/21/2012	4	3	7
PCL	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
PCL	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
PCL	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
PCL	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/23/2012	5/26/2012	9	3	12
OS	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OS	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OS	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OS	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/19/2012	5/23/2012	5	4	9
OV	UG/L	MSA-MW5-051412-37	240-11319-2	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	TB-051412	240-11319-5	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-MW5-051412-31	240-11319-3	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-MW5-051412-25	240-11319-4	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/17/2012	5/17/2012	3	0	3
OV	UG/L	MSA-DMW3I-051412	240-11319-7	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
OV	UG/L	MSA-DMW3D-051412	240-11319-8	NM	5/14/2012	5/25/2012	5/25/2012	11	0	11
OV	UG/L	TB-051412	240-11319-5	TB	5/14/2012	5/25/2012	5/25/2012	11	0	11
DRO	UG/L	MSA-DMW3S-051412	240-11319-6	NM	5/14/2012	5/16/2012	5/19/2012	2	3	5
DRO	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/16/2012	5/18/2012	2	2	4
GRO	UG/L	MSA-MW5-051412	240-11319-1	NM	5/14/2012	5/22/2012	5/22/2012	8	0	8
RAD	PCI/L	MSA-DMW3I-051412	9MTLR420	NM	5/14/2012	5/22/2012	6/4/2012	8	13	21
RAD	PCI/L	MSA-DMW3D-051412	9MTLR510	NM	5/14/2012	5/22/2012	6/1/2012	8	10	18
RAD	PCI/L	MSA-DMW3D-051412	9MTLR530	NM	5/14/2012	6/6/2012	6/8/2012	23	2	25
RAD	PCI/L	MSA-DMW3I-051412	9MTLR410	NM	5/14/2012	5/22/2012	6/1/2012	8	10	18

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11319-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds by GC/MS	TAL NC	SW846 8260C	
Purge and Trap	TAL NC		SW846 5030C
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270C	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Gasoline Range Organics - (GC)	TAL NC	SW846 8015B	
Purge and Trap	TAL NC		SW846 5030B
Diesel Range Organics (DRO) (GC)	TAL NC	SW846 8015B	
Liquid-Liquid Extraction (Separatory Funnel)	TAL NC		SW846 3510C
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD
Total Radium	TAL RCH	TAL-RCH EPA	
Haloacetic Acids (HAAs) (GC)	TAL SAV	EPA 552.2	
Microextraction	TAL SAV		EPA 552.2
General Sub Contract Method	TAL WSC	Subcontract	

Lab References:

TAL NC = TestAmerica Canton

TAL RCH = TestAmerica Richland

TAL SAV = TestAmerica Savannah

TAL WSC = TestAmerica West Sacramento

Method References:

EPA = US Environmental Protection Agency

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

TAL-RCH = TestAmerica Laboratories, Richland, Facility Standard Operating Procedure.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	ICV 240-44805/5 05/21/2012 08:57				CCV 240-44805/22 05/21/2012 10:44				CCV 240-44805/34 05/21/2012 11:55			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	81.7		80.0	102	98.5		100	99	99.4		100	99
Arsenic	80.6		80.0	101	102		100	102	100		100	100
Barium	80.0		80.0	100	100		100	100	101		100	101
Beryllium	84.1		80.0	105	105		100	105	105		100	105
Cadmium	80.7		80.0	101	101		100	101	102		100	102
Chromium	80.2		80.0	100	101		100	101	101		100	101
Cobalt	81.3		80.0	102	101		100	101	100		100	100
Copper	82.9		80.0	104	102		100	102	102		100	102
Lead	86.5		80.0	108	107		100	107	108		100	108
Molybdenum	81.5		80.0	102	103		100	103	103		100	103
Nickel	82.2		80.0	103	103		100	103	101		100	101
Selenium	81.8		80.0	102	104		100	104	102		100	102
Silver	82.3		80.0	103	103		100	103	103		100	103
Thallium	87.9		80.0	110	108		100	108	108		100	108
Tungsten	79.5		80.0	99	99.6		100	100	100		100	100
Vanadium	80.1		80.0	100	99.6		100	100	99.3		100	99
Zinc	82.3		80.0	103	103		100	103	103		100	103

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	CCV 240-44805/46 05/21/2012 13:06				CCV 240-44805/58 05/21/2012 14:16				CCV 240-44805/70 05/21/2012 15:31			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	98.8		100	99	98.1		100	98	97.7		100	98
Arsenic	100		100	100	100		100	100	99.5		100	100
Barium	100		100	100	100		100	100	100		100	100
Beryllium	106		100	106	106		100	106	103		100	103
Cadmium	101		100	101	101		100	101	100		100	100
Chromium	99.6		100	100	99.6		100	100	98.7		100	99
Cobalt	100		100	100	100		100	100	99.3		100	99
Copper	102		100	102	101		100	101	99.7		100	100
Lead	107		100	107	106		100	106	106		100	106
Molybdenum	102		100	102	102		100	102	101		100	101
Nickel	102		100	102	101		100	101	100		100	100
Selenium	101		100	101	102		100	102	101		100	101
Silver	103		100	103	102		100	102	102		100	102
Thallium	108		100	108	107		100	107	108		100	108
Tungsten	99.8		100	100	98.8		100	99	99.1		100	99
Vanadium	99.1		100	99	98.8		100	99	98.1		100	98
Zinc	103		100	103	102		100	102	102		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICV Source: MTHGICVW_00300 Concentration Units: ug/L

CCV Source: MTHGCALW_00195

Analyte	ICV 240-44403/7-A 05/17/2012 13:44				CCVL 240-44403/10-A 05/17/2012 13:49				CCV 240-44403/12-A 05/17/2012 17:20			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.27		2.50	91	5.00		5.00	100	5.31		5.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICV Source: MTHGICVW_00300 Concentration Units: ug/L

CCV Source: MTHGCALW_00195

Analyte	CCV 240-44403/12-A 05/17/2012 17:45				CCV 240-44403/12-A 05/17/2012 18:10				CCV 240-44403/12-A 05/17/2012 18:32			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.37		5.00	107	5.20		5.00	104	5.32		5.00	106

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICV Source: MTHGICVW_00302 Concentration Units: ug/L

CCV Source: MTHGCALW_00196

Analyte	ICV 240-44707/7-A 05/22/2012 09:26				CCVL 240-44707/10-A 05/22/2012 09:31				CCV 240-44707/12-A 05/22/2012 10:22			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.33		2.50	93	4.98		5.00	100	4.71		5.00	94

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICV Source: MTHGICVW_00302 Concentration Units: ug/L

CCV Source: MTHGCALW_00196

Analyte	CCV 240-44707/12-A 05/22/2012 10:46				CCV 240-44707/12-A 05/22/2012 11:11							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.00		5.00	100	5.04		5.00	101				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Method: 6020 Instrument ID: I8

Lab Sample ID: CRI 240-44805/7 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRIW_00018

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Antimony	2.00	1.93	J	97	50-150
Arsenic	2.00	2.05	J	102	50-150
Barium	1.00	1.05	J	105	50-150
Beryllium	1.00	1.07		107	50-150
Cadmium	0.500	0.529	J	106	50-150
Chromium	2.00	2.09		105	50-150
Cobalt	1.00	0.963	J	96	50-150
Copper	2.00	2.05		103	50-150
Lead	1.00	1.31		131	50-150
Molybdenum	10.0	9.71	J	97	50-150
Nickel	2.00	2.19		110	50-150
Selenium	2.00	1.90	J	95	50-150
Silver	0.500	0.500	J	100	50-150
Thallium	1.00	0.952	J	95	50-150
Vanadium	5.00	5.01	J	100	50-150
Tungsten	10.0	9.21	J	92	50-150
Zinc	10.0	9.39	J	94	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-44403/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00195

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.219		110	50-150

Lab Sample ID: CRA 240-44707/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00196

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.178	J	89	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44805/6 05/21/2012 09:04		CCB 240-44805/23 05/21/2012 10:51		CCB 240-44805/35 05/21/2012 12:02		CCB 240-44805/47 05/21/2012 13:14	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.258	J	0.309	J	0.467	J	0.206	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	2.0	U	2.0	U	0.173	J	2.0	U
Tungsten	10	10	U	10	U	0.479	J	10	U
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-44805/59 05/21/2012 14:23		CCB 240-44805/71 05/21/2012 15:38					
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U				
Arsenic	5.0	5.0	U	5.0	U				
Barium	5.0	5.0	U	5.0	U				
Beryllium	1.0	1.0	U	1.0	U				
Cadmium	1.0	1.0	U	1.0	U				
Chromium	2.0	2.0	U	2.0	U				
Cobalt	1.0	1.0	U	1.0	U				
Copper	2.0	2.0	U	2.0	U				
Lead	1.0	1.0	U	1.0	U				
Molybdenum	10	0.201	J	0.225	J				
Nickel	2.0	2.0	U	2.0	U				
Selenium	5.0	5.0	U	5.0	U				
Silver	1.0	1.0	U	1.0	U				
Thallium	2.0	2.0	U	0.223	J				
Tungsten	10	10	U	0.400	J				
Vanadium	20	20	U	20	U				
Zinc	20	20	U	20	U				

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44403/8-A 05/17/2012 13:45		CCB 240-44403/11-A 05/17/2012 17:23		CCB 240-44403/11-A 05/17/2012 17:47		CCB 240-44403/11-A 05/17/2012 18:12	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.148	J	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	CCB 240-44403/11-A 05/17/2012 18:35 Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U						

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-44707/8-A 05/22/2012 09:28		CCB 240-44707/11-A 05/22/2012 10:24		CCB 240-44707/11-A 05/22/2012 10:48		CCB 240-44707/11-A 05/22/2012 11:13	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.20	U	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44621/1-A

Instrument Code: I8 Batch No.: 44805

CAS No.	Analyte	Concentration	C	Q	Method
7440-36-0	Antimony	2.0	U		6020
7440-38-2	Arsenic	5.0	U		6020
7440-39-3	Barium	1.17	J		6020
7440-41-7	Beryllium	1.0	U		6020
7440-43-9	Cadmium	1.0	U		6020
7440-47-3	Chromium	2.0	U		6020
7440-48-4	Cobalt	1.0	U		6020
7440-50-8	Copper	0.560	J		6020
7439-92-1	Lead	1.0	U		6020
7439-98-7	Molybdenum	0.161	J		6020
7440-02-0	Nickel	2.0	U		6020
7782-49-2	Selenium	5.0	U		6020
7440-22-4	Silver	1.0	U		6020
7440-28-0	Thallium	2.0	U		6020
7440-62-2	Vanadium	20	U		6020
7440-33-7	Tungsten	10	U		6020
7440-66-6	Zinc	14.7	J		6020

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44260/1-A

Instrument Code: H4 Batch No.: 44545

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

3-IN
METHOD BLANK
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-44752/2-B

Instrument Code: H4 Batch No.: 45004

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.20	U		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICSA 240-44805/8 Instrument ID: I8

Lab File ID: I8052112A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.141**	
Arsenic		**0.332**	
Barium		**0.0800**	
Beryllium		**0.0010**	
Cadmium		**-0.259**	
Chromium		**0.553**	
Cobalt		**0.0800**	
Copper		**0.408**	
Lead		**-0.0200**	
Molybdenum	**1000**	**1029**	**103**
Nickel		**0.435**	
Selenium		**-0.0180**	
Silver		**0.0000**	
Thallium		**-0.156**	
Tungsten		**0.104**	
Vanadium		**0.174**	
Zinc		**0.663**	
Aluminum	*50000*	*52660*	*105*
Boron		*0.314*	
Calcium	*50000*	*52290*	*105*
Iron	*50000*	*51920*	*104*
Magnesium	*50000*	*53040*	*106*
Manganese		*0.0540*	
Potassium	*50000*	*51370*	*103*
Sodium	*50000*	*53330*	*107*
Strontium		*0.192*	
Tin		*-1.80*	
Titanium	*1000*	*1087*	*109*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Lab Sample ID: ICSAB 240-44805/9 Instrument ID: I8

Lab File ID: I8052112A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**104**	**104**
Arsenic	**100**	**101**	**101**
Barium	**100**	**105**	**105**
Beryllium	**100**	**110**	**110**
Cadmium	**100**	**103**	**103**
Chromium	**100**	**110**	**110**
Cobalt	**100**	**103**	**103**
Copper	**100**	**101**	**101**
Lead	**100**	**117**	**117**
Molybdenum	**1100**	**1154**	**105**
Nickel	**100**	**107**	**107**
Selenium	**100**	**102**	**102**
Silver	**100**	**104**	**104**
Thallium	**100**	**117**	**117**
Tungsten	**100**	**104**	**104**
Vanadium	**100**	**104**	**104**
Zinc	**100**	**105**	**105**
Aluminum	*50000*	*52690*	*105*
Boron	*100*	*101*	*101*
Calcium	*50000*	*53460*	*107*
Iron	*50000*	*52890*	*106*
Magnesium	*50000*	*53830*	*108*
Manganese	*100*	*117*	*117*
Potassium	*50000*	*52870*	*106*
Sodium	*50000*	*54050*	*108*
Strontium	*100*	*99.1*	*99*
Tin	*100*	*102*	*102*
Titanium	*1100*	*1201*	*109*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - DISSOLVED

Sample not in SDG

Client ID: _____ Lab ID: 240-11217-P-4-C MS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	1.16		0.20	U	1.00	116	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Sample not in SDG

Client ID: _____ Lab ID: 240-11217-N-4-C MS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Antimony	85.5		0.77	J	100	85	44-153		6020
Arsenic	926		4.6	J	1000	92	82-123		6020
Barium	987		43		1000	94	45-144		6020
Beryllium	1010		0.44	J	1000	101	77-124		6020
Cadmium	947		2.2		1000	94	78-117		6020
Chromium	956		11		1000	95	72-110		6020
Cobalt	951		10		1000	94	67-114		6020
Copper	974		23		1000	95	60-123		6020
Lead	975		14		1000	96	73-115		6020
Molybdenum	94.9		2.6	J	100	92	80-110		6020
Nickel	964		7.0		1000	96	72-111		6020
Selenium	911		5.0	U	1000	91	72-148		6020
Silver	99.0		0.47	J	100	98	10-139		6020
Thallium	242		2.0	U	250	97	69-117		6020
Vanadium	938		10	J	1000	93	70-112		6020
Tungsten	87.7		0.44	J	100	87	43-133		6020
Zinc	4380		3600		1000	81	49-156		6020

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Sample not in SDG

Client ID: _____ Lab ID: 240-11413-N-1-D MS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR C		Sample Result (SR) C		Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.860		0.20	U	1.00	86	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Sample not in SDG

Client ID: _____ Lab ID: 240-11413-N-1-E MSD

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.837		1.00	84	69-134	3	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

6-IN
DUPLICATES
METALS - DISSOLVED

Sample not in SDG

Client ID: _____ Lab ID: 240-11217-P-4-B DU

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Mercury	0.20	0.20	U	0.20	U	NC		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

6-IN
DUPLICATES
METALS - TOTAL RECOVERABLE

Sample 16 of 17 SDG

Client ID: _____ Lab ID: 240-11217-N-4-B DU

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.: _____

% Solids for Sample: _____ % Solids for Duplicate: _____

Matrix: Water Concentration Units: ug/L

Analyte	Control Limit	Sample (S)	C	Duplicate (D)	C	RPD	Q	Method
Antimony	2.0	0.77	J	0.728	J	6.00		6020
Arsenic	5.0	4.6	J	4.81	J	5.00		6020
Barium	5.0	43		44.2		2.00		6020
Beryllium	1.0	0.44	J	0.481	J	9.00		6020
Cadmium	1.0	2.2		2.31		6.00		6020
Chromium	2.0	11		11.1		1.00		6020
Cobalt	1.0	10		10.4		1.00		6020
Copper	2.0	23		23.3		1.00		6020
Lead	1.0	14		14.4		0.900		6020
Molybdenum	10	2.6	J	2.53	J	2.00		6020
Nickel	2.0	7.0		7.13		1.00		6020
Selenium	5.0	5.0	U	5.0	U	NC		6020
Silver	1.0	0.47	J	0.471	J	0.900		6020
Thallium	2.0	2.0	U	2.0	U	NC		6020
Vanadium	20	10	J	10.6	J	1.00		6020
Tungsten	10	0.44	J	10	U	NC		6020
Zinc	20	3600		3570		0.0300		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VI-IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-44621/2-A

Lab Name: TestAmerica Canton Job No.: 240-11319-1

Sample Matrix: Water LCS Source: MTICPMSB_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Antimony	100	95.2		95	80	120		6020
Arsenic	1000	948		95	80	120		6020
Barium	1000	953		95	80	120		6020
Beryllium	1000	1030		103	80	120		6020
Cadmium	1000	966		97	80	120		6020
Chromium	1000	963		96	80	120		6020
Cobalt	1000	959		96	80	120		6020
Copper	1000	973		97	80	120		6020
Lead	1000	983		98	80	120		6020
Molybdenum	100	92.5		92	80	120		6020
Nickel	1000	982		98	80	120		6020
Selenium	1000	971		97	80	120		6020
Silver	100	99.6		100	80	120		6020
Thallium	250	245		98	80	120		6020
Vanadium	1000	943		94	80	120		6020
Tungsten	100	89.4		89	80	120		6020
Zinc	1000	987		99	80	120		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-44260/2-A

Lab Name: TestAmerica Canton Job No.: 240-11319-1

Sample Matrix: Water LCS Source: MTHGICVW_00299

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	5.27		105	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-44759/2-A

Lab Name: TestAmerica Canton Job No.: 240-11319-1

Sample Matrix: Water LCS Source: MTHGICVW_00302

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.42		88	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Sample not in SDG

Lab ID: 240-11217-N-4-A SD ^5

SDG No:

Lab Name: TestAmerica Canton Job No: 240-11319-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Antimony	0.77	J	0.770	J	NC		6020
Arsenic	4.6	J	4.05	J	NC		6020
Barium	43		43.3		NC		6020
Beryllium	0.44	J	5.0	U	NC		6020
Cadmium	2.2		2.14	J	NC		6020
Chromium	11		10.8		NC		6020
Cobalt	10		10.5		NC		6020
Copper	23		23.5		NC		6020
Lead	14		14.3		NC		6020
Molybdenum	2.6	J	2.79	J	NC		6020
Nickel	7.0		6.85	J	NC		6020
Selenium	5.0	U	25	U	NC		6020
Silver	0.47	J	0.430	J	NC		6020
Thallium	2.0	U	10	U	NC		6020
Vanadium	10	J	10.1	J	NC		6020
Tungsten	0.44	J	50	U	NC		6020
Zinc	3600		3570		0.24		6020

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020 XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Tungsten	182.00	10	0.37
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11319-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44621/1-A	05/18/2012 15:38	44621		50	50
LCS 240-44621/2-A	05/18/2012 15:38	44621		50	50
240-11217-N-4-B DU	05/18/2012 15:38	44621		50	50
240-11217-N-4-C MS	05/18/2012 15:38	44621		50	50
240-11319-1	05/18/2012 15:38	44621		50	50
240-11319-6	05/18/2012 15:38	44621		50	50
240-11319-7	05/18/2012 15:38	44621		50	50
240-11319-8	05/18/2012 15:38	44621		50	50
240-11319-1	05/18/2012 15:38	44621		50	50
240-11319-6	05/18/2012 15:38	44621		50	50
240-11319-7	05/18/2012 15:38	44621		50	50
240-11319-8	05/18/2012 15:38	44621		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44260/1-A	05/16/2012 15:05	44260		100	100
LCS 240-44260/2-A	05/16/2012 15:05	44260		100	100
240-11217-P-4-B DU	05/16/2012 15:05	44260		100	100
240-11217-P-4-C MS	05/16/2012 15:05	44260		100	100
240-11319-1	05/16/2012 15:05	44260		100	100
240-11319-1	05/16/2012 15:05	44260		100	100
240-11319-6	05/16/2012 15:05	44260		100	100
240-11319-6	05/16/2012 15:05	44260		100	100
240-11319-7	05/16/2012 15:05	44260		100	100
240-11319-7	05/16/2012 15:05	44260		100	100
240-11319-8	05/16/2012 15:05	44260		100	100

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-44752/2-B	05/21/2012 15:00	44759		100	100
LCS 240-44759/2-A	05/21/2012 15:00	44759		100	100
240-11413-N-1-D MS	05/21/2012 15:00	44759		100	100
240-11413-N-1-E MSD	05/21/2012 15:00	44759		100	100
240-11319-8	05/21/2012 15:00	44759		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/21/2012 End Date: 05/21/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-44805/2 IC	08:37	93		100		99		97		98	
STD3 240-44805/3 IC	08:44	86		97		96		93		95	
STD4 240-44805/4 IC	08:52	99		99		98		99		98	
ICV 240-44805/5	08:57	99		102		99		97		97	
ICB 240-44805/6	09:04	105		103		98		99		98	
CRI 240-44805/7	09:10	109		106		100		99		99	
ICSA 240-44805/8	09:16	86		84		83		86		88	
ICSAB 240-44805/9	09:21	85		86		86		88		90	
CCV 240-44805/22	10:44	88		94		96		94		96	
CCB 240-44805/23	10:51	96		98		98		99		99	
MB 240-44621/1-A	11:42	91		95		95		96		96	
LCS 240-44621/2-A	11:48	85		87		90		90		93	
CCV 240-44805/34	11:55	84		89		91		90		91	
CCB 240-44805/35	12:02	91		92		93		93		93	
240-11217-N-4-A SD	12:14	94		93		92		94		94	
240-11217-N-4-B DU	12:19	97		97		99		98		97	
240-11217-N-4-C MS	12:25	98		98		97		97		97	
240-11319-1	12:55	83		92		92		88		90	
240-11319-6	13:01	76		91		99		91		92	
CCV 240-44805/46	13:06	83		89		95		92		93	
CCB 240-44805/47	13:14	90		92		96		96		96	
240-11319-7	13:19	71		73		77		77		80	
240-11319-8	13:25	80		82		94		95		95	
240-11319-1	14:05	86		93		92		88		90	
240-11319-6	14:10	72		88		100		91		92	
CCV 240-44805/58	14:16	84		90		96		93		94	
CCB 240-44805/59	14:23	94		95		98		97		97	
240-11319-7	14:29	78		79		79		78		81	
240-11319-8	14:35	88		89		96		97		97	
CCV 240-44805/70	15:31	82		90		96		94		95	
CCB 240-44805/71	15:38	94		94		98		97		97	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/21/2012 End Date: 05/21/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-44805/2 IC	08:37			99							
STD3 240-44805/3 IC	08:44			96							
STD4 240-44805/4 IC	08:52			96							
ICV 240-44805/5	08:57			97							
ICB 240-44805/6	09:04			96							
CRI 240-44805/7	09:10			98							
ICSA 240-44805/8	09:16			87							
ICSAB 240-44805/9	09:21			90							
CCV 240-44805/22	10:44			97							
CCB 240-44805/23	10:51			97							
MB 240-44621/1-A	11:42			96							
LCS 240-44621/2-A	11:48			94							
CCV 240-44805/34	11:55			92							
CCB 240-44805/35	12:02			93							
240-11217-N-4-A SD	12:14			94							
240-11217-N-4-B DU	12:19			97							
240-11217-N-4-C MS	12:25			96							
240-11319-1	12:55			93							
240-11319-6	13:01			94							
CCV 240-44805/46	13:06			94							
CCB 240-44805/47	13:14			95							
240-11319-7	13:19			98							
240-11319-8	13:25			98							
240-11319-1	14:05			93							
240-11319-6	14:10			94							
CCV 240-44805/58	14:16			95							
CCB 240-44805/59	14:23			96							
240-11319-7	14:29			98							
240-11319-8	14:35			99							
CCV 240-44805/70	15:31			97							
CCB 240-44805/71	15:38			96							

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D / F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ICIS 240-44805/1			08:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD2 240-44805/2 IC	1		08:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD3 240-44805/3 IC	1		08:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
STD4 240-44805/4 IC	1		08:52	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICV 240-44805/5	1		08:57	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICB 240-44805/6	1		09:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CRI 240-44805/7	1		09:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSA 240-44805/8	1		09:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ICSAB 240-44805/9	1		09:21	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44805/10			09:29																				
CCB 240-44805/11			09:36																				
ZZZZZZ			09:42																				
ZZZZZZ			09:47																				
ZZZZZZ			09:55																				
ZZZZZZ			10:00																				
ZZZZZZ			10:08																				
ZZZZZZ			10:15																				
ZZZZZZ			10:21																				
ZZZZZZ			10:26																				
ZZZZZZ			10:32																				
ZZZZZZ			10:38																				
CCV 240-44805/22	1		10:44	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44805/23	1		10:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			10:57																				
ZZZZZZ			11:02																				
ZZZZZZ			11:08																				
ZZZZZZ			11:14																				
ZZZZZZ			11:19																				
ZZZZZZ			11:25																				
ZZZZZZ			11:30																				
ZZZZZZ			11:36																				
MB 240-44621/1-A	1	R	11:42	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
LCS 240-44621/2-A	1	R	11:48	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44805/34	1		11:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
✓ CCB 240-44805/35	1		12:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			12:08																				
240-11217-N-4-A SD ^5	5	R	12:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-N-4-B DU	1	R	12:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11217-N-4-C MS	1	R	12:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			12:33																				
ZZZZZZ			12:38																				
ZZZZZZ			12:44																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D/F	Type	Time	Analytes																		
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			12:50																			
240-11319-1	1	R	12:55	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11319-6	1	R	13:01	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44805/46	1		13:06	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44805/47	1		13:14	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11319-7	1	R	13:19	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11319-8	1	R	13:25	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			13:31																				
ZZZZZZ			13:36																				
ZZZZZZ			13:42																				
ZZZZZZ			13:48																				
ZZZZZZ			13:53																				
ZZZZZZ			13:59																				
240-11319-1	1	D	14:05	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11319-6	1	D	14:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCV 240-44805/58	1		14:16	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44805/59	1		14:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11319-7	1	D	14:29	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
240-11319-8	1	D	14:35	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			14:40																				
ZZZZZZ			14:46																				
ZZZZZZ			14:51																				
ZZZZZZ			14:59																				
ZZZZZZ			15:04																				
ZZZZZZ			15:10																				
ZZZZZZ			15:18																				
ZZZZZZ			15:25																				
CCV 240-44805/70	1		15:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
CCB 240-44805/71	1		15:38	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X			
ZZZZZZ			15:44																				
ZZZZZZ			15:49																				
ZZZZZZ			15:55																				
ZZZZZZ			16:01																				
ZZZZZZ			16:06																				
ZZZZZZ			16:12																				
ZZZZZZ			16:18																				
ZZZZZZ			16:23																				
ZZZZZZ			16:31																				
ZZZZZZ			16:36																				
CCV 240-44805/82			16:42																				
CCB 240-44805/83			16:49																				
ZZZZZZ			16:55																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D/F	Type	Time	Analytes																				
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			17:02																				
ZZZZZZ			17:10																				
ZZZZZZ			17:15																				
ZZZZZZ			17:21																				
ZZZZZZ			17:27																				
ZZZZZZ			17:33																				
ZZZZZZ			17:38																				
ZZZZZZ			17:44																				
ZZZZZZ			17:50																				
CCV 240-44805/94			17:55																				
CCB 240-44805/95			18:03																				
ZZZZZZ			18:08																				
ZZZZZZ			18:14																				
ZZZZZZ			18:20																				
ZZZZZZ			18:25																				
ZZZZZZ			18:31																				
ZZZZZZ			18:37																				
ZZZZZZ			18:42																				
ZZZZZZ			18:48																				
ZZZZZZ			18:54																				
ZZZZZZ			18:59																				
CCV 240-44805/106			19:05																				
CCB 240-44805/107			19:12																				
ZZZZZZ			19:18																				
ZZZZZZ			19:24																				
ZZZZZZ			19:29																				
ZZZZZZ			19:37																				
ZZZZZZ			19:42																				
ZZZZZZ			19:48																				
ZZZZZZ			19:56																				
ZZZZZZ			20:03																				
ZZZZZZ			20:09																				
ZZZZZZ			20:14																				
CCV 240-44805/118			20:20																				
CCB 240-44805/119			20:27																				
ICSA 240-44805/120			20:33																				
ICSAB 240-44805/121			20:39																				
CCV 240-44805/122			20:46																				
CCB 240-44805/123			20:54																				
ZZZZZZ			20:59																				
ZZZZZZ			21:05																				
ZZZZZZ			21:11																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: I8 Method: 6020

Start Date: 05/21/2012 08:31 End Date: 05/22/2012 00:51

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	W	Zn			
ZZZZZZ			21:16																				
ZZZZZZ			21:22																				
ZZZZZZ			21:28																				
ZZZZZZ			21:33																				
ZZZZZZ			21:39																				
ZZZZZZ			21:46																				
ZZZZZZ			21:52																				
CCV 240-44805/134			21:58																				
CCB 240-44805/135			22:05																				
ZZZZZZ			22:11																				
ZZZZZZ			22:18																				
ZZZZZZ			22:26																				
ZZZZZZ			22:31																				
ZZZZZZ			22:37																				
ZZZZZZ			22:43																				
ZZZZZZ			22:48																				
ZZZZZZ			22:54																				
ZZZZZZ			23:00																				
ZZZZZZ			23:05																				
CCV 240-44805/146			23:11																				
CCB 240-44805/147			23:18																				
ZZZZZZ			23:24																				
ZZZZZZ			23:30																				
ZZZZZZ			23:36																				
ZZZZZZ			23:41																				
ZZZZZZ			23:47																				
ZZZZZZ			23:53																				
ZZZZZZ			23:58																				
ZZZZZZ			00:04																				
ZZZZZZ			00:10																				
ZZZZZZ			00:16																				
CCV 240-44805/158			00:21																				
CCB 240-44805/159			00:27																				
ZZZZZZ			00:33																				
ZZZZZZ			00:39																				
CCV 240-44805/162			00:44																				
CCB 240-44805/163			00:51																				

Prep Types

D = Dissolved

R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-44403/1-A			13:31	X																				
IC 240-44403/2-A			13:33	X																				
IC 240-44403/3-A			13:35	X																				
IC 240-44403/4-A			13:38	X																				
IC 240-44403/5-A			13:40	X																				
IC 240-44403/6-A			13:42	X																				
ICV 240-44403/7-A	1		13:44	X																				
ICB 240-44403/8-A	1		13:45	X																				
CRA 240-44403/9-A	1		13:47	X																				
CCVL 240-44403/10-A	1		13:49	X																				
CCB 240-44403/11-A			13:51																					
ZZZZZZ			13:53																					
ZZZZZZ			13:55																					
ZZZZZZ			13:57																					
ZZZZZZ			13:59																					
ZZZZZZ			14:01																					
ZZZZZZ			14:03																					
ZZZZZZ			14:05																					
ZZZZZZ			14:07																					
ZZZZZZ			14:09																					
ZZZZZZ			14:11																					
CCV 240-44403/12-A			14:13																					
CCB 240-44403/11-A			14:15																					
ZZZZZZ			14:17																					
ZZZZZZ			14:19																					
ZZZZZZ			14:22																					
ZZZZZZ			14:24																					
ZZZZZZ			14:26																					
ZZZZZZ			14:28																					
ZZZZZZ			14:30																					
ZZZZZZ			14:32																					
ZZZZZZ			14:34																					
ZZZZZZ			14:36																					
CCV 240-44403/12-A			14:38																					
CCB 240-44403/11-A			14:40																					
ZZZZZZ			14:42																					
ZZZZZZ			14:44																					
ZZZZZZ			14:46																					
ZZZZZZ			14:47																					
CRA 240-44403/9-A			14:49																					
ZZZZZZ			14:51																					
ZZZZZZ			14:54																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			14:55																					
ZZZZZZ			14:57																					
ZZZZZZ			14:59																					
CCV 240-44403/12-A			15:01																					
CCB 240-44403/11-A			15:03																					
ZZZZZZ			15:05																					
ZZZZZZ			15:07																					
ZZZZZZ			15:10																					
ZZZZZZ			15:12																					
ZZZZZZ			15:14																					
CCV 240-44403/12-A			15:16																					
CCB 240-44403/11-A			15:18																					
ZZZZZZ			15:20																					
ZZZZZZ			15:22																					
ZZZZZZ			15:24																					
ZZZZZZ			15:26																					
ZZZZZZ			15:29																					
ZZZZZZ			15:31																					
ZZZZZZ			15:33																					
ZZZZZZ			15:35																					
ZZZZZZ			15:36																					
ZZZZZZ			15:38																					
CCV 240-44403/12-A			15:40																					
CCB 240-44403/11-A			15:42																					
ZZZZZZ			15:44																					
ZZZZZZ			15:46																					
ZZZZZZ			15:48																					
ZZZZZZ			15:50																					
ZZZZZZ			15:52																					
ZZZZZZ			15:54																					
ZZZZZZ			15:56																					
ZZZZZZ			15:58																					
ZZZZZZ			16:00																					
ZZZZZZ			16:02																					
CCV 240-44403/12-A			16:04																					
CCB 240-44403/11-A			16:06																					
ZZZZZZ			16:08																					
ZZZZZZ			16:10																					
ZZZZZZ			16:12																					
ZZZZZZ			16:14																					
ZZZZZZ			16:16																					
ZZZZZZ			16:18																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			16:20																					
ZZZZZZ			16:22																					
ZZZZZZ			16:24																					
ZZZZZZ			16:27																					
CCV 240-44403/12-A			16:29																					
CCB 240-44403/11-A			16:31																					
ZZZZZZ			16:33																					
ZZZZZZ			16:36																					
ZZZZZZ			16:38																					
ZZZZZZ			16:40																					
ZZZZZZ			16:42																					
ZZZZZZ			16:44																					
ZZZZZZ			16:46																					
ZZZZZZ			16:49																					
ZZZZZZ			16:51																					
ZZZZZZ			16:53																					
CCV 240-44403/12-A			16:55																					
CCB 240-44403/11-A			16:57																					
ZZZZZZ			16:59																					
ZZZZZZ			17:01																					
ZZZZZZ			17:03																					
ZZZZZZ			17:05																					
ZZZZZZ			17:07																					
ZZZZZZ			17:09																					
ZZZZZZ			17:12																					
ZZZZZZ			17:14																					
ZZZZZZ			17:16																					
ZZZZZZ			17:18																					
CCV 240-44403/12-A	1		17:20	X																				
CCB 240-44403/11-A	1		17:23	X																				
ZZZZZZ			17:24																					
ZZZZZZ			17:26																					
ZZZZZZ			17:28																					
ZZZZZZ			17:30																					
ZZZZZZ			17:32																					
MB 240-44260/1-A	1	T	17:34	X																				
LCS 240-44260/2-A	1	T	17:37	X																				
ZZZZZZ			17:39																					
240-11217-P-4-B DU	1	D	17:41	X																				
240-11217-P-4-C MS	1	D	17:43	X																				
CCV 240-44403/12-A	1		17:45	X																				
CCB 240-44403/11-A	1		17:47	X																				

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/17/2012 13:31 End Date: 05/17/2012 18:35

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			17:49																					
ZZZZZZ			17:51																					
ZZZZZZ			17:53																					
ZZZZZZ			17:55																					
ZZZZZZ			17:57																					
ZZZZZZ			17:59																					
ZZZZZZ			18:01																					
ZZZZZZ			18:03																					
240-11319-1	1	T	18:05	X																				
240-11319-1	1	D	18:08	X																				
CCV 240-44403/12-A	1		18:10	X																				
CCB 240-44403/11-A	1		18:12	X																				
240-11319-6	1	T	18:14	X																				
240-11319-6	1	D	18:16	X																				
240-11319-7	1	T	18:18	X																				
240-11319-7	1	D	18:20	X																				
240-11319-8	1	T	18:22	X																				
ZZZZZZ			18:25																					
ZZZZZZ			18:26																					
ZZZZZZ			18:29																					
ZZZZZZ			18:31																					
CCV 240-44403/12-A	1		18:32	X																				
CCB 240-44403/11-A	1		18:35	X																				

Prep Types
D = Dissolved
T = Total/NA

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/22/2012 09:14 End Date: 05/22/2012 16:55

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
IC 240-44707/1-A			09:14	X																				
IC 240-44707/2-A			09:16	X																				
IC 240-44707/3-A			09:18	X																				
IC 240-44707/4-A			09:20	X																				
IC 240-44707/5-A			09:22	X																				
IC 240-44707/6-A			09:24	X																				
ICV 240-44707/7-A	1		09:26	X																				
ICB 240-44707/8-A	1		09:28	X																				
CRA 240-44707/9-A	1		09:30	X																				
CCVL 240-44707/10-A	1		09:31	X																				
CCB 240-44707/11-A			09:33																					
ZZZZZZ			09:35																					
ZZZZZZ			09:37																					
ZZZZZZ			09:39																					
ZZZZZZ			09:41																					
ZZZZZZ			09:43																					
ZZZZZZ			09:45																					
ZZZZZZ			09:47																					
ZZZZZZ			09:49																					
ZZZZZZ			09:52																					
ZZZZZZ			09:54																					
CCV 240-44707/12-A			09:56																					
CCB 240-44707/11-A			09:58																					
ZZZZZZ			10:01																					
ZZZZZZ			10:02																					
ZZZZZZ			10:05																					
ZZZZZZ			10:07																					
ZZZZZZ			10:09																					
ZZZZZZ			10:12																					
ZZZZZZ			10:14																					
ZZZZZZ			10:16																					
ZZZZZZ			10:18																					
ZZZZZZ			10:20																					
CCV 240-44707/12-A	1		10:22	X																				
CCB 240-44707/11-A	1		10:24	X																				
ZZZZZZ			10:26																					
ZZZZZZ			10:28																					
ZZZZZZ			10:30																					
ZZZZZZ			10:32																					
MB 240-44752/2-B	1	D	10:33	X																				
LCS 240-44759/2-A	1	T	10:35	X																				
ZZZZZZ			10:37																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/22/2012 09:14 End Date: 05/22/2012 16:55

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
ZZZZZZ			10:39																					
ZZZZZZ			10:41																					
ZZZZZZ			10:44																					
CCV 240-44707/12-A	1		10:46	X																				
CCB 240-44707/11-A	1		10:48	X																				
ZZZZZZ			10:50																					
ZZZZZZ			10:53																					
ZZZZZZ			10:55																					
240-11413-N-1-D MS	1	T	10:58	X																				
240-11413-N-1-E MSD	1	T	11:00	X																				
240-11319-8	1	D	11:02	X																				
ZZZZZZ			11:04																					
ZZZZZZ			11:06																					
ZZZZZZ			11:07																					
ZZZZZZ			11:09																					
CCV 240-44707/12-A	1		11:11	X																				
CCB 240-44707/11-A	1		11:13	X																				
ZZZZZZ			11:15																					
ZZZZZZ			11:17																					
ZZZZZZ			11:19																					
ZZZZZZ			11:21																					
ZZZZZZ			11:23																					
ZZZZZZ			11:25																					
ZZZZZZ			11:27																					
CCV 240-44707/12-A			11:29																					
CCB 240-44707/11-A			11:31																					
CCV 240-44707/12-A			11:35																					
CCB 240-44707/11-A			11:37																					
ZZZZZZ			11:39																					
CCV 240-44707/12-A			11:41																					
CCB 240-44707/11-A			11:43																					
CCV 240-44707/12-A			16:33																					
CCB 240-44707/11-A			16:35																					
ZZZZZZ			16:38																					
ZZZZZZ			16:39																					
ZZZZZZ			16:42																					
ZZZZZZ			16:43																					
ZZZZZZ			16:45																					
ZZZZZZ			16:47																					
ZZZZZZ			16:49																					
ZZZZZZ			16:51																					
CCV 240-44707/12-A			16:53																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11319-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 05/22/2012 09:14 End Date: 05/22/2012 16:55

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
CCB 240-44707/11-A			16:55																					

Prep Types

D = Dissolved

T = Total/NA

total
Sample MSA-MW5-051412

240-11319-d-1-b, 5/21/2012 12:55:39 QC Status: PASS (Initial: PASS) Barium rep result 19ug/L

User Pre-dilution: 1.000

Run	Time			
		6Li	[redacted]	[redacted]
		ppb	[redacted]	[redacted]
x		83.307%	-0.003	M 1295.000
%RSD		10.367	654.100	M 8.757
Run	Time	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]
x		T 41880.000	72050.000	320.400
%RSD		T 0.201	0.941	1.675
Run	Time	35Cl	[redacted]	[redacted]
		ppb	[redacted]	[redacted]
x		T 0.000	T 25330.000	M 230500.000
%RSD		T 0.000	T 1.319	M 0.539
Run	Time	45Sc	45Sc	[redacted]
		ppb	ppb	[redacted]
x		92.430%	91.997%	10.270
%RSD		2.910	0.504	38.870
Run	Time	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]
x		2.401	1.016	1.847
%RSD		12.300	5.379	34.700
Run	Time	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]
x		TM 1374.000	T 13300.000	0.315
%RSD		TM 0.275	T 0.364	1.774
Run	Time	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]
x		1.367	4.818	10.350
%RSD		6.602	4.509	4.737
Run	Time	72Ge	[redacted]	[redacted]
		ppb	[redacted]	[redacted]
x		87.591%	2.012	0.588
%RSD		0.671	1.439	1.426
Run	Time	[redacted]	[redacted]	[redacted]
		[redacted]	[redacted]	[redacted]
x		0.161	M 893.200	1.615
%RSD		52.130	M 0.445	8.976
Run	Time	105Pd	[redacted]	[redacted]
		ppb	[redacted]	[redacted]
x		0.000	-0.019	-0.961
%RSD		0.000	26.330	228.800
Run	Time	[redacted]	115In	[redacted]
		[redacted]	ppb	[redacted]
x		0.029	90.191%	-1.849
%RSD		7.745	0.334	0.823
Run	Time	[redacted]	[redacted]	159Tb
		[redacted]	[redacted]	ppb
x		0.102	18.690	0.000
%RSD		12.180	0.961	0.000
Run	Time	165Ho	[redacted]	[redacted]
		ppb	[redacted]	[redacted]
x		92.605%	-0.012	-0.208
%RSD		0.393	32.640	2.021
Run	Time	[redacted]	209Bi	
		[redacted]	ppb	
x		0.920	0.000	
%RSD		4.714	0.000	

Certificate of Analysis

June 12, 2012

TestAmerica Laboratory North Canton
4101 Shuffel Drive NW
North Canton, OH 44720

Attention: Pat O'Meara

Date Received	:	May 16, 2012
Sample Number/Matrix	:	Two (2) Waters
SDG Number	:	45009
Project Name	:	MSA Groundwater Sampling
Job Number	:	240-11319-1

CASE NARRATIVE

I. Introduction

On May 16, 2012, two water samples were received at the TestAmerica Richland laboratory for radiochemical analysis. Upon receipt, the samples were assigned the TestAmerica identification numbers as described on the cover page of the Analytical Data Package. The samples were assigned to Lot Number J2E160478.

II. Sample Receipt

The samples were received in good condition and no anomalies were noted during check-in.

III. Analytical Results/Methodology

The analytical results for this report are presented by laboratory sample ID. Each set of data includes sample identification information; analytical results and the appropriate associated statistical uncertainties.

The requested analyses were:

Gas Proportional Counting
Radium-226 by method RL-RA-002
Radium-228 by method RL-RA-001

IV. Quality Control

The analytical result for each analysis performed includes a minimum of one laboratory control sample (LCS), and one reagent blank sample analysis. Any exceptions have been noted in the "Comments" section.

V. Comments

Gas Proportional Counting

Radium-226 by method RL-RA-002:
The final precipitate weight for sample MSA-DMW3D-051412 (240-11319-8) exceeded acceptance criteria in batch 2142059. The sample was successfully reanalyzed in batch 2157047. In addition, the LCS recovery for batch 2142059 was below acceptance criteria at 72%. The batch was recounted for an acceptable final LCS recovery of 80%. Except as previously noted, the LCS, batch blank, sample, and sample duplicate results are within acceptance limits.

Radium-228 by method RL-RA-001:
The LCS, batch blank, sample, and sample duplicate results are within acceptance limits.

I certify that this Certificate of Analysis is in compliance with the SOW and/or NELAC, both technically and for completeness, for other than the conditions detailed above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager, or a designee as verified by the following signature.

Reviewed and approved:

2012.06.12
14:29:54
-07'00'

Dennis O'Neill
Project Manager

Clouseau Nonconformance Memo

TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

NCM #: **10-21196**
NCM Initiated By: Tom Mcginnis
Date Opened: 06/11/2012
Date Closed:

Classification: **Deficiency**
Status: **PMREVIEW**
Production Area: Environmental - Sep
Tests: RaTot by GPC
Lot #'s (Sample #'s): J2E160462 (1,2,3), J2E160478 (1,2), J2E210000 (59),
QC Batches: 2142059,

Nonconformance: Batch Result Out of Limits
Subcategory: LCS result outside acceptance limits

Problem Description / Root Cause

Name	Date	Description
Tom Mcginnis	06/11/2012	The final precipitate weight for sample J2E160478-2 exceeded acceptance criteria. The sample was successfully reanalyzed in batch 2147047. The LCS recovery (72%) for batch 2142059 was below acceptance criteria. The entire batch was recounted. The final LCS recovery (80%) as well as all other batch results meet acceptance criteria.

Corrective Action

Name	Date	Corrective Action
Tom Mcginnis	06/11/2012	The PM was notified of the batch deficiencies.

Client Notification Summary

Client	Project Manager	Notified	Response	How Notified	Note
	Response	Response Note			

Quality Assurance Verification

Verified By	Due Date	Status	Notes
		This section not yet completed by QA.	

Approval History

Date Approved	Approved By	Position

Drinking Water Method Cross References

	DRINKING WATER ASTM METHOD CROSS REFERENCES	
Referenced Method	**Isotope(s)**	**TestAmerica Richland's SOP No.**
EPA 901.1	Cs-134, I-131	RL-GAM-001
EPA 900.0	Alpha & Beta	RL-GPC-001
EPA 00-02	Gross Alpha (Coprecipitation)	RL-GPC-002
EPA 903.0	Total Alpha Radium (Ra-226)	RL-RA-002
EPA 903.1	Ra-226	RL-RA-001
EPA 904.0	Ra-228	RL-RA-001
EPA 905.0	Sr-89/90	RL-GPC-003
ASTM D5174	Uranium	RL-KPA-003
EPA 906.0	Tritium	RL-LSC-005

Results in this report relate only to the sample(s) analyzed.

Uncertainty Estimation

TestAmerica Richland has adopted the internationally accepted approach to estimating uncertainties described in "NIST Technical Note 1297, 1994 Edition". The approach, "Law of Propagation of Errors", involves the identification of all variables in an analytical method which are used to derive a result. These variables are related to the analytical result (R) by some functional relationship, R = constants * f(x,y,z,...). The components (x,y,z) are evaluated to determine their contribution to the overall method uncertainty. The individual component uncertainties (u_i) are then combined using a statistical model that provides the most probable overall uncertainty value. All component uncertainties are categorized as type A, evaluated by statistical methods, or type B, evaluated by other means. Uncertainties not included in the components, such as sample homogeneity, are combined with the component uncertainty as the square root of the sum-of-the-squares of the individual uncertainties. The uncertainty associated with the derived result is the combined uncertainty (u_c) multiplied by the coverage factor (1,2, or 3).

When three or more sample replicates are used to derive the analytical result, the type A uncertainty is the standard deviation of the mean value (S/?n), where S is the standard deviation of the derived results. The type B uncertainties are all other random or non-random components that are not included in the standard deviation.

The derivation of the general "Law of Propagation of Errors" equations and specific example are available on request.

sample not in SDG

FORM II

Date: 12-Jun-12

DUPLICATE RESULTS

Lab Name: TestAmerica **SDG:** 45001 **Collection Date:** 5/9/2012 12:50:00 PM

Lot-Sample No.: J2E160462-2 **Report No. :** 51983 **Received Date:** 5/14/2012 10:30:00 AM

Client Sample ID: MW16I-050912(240-11168-4) DUP **COC No. :** 240-5844.1 **Matrix:** WATER AQ

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2142060	EPA 904.0			Work Order: MTLQD1AD		Report DB ID: MTLQD1DR			Orig Sa DB ID: 9MTLQD10			
RA-228	4.93E-01	U	3.1E-01	3.3E-01	6.50E-01	pCi/L	70%	0.76	6/1/12 04:52 p		0.9671	GPC3C
	4.81E-01	J	RER2 0.1			1.00E+00		(3.)			L	

No. of Results: 1 Comments:

TestAmerica RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.

GammaSTLRchDupV5.2.20 A2002 MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.

J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

Sample Not in SDG

FORM II

DUPLICATE RESULTS

Date: 12-Jun-12

Lab Name:	TestAmerica	**SDG:**	45001	**Collection Date:**	5/9/2012 10:55:00 AM
Lot-Sample No.:	J2E160462-1	**Report No. :**	51983	**Received Date:**	5/14/2012 10:30:00 AM
Client Sample ID:	MW16S-050912(240-11168-3) DUP	**COC No. :**	240-5844.1	**Matrix:**	WATER AQ

Parameter	Result, Orig Rst	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Action Lev	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2142059	EPA 903.0			**Work Order:** MTLQC2AD		**Report DB ID:** MTLQC2DR			**Orig Sa DB ID:** 9MTLQC20			
TOTAL ALPHA RA	4.21E-01	J	1.8E-01	2.0E-01	1.51E-01	pCi/L	86%	(2.8)	6/4/12 10:47 a		0.4998	GPC10B
	2.83E-01	J	**RER2 1.1**			5.00E-01		(4.2)			L	

No. of Results: 1 **Comments:**

06/[illegible]/2012

TestAmerica STLRchDupV5.20 A2002

RER2 - Replicate Error Ratio = (S-D)/[sqrt(sq(TPUs)+sq(TPUd))] as defined by ICPT BOA.
MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
J Qual - No U|< qualifier has been assigned and the result is below the Reporting Limit, RL (CRDL) or Report Value is Estimated.

FORM II

BLANK RESULTS

Date: 12-Jun-12

Lab Name: TestAmerica **SDG:** 45001

Matrix: WATER **Report No. :** 51983

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL, Lc	Rpt Unit, CRDL	Yield	Rst/MDL, Rst/TotUcert	Analysis, Prep Date	Total Sa Size	Aliquot Size	Primary Detector
Batch: 2142059	EPA 903.0			**Work Order:**	MTNGR2AA		**Report DB ID:**	MTNGR2AB				
TOTAL ALPHA RA	-3.47E-02	U	4.6E-02	4.7E-02	2.00E-01	pCi/L	82%	-0.17	6/4/12 11:55 a		0.5003	GPC10D
					7.42E-02	5.00E-01		-(1.5)			L	
Batch: 2157047	EPA 903.0			**Work Order:**	MT0JE1AA		**Report DB ID:**	MT0JE1AB				
TOTAL ALPHA RA	7.04E-02	U	1.2E-01	1.2E-01	2.48E-01	pCi/L	79%	0.28	6/8/12 12:02 p		0.5027	GPC10C
					1.00E-01	5.00E-01		(1.1)			L	
Batch: 2142060	EPA 904.0			**Work Order:**	MTNGT1AA		**Report DB ID:**	MTNGT1AB				
RA-228	-2.11E-01	U	3.1E-01	3.1E-01	7.58E-01	pCi/L	84%	-0.28	6/1/12 04:52 p		1.0017	GPC4C
					3.48E-01	1.00E+00		-(1.4)			L	

No. of Results: 3 **Comments:**

TestAmerica
RptSTLRchBlank
V5.2.20 A2002

MDC|MDA,Lc - Detection, Decision Level based on instrument background or blank, adjusted by the sample Efficiency, Yield, and Volume.
U Qual - Analyzed for but not detected above limiting criteria. Limit criteria is less than the Mdc/Mda/Mdl, Total Uncert, CRDL, RDL or not identified by gamma scan software.

FORM II

LCS RESULTS

Date: 12-Jun-12

Lab Name: TestAmerica **SDG:** 45001

Matrix: WATER **Report No. :** 51983

Parameter	Result	Qual	Count Error (2 s)	Total Uncert(2 s)	MDL	Report Unit	Yield	Expected	Expected Uncert	Recovery, Bias	Analysis, Prep Date	Aliquot Size	Primary Detector
Batch: 2142059	EPA 903.0			**Work Order:**	MTNGR2AC		**Report DB ID:**	MTNGR2CS					
TOTAL ALPHA RA	5.10E+00		6.2E-01	1.2E+00	1.57E-01	pCi/L	82%	6.35E+00	6.57E-02	80%	6/4/12 01:03 p	0.5009	GPC10B
							Rec Limits:			-0.2		L	
Batch: 2157047	EPA 903.0			**Work Order:**	MT0JE1AC		**Report DB ID:**	MT0JE1CS					
TOTAL ALPHA RA	5.89E+00		6.7E-01	1.4E+00	2.81E-01	pCi/L	76%	6.41E+00	6.62E-02	92%	6/8/12 12:02 p	0.5022	GPC10D
							Rec Limits:			-0.1		L	
Batch: 2142060	EPA 904.0			**Work Order:**	MTNGT1AC		**Report DB ID:**	MTNGT1CS					
RA-228	4.83E+00		5.9E-01	8.1E-01	6.76E-01	pCi/L	81%	4.94E+00	5.74E-02	98%	6/1/12 04:52 p	1.001	GPC4D
							Rec Limits:	70	130	0.0		L	

No. of Results: 3 **Comments:**

TestAmerica **Bias** - (Result/Expected)-1 as defined by ANSI N13.30.

rptSTLRchLcs
V5.2.20 A2002

Batch Nbr: 2157047

sAmple DMW3D

Alpha Beta, RaTot by GPC , Calculated Results

Detailed Report

6/8/2012 9:59:56 PM

Total Radium reported result 1.82 wgk

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TD	WATER	*STLE	TotalRAWoBS	MTLR53AA	pCi/L		05/14/12 12:35	06/08/12 12:02	06/06/12 13:15	RATC16741	1	g	
240,MSA-DMW3D-051412 (240-11319-8)						,J2E160478-2	WATER			15.2		RATC16741 Alq		500.50 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/08/12 12:52	RA	118	14	GPC10B	1.5	N	N	3.3162E-01	1.0000E+00	N	89%	N		5.2819E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.102E-02)	(0.000E+00)		7%			(0.000E+00)	0.001998		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/08/12	RA	R	**1.817032**		1.13333E+00	2.018922	2.018922	0.5005 L	89%		0.204499		
				(0.252515)		(1.0934E-01)	(0.261782)	(0.261782)	(0.173205)			0.080573		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TD	WATER	*STLE	TotalRAWoBS	MT0JE1AA	pCi/L	B	05/14/12 12:35	06/08/12 12:02	06/06/12 13:15	RATC16743	1	g	
0,INTRA-LAB BLANK						,J2F050000-47 v4.8.34	WATER			13.5		RATC16743 Alq		502.70 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/08/12 12:52	RA	10	18	GPC10C	1.5	N	N	3.3848E-01	1.0000E+00	N	79%	N		5.2819E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.162E-02)	(0.000E+00)		6%			(0.000E+00)	0.001989		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/08/12	RA	R	**0.070433**	U4	4.00000E-02	0.078603	0.078603	0.5027 L	79%		0.248279		
				(0.061405)		(3.4641E-02)	(0.068415)	(0.068415)	(0.173205)			0.10034		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TD	WATER	*STLE	TotalRAWoBS	MT0JE1AC	pCi/L	S	05/14/12 12:35	06/08/12 12:02	06/06/12 13:15	RTSA2773	1	g	
0,INTRA-LAB CHECK						,J2F050000-47 v4.8.34	WATER			13.0		RTSA2773 Alq		502.20 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/08/12 12:52	RA	322	21	GPC10D	1.5	N	N	3.3147E-01	1.0000E+00	N	76%	N		5.2819E-01	4.5045E+02	1.0000E+00	
			100	300			Y		(1.192E-02)	(0.000E+00)		6%			(0.000E+00)	0.001991		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/08/12	RA	R	**5.887497**		3.15000E+00	6.563877	6.563877	0.5022 L	76%	92%	0.280595		
				(0.683081)		(1.8009E-01)	(0.687206)	(0.687206)	(0.173205)			0.11504		

Quality Assurance Report. Generated 5-JUN-2012 13:07:29.25

QA Filename : RDND07$DKA100:[QUAD10.QA]CHK.QAF;3

Total Radium Calibration + BKG. Checks

-- Multi-Test Full Report --

Description : Quad10A (Hex 1) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 45.588001 Upper Bound : 50.386879

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 47.987499 Std Deviation : 0.805231

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-APR-2012 04:48	CHK		47.7000	| | |
3-APR-2012 05:33	CHK		49.0000	| | |
4-APR-2012 04:11	CHK		48.1000	| | |
5-APR-2012 10:14	CHK		49.5000	| | |
6-APR-2012 04:28	CHK		48.3000	| | |
9-APR-2012 04:32	CHK		48.4000	| | |
10-APR-2012 05:34	CHK		49.4000	| | |
11-APR-2012 05:33	CHK		48.8000	| | |
12-APR-2012 05:18	CHK		47.9000	| | |
13-APR-2012 05:11	CHK		48.4000	| | |
16-APR-2012 04:54	CHK		48.4000	| | |
17-APR-2012 04:47	CHK		48.2000	| | |
18-APR-2012 04:59	CHK		48.4000	| | |
19-APR-2012 05:13	CHK		47.8000	| | |
20-APR-2012 03:55	CHK		48.7000	| | |
23-APR-2012 04:16	CHK		48.9000	| | |
24-APR-2012 06:39	CHK		48.0000	| | |
25-APR-2012 04:55	CHK		48.1000	| | |
26-APR-2012 05:37	CHK		48.7000	| | |
27-APR-2012 06:19	CHK		48.5000	| | |
30-APR-2012 04:55	CHK		48.1000	| | |
1-MAY-2012 04:31	CHK		48.5000	| | |
2-MAY-2012 04:12	CHK		48.4000	| | |
3-MAY-2012 05:08	CHK		48.7000	| | |
4-MAY-2012 04:21	CHK		48.7000	| | |
7-MAY-2012 04:36	CHK		48.3000	| | |
8-MAY-2012 05:12	CHK		48.1000	| | |
9-MAY-2012 04:49	CHK		48.2000	| | |
10-MAY-2012 04:40	CHK		48.3000	| | |
11-MAY-2012 04:38	CHK		48.5000	| | |
14-MAY-2012 05:08	CHK		48.1000	| | |
15-MAY-2012 04:07	CHK		47.9000	| | |

16-MAY-2012 04:11	CHK		48.5000	| | |
17-MAY-2012 04:46	CHK		48.4000	| | |
18-MAY-2012 06:03	CHK		48.8000	| | |
21-MAY-2012 04:48	CHK		48.2000	| | |
22-MAY-2012 05:02	CHK		48.7000	| | |
23-MAY-2012 06:35	CHK		48.6000	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
24-MAY-2012 04:43	CHK		48.4000	| | |
25-MAY-2012 05:51	CHK		48.3000	| | |
29-MAY-2012 05:26	CHK		48.5000	| | |
30-MAY-2012 05:40	CHK		48.3000	| | |
31-MAY-2012 05:28	CHK		48.4000	| | |
1-JUN-2012 05:40	CHK		49.3000	| | |
4-JUN-2012 04:30	CHK		48.4000	| | |

-- Multi-Test Full Report --

Description : Quad10B (Hex 2) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 39.499199 Upper Bound : 43.657001

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 41.578064 Std Deviation : 0.424306

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-APR-2012 04:48	CHK		41.5000	| | |
3-APR-2012 05:33	CHK		41.3000	| | |
4-APR-2012 04:11	CHK		41.7000	| | |
5-APR-2012 10:14	CHK		42.5000	|In| |
6-APR-2012 04:28	CHK		42.2000	| | |
9-APR-2012 04:32	CHK		41.6000	| | |
10-APR-2012 05:34	CHK		42.1000	| | |
11-APR-2012 05:33	CHK		41.9000	| | |
12-APR-2012 05:18	CHK		41.5000	| | |
13-APR-2012 05:11	CHK		41.9000	| | |
16-APR-2012 04:54	CHK		41.7000	| | |
17-APR-2012 04:47	CHK		42.0000	| | |
18-APR-2012 04:59	CHK		41.8000	| | |
19-APR-2012 05:13	CHK		42.1000	| | |
20-APR-2012 03:55	CHK		42.1000	| | |
23-APR-2012 04:16	CHK		41.9000	| | |
24-APR-2012 06:39	CHK		41.9000	| | |
25-APR-2012 04:55	CHK		42.3000	| | |
26-APR-2012 05:37	CHK		41.9000	| | |
27-APR-2012 06:19	CHK		41.7000	| | |

30-APR-2012 04:55	CHK		41.3000	| | |
1-MAY-2012 04:31	CHK		41.8000	| | |
2-MAY-2012 04:12	CHK		41.6000	| | |
3-MAY-2012 05:08	CHK		42.0000	| | |
4-MAY-2012 04:21	CHK		41.7000	| | |
7-MAY-2012 04:36	CHK		41.5000	| | |
8-MAY-2012 05:12	CHK		41.8000	| | |
9-MAY-2012 04:49	CHK		42.2000	| | |
10-MAY-2012 04:40	CHK		41.0000	| | |
11-MAY-2012 04:38	CHK		41.8000	| | |
14-MAY-2012 05:08	CHK		41.4000	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
15-MAY-2012 04:07	CHK		42.1000	| | |
16-MAY-2012 04:11	CHK		41.8000	| | |
17-MAY-2012 04:46	CHK		41.3000	| | |
18-MAY-2012 06:03	CHK		42.8000	|In| |
21-MAY-2012 04:48	CHK		41.9000	| | |
22-MAY-2012 05:02	CHK		41.8000	| | |
23-MAY-2012 06:35	CHK		41.9000	| | |
24-MAY-2012 04:43	CHK		41.9000	| | |
25-MAY-2012 05:51	CHK		41.3000	| | |
29-MAY-2012 05:26	CHK		41.6000	| | |
30-MAY-2012 05:40	CHK		42.0000	| | |
31-MAY-2012 05:28	CHK		41.7000	| | |
1-JUN-2012 05:40	CHK		41.4000	| | |
4-JUN-2012 04:30	CHK		41.2000	| | |

-- Multi-Test Full Report --

Description : Quad10C (Hex 3) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 46.298698 Upper Bound : 51.172279

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 48.735485 Std Deviation : 0.415877

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-APR-2012 04:48	CHK		48.5000	| | |
3-APR-2012 05:33	CHK		49.1000	| | |
4-APR-2012 04:11	CHK		48.8000	| | |
5-APR-2012 10:14	CHK		49.5000	| | |
6-APR-2012 04:28	CHK		48.9000	| | |
9-APR-2012 04:32	CHK		49.1000	| | |
10-APR-2012 05:34	CHK		48.8000	| | |
11-APR-2012 05:33	CHK		48.8000	| | |

12-APR-2012 05:18	CHK	48.7000		
13-APR-2012 05:11	CHK	48.3000		
16-APR-2012 04:54	CHK	48.5000		
17-APR-2012 04:47	CHK	48.3000		
18-APR-2012 04:59	CHK	48.6000		
19-APR-2012 05:13	CHK	49.0000		
20-APR-2012 03:55	CHK	48.8000		
23-APR-2012 04:16	CHK	48.8000		
24-APR-2012 06:39	CHK	49.3000		
25-APR-2012 04:55	CHK	48.5000		
26-APR-2012 05:37	CHK	49.0000		
27-APR-2012 06:19	CHK	48.1000		
30-APR-2012 04:55	CHK	48.3000		
1-MAY-2012 04:31	CHK	48.7000		
2-MAY-2012 04:12	CHK	48.8000		
3-MAY-2012 05:08	CHK	48.8000		

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
4-MAY-2012 04:21	CHK		48.6000		
7-MAY-2012 04:36	CHK		48.4000		
8-MAY-2012 05:12	CHK		49.3000		
9-MAY-2012 04:49	CHK		48.2000		
10-MAY-2012 04:40	CHK		48.8000		
11-MAY-2012 04:38	CHK		49.1000		
14-MAY-2012 05:08	CHK		49.0000		
15-MAY-2012 04:07	CHK		48.8000		
16-MAY-2012 04:11	CHK		48.7000		
17-MAY-2012 04:46	CHK		48.6000		
18-MAY-2012 06:03	CHK		48.7000		
21-MAY-2012 04:48	CHK		48.6000		
22-MAY-2012 05:02	CHK		48.8000		
23-MAY-2012 06:35	CHK		47.9000	In	
24-MAY-2012 04:43	CHK		48.7000		
25-MAY-2012 05:51	CHK		48.7000		
29-MAY-2012 05:26	CHK		48.9000		
30-MAY-2012 05:40	CHK		48.1000		
31-MAY-2012 05:28	CHK		48.7000		
1-JUN-2012 05:40	CHK		49.3000		
4-JUN-2012 04:30	CHK		48.9000		

-- Multi-Test Full Report --

Description : Quad10D (Hex 4) alpha %Eff
Parameter Units : Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 46.094002 Upper Bound : 50.945999

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00

Mean : 48.520000 Std Deviation : 0.421716

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
2-APR-2012 04:48	CHK		48.6000	| | |
3-APR-2012 05:33	CHK		48.1000	| | |
4-APR-2012 04:11	CHK		49.0000	| | |
5-APR-2012 10:14	CHK		49.2000	| | |
6-APR-2012 04:28	CHK		47.9000	| | |
9-APR-2012 04:32	CHK		48.2000	| | |
10-APR-2012 05:34	CHK		48.9000	| | |
11-APR-2012 05:33	CHK		49.6000	|In| |
12-APR-2012 05:18	CHK		48.5000	| | |
13-APR-2012 05:11	CHK		48.5000	| | |
16-APR-2012 04:54	CHK		49.0000	| | |
17-APR-2012 04:47	CHK		48.2000	| | |
18-APR-2012 04:59	CHK		48.4000	| | |
19-APR-2012 05:13	CHK		48.0000	| | |
20-APR-2012 03:55	CHK		48.5000	| | |
23-APR-2012 04:16	CHK		48.9000	| | |
24-APR-2012 06:39	CHK		49.1000	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-APR-2012 04:55	CHK		48.7000	| | |
26-APR-2012 05:37	CHK		48.7000	| | |
27-APR-2012 06:19	CHK		48.5000	| | |
30-APR-2012 04:55	CHK		48.6000	| | |
1-MAY-2012 04:31	CHK		48.3000	| | |
2-MAY-2012 04:12	CHK		48.4000	| | |
3-MAY-2012 05:08	CHK		48.9000	| | |
4-MAY-2012 04:21	CHK		48.5000	| | |
7-MAY-2012 04:36	CHK		48.5000	| | |
8-MAY-2012 05:12	CHK		48.9000	| | |
9-MAY-2012 04:49	CHK		48.7000	| | |
10-MAY-2012 04:40	CHK		48.4000	| | |
11-MAY-2012 04:38	CHK		48.0000	| | |
14-MAY-2012 05:08	CHK		48.6000	| | |
15-MAY-2012 04:07	CHK		48.6000	| | |
16-MAY-2012 04:11	CHK		48.6000	| | |
17-MAY-2012 04:46	CHK		48.2000	| | |
18-MAY-2012 06:03	CHK		48.2000	| | |
21-MAY-2012 04:48	CHK		48.5000	| | |
22-MAY-2012 05:02	CHK		49.0000	| | |
23-MAY-2012 06:35	CHK		48.4000	| | |
24-MAY-2012 04:43	CHK		48.5000	| | |
25-MAY-2012 05:51	CHK		48.6000	| | |
29-MAY-2012 05:26	CHK		48.4000	| | |
30-MAY-2012 05:40	CHK		48.2000	| | |
31-MAY-2012 05:28	CHK		49.2000	| | |
1-JUN-2012 05:40	CHK		48.4000	| | |
4-JUN-2012 04:30	CHK ✓		48.2000	| | |

18-APR-2012 03:26	BKG		0.0200	| |	|
19-APR-2012 03:58	BKG		0.0200	| |	|
20-APR-2012 03:09	BKG		0.0200	| |	|
21-APR-2012 05:37	BKG		0.0100	| |	|
24-APR-2012 06:02	BKG		0.0100	| |	|
25-APR-2012 04:13	BKG		0.0300	| |	|
26-APR-2012 03:46	BKG		0.0300	| |	|
27-APR-2012 03:39	BKG		0.0600	|In|	|
28-APR-2012 01:00	BKG		0.0100	| |	|
29-APR-2012 02:56	BKG		0.0300	| |	|
29-APR-2012 09:35	BKG		0.0300	| |	|
1-MAY-2012 03:26	BKG		0.0400	| |	|
2-MAY-2012 03:27	BKG		0.0300	| |	|
3-MAY-2012 03:47	BKG		0.0200	| |	|
4-MAY-2012 03:40	BKG		0.0100	| |	|
5-MAY-2012 01:23	BKG		0.0200	| |	|
5-MAY-2012 18:05	BKG		0.0400	| |	|
8-MAY-2012 03:29	BKG		0.0100	| |	|
9-MAY-2012 02:59	BKG		0.0400	| |	|
10-MAY-2012 03:13	BKG		0.0200	| |	|
11-MAY-2012 03:41	BKG		0.0100	| |	|
12-MAY-2012 04:36	BKG		0.0200	| |	|
12-MAY-2012 15:52	BKG		0.0300	| |	|
15-MAY-2012 03:35	BKG		0.0200	| |	|
16-MAY-2012 03:02	BKG		0.0300	| |	|
17-MAY-2012 04:06	BKG		0.0200	| |	|
18-MAY-2012 05:24	BKG		0.0200	| |	|
19-MAY-2012 04:56	BKG		0.0200	| |	|
19-MAY-2012 16:54	BKG		0.0200	| |	|

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
22-MAY-2012 03:10	BKG		0.0200	| | | |
23-MAY-2012 03:33	BKG		0.0300	| | | |
24-MAY-2012 04:19	BKG		0.0200	| | | |
25-MAY-2012 04:20	BKG		0.0200	| | | |
26-MAY-2012 03:56	BKG		0.0400	| | | |
27-MAY-2012 19:48	BKG		0.0300	| | | |
30-MAY-2012 04:56	BKG		0.0200	| | | |
31-MAY-2012 04:50	BKG		0.0200	| | | |
1-JUN-2012 04:56	BKG		0.0200	| | | |
2-JUN-2012 03:53	BKG		0.0100	| | | |
2-JUN-2012 03:53	BKG		0.0100	| | | |
3-JUN-2012 11:40	BKG		0.0200	| | | |

-- Multi-Test Full Report --

Description : Quad10B (Hex 2) alpha bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.044078 Std Deviation : 0.015992

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-APR-2012 04:53	BKG		0.0500	| | |
4-APR-2012 03:06	BKG		0.0300	| | |
5-APR-2012 09:39	BKG		0.0400	| | |
6-APR-2012 03:16	BKG		0.0400	| | |
7-APR-2012 01:50	BKG		0.0200	| | |
10-APR-2012 03:01	BKG		0.0300	| | |
11-APR-2012 04:04	BKG		0.0400	| | |
12-APR-2012 03:39	BKG		0.0400	| | |
13-APR-2012 04:34	BKG		0.0300	| | |
14-APR-2012 00:07	BKG		0.0500	| | |
14-APR-2012 16:25	BKG		0.0400	| | |
17-APR-2012 03:13	BKG		0.0300	| | |
18-APR-2012 03:26	BKG		0.0300	| | |
19-APR-2012 03:58	BKG		0.0200	| | |
20-APR-2012 03:09	BKG		0.0500	| | |
21-APR-2012 05:37	BKG		0.0300	| | |
24-APR-2012 06:02	BKG		0.0600	| | |
25-APR-2012 04:13	BKG		0.0500	| | |
26-APR-2012 03:46	BKG		0.0300	| | |
27-APR-2012 03:39	BKG		0.0500	| | |
28-APR-2012 01:00	BKG		0.0200	| | |
29-APR-2012 02:56	BKG		0.0400	| | |
29-APR-2012 09:35	BKG		0.0400	| | |
1-MAY-2012 03:26	BKG		0.0200	| | |
2-MAY-2012 03:27	BKG		0.0400	| | |
3-MAY-2012 03:47	BKG		0.0200	| | |
4-MAY-2012 03:40	BKG		0.0600	| | |
5-MAY-2012 01:23	BKG		0.0300	| | |
5-MAY-2012 18:05	BKG		0.0200	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
8-MAY-2012 03:29	BKG		0.0200	| | |
9-MAY-2012 02:59	BKG		0.0300	| | |
10-MAY-2012 03:13	BKG		0.0300	| | |
11-MAY-2012 03:41	BKG		0.0200	| | |
12-MAY-2012 04:36	BKG		0.0500	| | |
12-MAY-2012 15:52	BKG		0.0200	| | |
15-MAY-2012 03:35	BKG		0.0300	| | |
16-MAY-2012 03:02	BKG		0.0500	| | |
17-MAY-2012 04:06	BKG		0.0400	| | |
18-MAY-2012 05:24	BKG		0.0100	|In| |
19-MAY-2012 04:56	BKG		0.0800	|In| |
19-MAY-2012 16:54	BKG		0.0500	| | |
22-MAY-2012 03:10	BKG		0.0300	| | |
23-MAY-2012 03:33	BKG		0.0200	| | |
24-MAY-2012 04:19	BKG		0.0500	| | |
25-MAY-2012 04:20	BKG		0.0100	|In| |

26-MAY-2012 03:56	BKG		0.8000	|Ac| |
27-MAY-2012 19:48	BKG		0.0300	| | |
30-MAY-2012 04:56	BKG		0.0400	| | |
31-MAY-2012 04:50	BKG		0.0400	| | |
1-JUN-2012 04:56	BKG		0.0400	| | |
2-JUN-2012 03:53	BKG		0.0300	| | |
2-JUN-2012 03:53	BKG		0.0300	| | |
3-JUN-2012 11:40	BKG		0.0300	| | |

-- Multi-Test Full Report --

Description : Quad10C (Hex 3) alpha bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.067095 Std Deviation : 0.020236

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-APR-2012 04:53	BKG		0.0500	| | |
4-APR-2012 03:06	BKG		0.0700	| | |
5-APR-2012 09:39	BKG		0.0600	| | |
6-APR-2012 03:16	BKG		0.0700	| | |
7-APR-2012 01:50	BKG		0.0500	| | |
10-APR-2012 03:01	BKG		0.0500	| | |
11-APR-2012 04:04	BKG		0.0600	| | |
12-APR-2012 03:39	BKG		0.0700	| | |
13-APR-2012 04:34	BKG		0.0700	| | |
14-APR-2012 00:07	BKG		0.0900	| | |
14-APR-2012 16:25	BKG		0.0300	| | |
17-APR-2012 03:13	BKG		0.0500	| | |
18-APR-2012 03:26	BKG		0.0900	| | |
19-APR-2012 03:58	BKG		0.1000	| | |
20-APR-2012 03:09	BKG		0.0500	| | |
21-APR-2012 05:37	BKG		0.0900	| | |
24-APR-2012 06:02	BKG		0.0600	| | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
25-APR-2012 04:13	BKG		0.0600	| | |
26-APR-2012 03:46	BKG		0.0800	| | |
27-APR-2012 03:39	BKG		0.0600	| | |
28-APR-2012 01:00	BKG		0.0600	| | |
29-APR-2012 02:56	BKG		0.0900	| | |
29-APR-2012 09:35	BKG		0.1100	|In| |
1-MAY-2012 03:26	BKG		0.0900	| | |
2-MAY-2012 03:27	BKG		0.0600	| | |
3-MAY-2012 03:47	BKG		0.0400	| | |
4-MAY-2012 03:40	BKG		0.0500	| | |
5-MAY-2012 01:23	BKG		0.0900	| | |

5-MAY-2012 18:05	BKG	0.0700	| |	|
8-MAY-2012 03:29	BKG	0.0700	| |	|
9-MAY-2012 02:59	BKG	0.0500	| |	|
10-MAY-2012 03:13	BKG	0.0700	| |	|
11-MAY-2012 03:41	BKG	0.0700	| |	|
12-MAY-2012 04:36	BKG	0.0700	| |	|
12-MAY-2012 15:52	BKG	0.0800	| |	|
15-MAY-2012 03:35	BKG	0.0800	| |	|
16-MAY-2012 03:02	BKG	0.0400	| |	|
17-MAY-2012 04:06	BKG	0.0200	|In|	|
18-MAY-2012 05:24	BKG	0.0500	| |	|
19-MAY-2012 04:56	BKG	0.0700	| |	|
19-MAY-2012 16:54	BKG	0.0600	| |	|
22-MAY-2012 03:10	BKG	0.0600	| |	|
23-MAY-2012 03:33	BKG	0.0700	| |	|
24-MAY-2012 04:19	BKG	0.0800	| |	|
25-MAY-2012 04:20	BKG	0.0700	| |	|
26-MAY-2012 03:56	BKG	0.0600	| |	|
27-MAY-2012 19:48	BKG	0.0600	| |	|
30-MAY-2012 04:56	BKG	0.0900	| |	|
31-MAY-2012 04:50	BKG	0.0500	| |	|
1-JUN-2012 04:56	BKG	0.0500	| |	|
2-JUN-2012 03:53	BKG	0.0500	| |	|
2-JUN-2012 03:53	BKG	0.0500	| |	|
3-JUN-2012 11:40	BKG	0.0500	| |	|

-- Multi-Test Full Report --

Description : Quad10D (Hex 4) alpha bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.058222 Std Deviation : 0.028386

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-APR-2012 04:53	BKG		0.0500	| | | |
4-APR-2012 03:06	BKG		0.0400	| | | |
5-APR-2012 09:39	BKG		0.0500	| | | |
6-APR-2012 03:16	BKG		0.0600	| | | |
7-APR-2012 01:50	BKG		0.0500	| | | |

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
10-APR-2012 03:01	BKG		0.0800	| | | |
11-APR-2012 04:04	BKG		0.0200	| | | |
12-APR-2012 03:39	BKG		0.0500	| | | |
13-APR-2012 04:34	BKG		0.0500	| | | |
14-APR-2012 00:07	BKG		0.0300	| | | |
14-APR-2012 16:25	BKG		0.0800	| | | |

17-APR-2012 03:13	BKG	0.0600		
18-APR-2012 03:26	BKG	0.0500		
19-APR-2012 03:58	BKG	0.0400		
20-APR-2012 03:09	BKG	0.0400		
21-APR-2012 05:37	BKG	0.0600		
24-APR-2012 06:02	BKG	0.0600		
25-APR-2012 04:13	BKG	0.0500		
26-APR-2012 03:46	BKG	0.0500		
27-APR-2012 03:39	BKG	0.0400		
28-APR-2012 01:00	BKG	0.0500		
29-APR-2012 02:56	BKG	0.0500		
29-APR-2012 09:35	BKG	0.0300		
1-MAY-2012 03:26	BKG	0.0300		
2-MAY-2012 03:27	BKG	0.0900		
3-MAY-2012 03:47	BKG	0.0400		
4-MAY-2012 03:40	BKG	0.0400		
5-MAY-2012 01:23	BKG	0.0500		
5-MAY-2012 18:05	BKG	0.0400		
8-MAY-2012 03:29	BKG	0.0500		
9-MAY-2012 02:59	BKG	0.0400		
10-MAY-2012 03:13	BKG	0.0400		
11-MAY-2012 03:41	BKG	0.0500		
12-MAY-2012 04:36	BKG	0.0700		
12-MAY-2012 15:52	BKG	0.0400		
15-MAY-2012 03:35	BKG	0.0600		
16-MAY-2012 03:02	BKG	0.0300		
17-MAY-2012 04:06	BKG	0.0400		
18-MAY-2012 05:24	BKG	0.0500		
19-MAY-2012 04:56	BKG	0.0500		
19-MAY-2012 16:54	BKG	0.0700		
22-MAY-2012 03:10	BKG	0.0600		
23-MAY-2012 03:33	BKG	0.0500		
24-MAY-2012 04:19	BKG	0.0500		
25-MAY-2012 04:20	BKG	0.0400		
26-MAY-2012 03:56	BKG	2.6100	Ac	
27-MAY-2012 19:48	BKG	0.0600		
30-MAY-2012 04:56	BKG	0.0600		
31-MAY-2012 04:50	BKG	0.0600		
1-JUN-2012 04:56	BKG	0.0400		
2-JUN-2012 03:53	BKG	0.0600		
2-JUN-2012 03:53	BKG	0.0600		
3-JUN-2012 11:40	BKG	0.0600		

-- Multi-Test Full Report --

Description : Quad10E (Hex 5) alpha bkg
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.007486 Std Deviation : 0.006346

Batch Nbr: 2142060

Alpha Beta, Ra-228 by GPC , Calculated Results
Detailed Report

Ra-226

6/1/2012 6:57:00 PM

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
1	Calc	TF	WATER	*STLE	Ra228WoBS	MTLQC1AC	pCi/L		05/09/12 10:55	06/01/12 16:52	05/23/12 15:55	RATA45965	1	g	
240,MW16S-050912(240-11168-3)					,J2E160462-1		WATER			31.1	06/01/12 10:50	RATA45965 Alq	100%	951.40 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:01	RA-228	46	125	GPC3A	1	N	N	4.6111E-01	1.0000E+00	N	90%	N		1.5319E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		7%			(0.000E+00)	0.001051		
1	06/01/12 15:56	RA-228	46	125	GPC3A	1	N	N	4.6111E-01	1.0000E+00	N	90%	N		1.7000E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		7%			(0.000E+00)	0.001051		
2	06/01/12 16:52	RA-228	36	125	GPC3A	1	N	N	4.6111E-01	1.0000E+00	N	90%	N		1.8866E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.244E-02)	(0.000E+00)		7%			(0.000E+00)	0.001051		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**0.879835**		5.03333E-01	1.849612	1.849612	0.9514 L	90%		0.836749		
				(0.260612)		(1.4067E-01)	(0.540004)	(0.540004)	(0.173205)			0.371224		
	06/01/12	RA-228	R	**0.976385**		5.03333E-01	2.052582	2.052582	0.9514 L	90%		0.928571		
				(0.289211)		(1.4067E-01)	(0.599263)	(0.599263)	(0.173205)			0.411961		
	06/01/12	RA-228	R	**0.652988**		3.03333E-01	1.37273	1.37273	0.9514 L	90%		1.030469		
				(0.277981)		(1.2565E-01)	(0.580334)	(0.580334)	(0.173205)			0.457168		
	06/01/12	RA-228	A	**0.836403**		4.36667E-01	1.758308	1.758308	0.9514 L	90%		0.53805		
				(0.159456)		(7.8434E-02)	(0.331245)	(0.331245)	(0.10)			0.238706		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
2	Calc	TF	WATER	*STLE	Ra228WoBS	MTLQD1AC	pCi/L		05/09/12 12:50	06/01/12 16:52	05/23/12 15:55	RATA45966	1	g	
240,MW16I-050912(240-11168-4)					,J2E160462-2		WATER			31.3	06/01/12 10:50	RATA45966 Alq	100%	971.00 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:01	RA-228	34	107	GPC3B	1	N	N	4.7430E-01	1.0000E+00	N	91%	N		1.5319E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.043E-02)	(0.000E+00)		7%			(0.000E+00)	0.00103		
1	06/01/12 15:56	RA-228	30	107	GPC3B	1	N	N	4.7430E-01	1.0000E+00	N	91%	N		1.7000E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.043E-02)	(0.000E+00)		7%			(0.000E+00)	0.00103		
2	06/01/12 16:52	RA-228	29	107	GPC3B	1	N	N	4.7430E-01	1.0000E+00	N	91%	N		1.8866E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.043E-02)	(0.000E+00)		7%			(0.000E+00)	0.00103		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**0.536968**		3.23333E-01	1.152113	1.152113	0.971 L	91%		0.742235		
				(0.208551)		(1.2161E-01)	(0.443742)	(0.443742)	(0.173205)			0.326306		
	06/01/12	RA-228	R	**0.448455**		2.43333E-01	0.962202	0.962202	0.971 L	91%		0.823686		
				(0.216064)		(1.1484E-01)	(0.461082)	(0.461082)	(0.173205)			0.362114		

() - (1s Uncertainities), Q - Qualifier, U Result Is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:2

RADCALC v4.8.34
TestAmerica

Batch Nbr: 2142060

Alpha Beta, Ra-228 by GPC , Calculated Results

6/1/2012 6:57:00 PM

06/01/12	RA-228	R	**0.456763**	2.23333E-01	0.980027	0.980027	0.971 L	91%	0.914074
			(0.235483)	(1.1309E-01)	(0.502868)	(0.502868)	(0.173205)		0.401851
06/01/12	RA-228	A	**0.480729**	2.63333E-01	1.031448	1.031448	0.971 L	91%	0.477275
			(0.127205)	(6.7303E-02)	(0.271289)	(0.271289)	(0.10)		0.209823

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
3	Calc	TF	WATER	*STLE	Ra228WoBS	MTLQD1AD	pCi/L	R	05/09/12 12:50	06/01/12 16:52	05/23/12 15:55	RATA45967	1	g	
240,MW16I-050912(240-11168-4) DUP						,J2E160462-2	WATER			30.7	06/01/12 10:50	RATA45967 Alq	79%	967.10 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:01	RA-228	35	118	GPC3C	1	N	N	4.7111E-01	1.0000E+00	N	70%	N		1.5319E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.503E-02)	(0.000E+00)		6%			(0.000E+00)	0.001034		
1	06/01/12 15:56	RA-228	34	118	GPC3C	1	N	N	4.7111E-01	1.0000E+00	N	70%	N		1.7000E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.503E-02)	(0.000E+00)		6%			(0.000E+00)	0.001034		
2	06/01/12 16:52	RA-228	22	118	GPC3C	1	N	N	4.7111E-01	1.0000E+00	N	70%	N		1.8866E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.503E-02)	(0.000E+00)		6%			(0.000E+00)	0.001034		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**0.664651**		3.06667E-01	1.420342	1.420342	0.9671 L	70%		1.011342		
				(0.276231)		(1.2374E-01)	(0.58601)	(0.58601)	(0.173205)			0.447202		
	06/01/12	RA-228	R	**0.689484**		2.86667E-01	1.47341	1.47341	0.9671 L	70%		1.122324		
				(0.301619)		(1.2211E-01)	(0.640328)	(0.640328)	(0.173205)			0.496276		
	06/01/12	RA-228	R	**0.124559**	U4	4.66667E-02	0.266179	0.266179	0.9671 L	70%		1.245484		
				(0.268677)		(1.0055E-01)	(0.574001)	(0.574001)	(0.173205)			0.550736		
	06/01/12	RA-228	A	**0.492898**		2.13333E-01	1.05331	1.05331	0.9671 L	70%		0.650318		
				(0.163117)		(6.6944E-02)	(0.346876)	(0.346876)	(0.10)			0.287562		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
4	Calc	TF	WATER	*STLE	Ra228WoBS	MTLQE1AC	pCi/L		05/09/12 14:10	06/01/12 16:52	05/23/12 15:55	RATA45968	1	g	
240,MW16D-050912(240-11168-6)						,J2E160462-3	WATER			30.6	06/01/12 10:50	RATA45968 Alq	82%	980.70 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:01	RA-228	21	124	GPC3D	1	N	N	4.7170E-01	1.0000E+00	N	73%	N		1.5319E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		6%			(0.000E+00)	0.00102		
1	06/01/12 15:56	RA-228	33	124	GPC3D	1	N	N	4.7170E-01	1.0000E+00	N	73%	N		1.7000E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		6%			(0.000E+00)	0.00102		
2	06/01/12 16:52	RA-228	26	124	GPC3D	1	N	N	4.7170E-01	1.0000E+00	N	73%	N		1.8866E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.204E-02)	(0.000E+00)		6%			(0.000E+00)	0.00102		

() - (1s Uncertainities), Q - Qualifier, U Result Is Less Than Lc = 1.645 * TPU

IDC - Instrument Detection Level In Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:4

RADCALC v4.8.34

TestAmerica

Batch Nbr: 2142060

Alpha Beta, Ra-228 by GPC , Calculated Results

6/1/2012 6:57:00 PM

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**0.013722**	**U4**	6.66667E-03	0.029737	0.029737	0.9807 L	73%		0.98178		
				(0.203536)		(9.8883E-02)	(0.441072)	(0.441072)	(0.173205)			0.435368		
	06/01/12	RA-228	R	**0.563432**		2.46667E-01	1.220993	1.220993	0.9807 L	73%		1.089518		
				(0.281232)		(1.2074E-01)	(0.606383)	(0.606383)	(0.173205)			0.483144		
	06/01/12	RA-228	R	**0.270383**	**U4**	1.06667E-01	0.585938	0.585938	0.9807 L	73%		1.209078		
				(0.276361)		(1.0853E-01)	(0.598176)	(0.598176)	(0.173205)			0.536163		
	06/01/12	RA-228	A	**0.282512**		1.20000E-01	0.612223	0.612223	0.9807 L	73%		0.631309		
				(0.147909)		(6.3363E-02)	(0.319732)	(0.319732)	(0.10)			0.279953		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
5	Calc	TF	WATER	*STLE	Ra228WoBS	**MTLR41AC**	**pCi/L**		05/14/12 11:10	06/01/12 16:52	05/23/12 15:55	RATA45969	1	g	
240,MSA-DMW3I-051412 (240-11319-7)						,J2E160478-1	WATER			31.3	06/01/12 10:50	RATA45969 Alq	75%	950.90 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:02	RA-228	236	157	GPC4A	1	N	N	4.6414E-01	1.0000E+00	N	68%	N		1.5338E+00	4.5045E+02	1.0030E+00	
			50	300			Y		(1.447E-02)	(0.000E+00)		5%			(0.000E+00)	0.001052		
1	06/01/12 15:57	RA-228	190	157	GPC4A	1	N	N	4.6414E-01	1.0000E+00	N	68%	N		1.7021E+00	4.5045E+02	1.0030E+00	
			50	300			Y		(1.447E-02)	(0.000E+00)		5%			(0.000E+00)	0.001052		
2	06/01/12 16:52	RA-228	187	157	GPC4A	1	N	N	4.6414E-01	1.0000E+00	N	68%	N		1.8889E+00	4.5045E+02	1.0030E+00	
			50	300			Y		(1.447E-02)	(0.000E+00)		5%			(0.000E+00)	0.001052		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**9.666431**		4.19667E+00	20.343964	20.343964	0.9509 L	68%		1.220611		
				(1.196868)		(3.1007E-01)	(2.304406)	(2.304406)	(0.173205)			0.54821		
	06/01/12	RA-228	R	**8.375561**		3.27667E+00	17.627201	17.627201	0.9509 L	68%		1.354556		
				(1.095654)		(2.7883E-01)	(2.130827)	(2.130827)	(0.173205)			0.608369		
	06/01/12	RA-228	R	**9.124471**		3.21667E+00	19.203356	19.203356	0.9509 L	68%		1.503201		
				(1.199074)		(2.7667E-01)	(2.333769)	(2.333769)	(0.173205)			0.675129		
	06/01/12	RA-228	A	**9.055488**		3.56333E+00	19.058174	19.058174	0.9509 L	68%		0.784882		
				(0.672535)		(1.6681E-01)	(1.303721)	(1.303721)	(0.10)			0.352512		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
6	Calc	TF	WATER	*STLE	Ra228WoBS	**MTLR51AC**	**pCi/L**		05/14/12 12:35	06/01/12 16:52	05/23/12 15:55	RATA45970	1	g	
240,MSA-DMW3D-051412 (240-11319-8)						,J2E160478-2	WATER			31.4	06/01/12 10:50	RATA45970 Alq	98%	1000.90 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:02	RA-228	74	128	GPC4B	1	N	N	4.5389E-01	1.0000E+00	N	89%	N		1.5338E+00	4.5045E+02	1.0030E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		
1	06/01/12 15:57	RA-228	84	128	GPC4B	1	N	N	4.5389E-01	1.0000E+00	N	89%	N		1.7021E+00	4.5045E+02	1.0030E+00	
			50	300			Y		(1.577E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999		

0 - (1s Uncertainities), Q - Qualifier, U Result Is Less Than Lc = 1.645 * TPU

RecCnt:6

RADCALC v4.8.34

TestAmerica

IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration

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Alpha Beta, Ra-228 by GPC , Calculated Results

6/1/2012 6:57:00 PM

2	06/01/12 16:52	RA-228	64	128	GPC4B	1	N	N	4.5389E-01	1.0000E+00	N	89%	N		1.8889E+00	4.5045E+02	1.0030E+00
			50	300			Y		(1.577E-02)	(0.000E+00)		7%			(0.000E+00)	0.000999	

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**1.801687**		1.05333E+00	3.991289	3.991289	1.0009 L	89%		0.827434		
				(0.351524)		(1.7613E-01)	(0.752727)	(0.752727)	(0.173205)			0.367582		
	06/01/12	RA-228	R	**2.379031**		1.25333E+00	5.270283	5.270283	1.0009 L	89%		0.918234		
				(0.428239)		(1.8714E-01)	(0.911348)	(0.911348)	(0.173205)			0.407919		
	06/01/12	RA-228	R	**1.797514**		8.53333E-01	3.982044	3.982044	1.0009 L	89%		1.018998		
				(0.390587)		(1.6438E-01)	(0.842052)	(0.842052)	(0.173205)			0.452683		
	06/01/12	RA-228	A	**1.992744**		1.05333E+00	4.414539	4.414539	1.0009 L	89%		0.53206		
				(0.225959)		(1.0169E-01)	(0.483759)	(0.483759)	(0.10)			0.236364		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
7	Calc	TF	WATER	*STLE	Ra228WoBS	MTNGT1AA	pCi/L	B	05/09/12 10:55	06/01/12 16:52	05/23/12 15:55	RATA45971	1	g	
0,INTRA-LAB BLANK					,J2E210000-60 v4.8.34		WATER			31.1	06/01/12 10:50	RATA45971 Alq	93%	1001.70 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:02	RA-228	44	256	GPC4C	1	N	N	4.6052E-01	1.0000E+00	N	84%	N		1.5338E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.377E-02)	(0.000E+00)		7%			(0.000E+00)	0.000998		
1	06/01/12 15:57	RA-228	34	256	GPC4C	1	N	N	4.6052E-01	1.0000E+00	N	84%	N		1.7021E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.377E-02)	(0.000E+00)		7%			(0.000E+00)	0.000998		
2	06/01/12 16:52	RA-228	35	256	GPC4C	1	N	N	4.6052E-01	1.0000E+00	N	84%	N		1.8889E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.377E-02)	(0.000E+00)		7%			(0.000E+00)	0.000998		

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/ILcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**0.047526**	U4	2.66667E-02	0.105193	0.105193	1.0017 L	84%		1.179256		
				(0.254874)		(1.4298E-01)	(0.564106)	(0.564106)	(0.173205)			0.541651		
	06/01/12	RA-228	R	**-0.34282**	U4	-1.73333E-01	-0.758788	-0.758788	1.0017 L	84%		1.308663		
				(0.255885)		(1.2824E-01)	(0.565097)	(0.565097)	(0.173205)			0.60109		
	06/01/12	RA-228	R	**-0.336543**	U4	-1.53333E-01	-0.744895	-0.744895	1.0017 L	84%		1.452272		
				(0.286801)		(1.2979E-01)	(0.633704)	(0.633704)	(0.173205)			0.667052		
	06/01/12	RA-228	A	**-0.210612**	U4	-1.00000E-01	-0.466163	-0.466163	1.0017 L	84%		0.75829		
				(0.153729)		(7.7268E-02)	(0.339793)	(0.339793)	(0.10)			0.348295		

Sq	Status	Method	Matrix	Protocol	Equation Set	Wrk Ord	Units/Matrix	QC/BB	Sa/On Date	AnalysisDate/PptWt	Sep1/Sep2 Date	QC/Tracer Vial	Mult/EntYld	Total/Analy Vol	Final/Count Vol
8	Calc	TF	WATER	*STLE	Ra228WoBS	MTNGT1AC	pCi/L	S	05/09/12 10:55	06/01/12 16:52	05/23/12 15:55	RASF3743	1	g	
0,INTRA-LAB CHECK					,J2E210000-60 v4.8.34		WATER			30.1	06/01/12 10:50	RASF3743 Alq	92%	1001.00 g	

Sq	Cnt Date	Parameter	Sample Cnt	Bkgrnd Cnt	Instr	Geom	Trc/Av	Ent	Efficiency1	Efficiency 2	Ent	Trc Yld Fct	Ent	Blk Value	Ingr Fct	Conv Fct/VolAdj	Decay	Abn
0	06/01/12 15:02	RA-228	146	171	GPC4D	1	N	N	4.4916E-01	1.0000E+00	N	81%	N		1.5338E+00	4.5045E+02	1.0047E+00	
			50	300			Y		(1.267E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.34
TestAmerica

Batch Nbr: 2142060

Alpha Beta, Ra-228 by GPC , Calculated Results

6/1/2012 6:57:00 PM

1	06/01/12 15:57	RA-228	145	171	GPC4D	1	N	N	4.4916E-01	1.0000E+00	N	81%	N		1.7021E+00	4.5045E+02	1.0047E+00
			50	300			Y		(1.267E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999	
2	06/01/12 16:52	RA-228	136	171	GPC4D	1	N	N	4.4916E-01	1.0000E+00	N	81%	N		1.8889E+00	4.5045E+02	1.0047E+00
			50	300			Y		(1.267E-02)	(0.000E+00)		6%			(0.000E+00)	0.000999	

Sq	CalcDate,TrcAct	Parameter	Avg	Sa Act, Total U	Q	Net Cnt Rt	Dpm Wo Blk	Dpm-Blk	Vol Used	TrcYld,EnFct	LCSYld,EFctU	IDC/LcC	BlkLcC/MDC	StdDvMdC/LcC
	06/01/12	RA-228	R	**4.487521**		2.35000E+00	9.925604	9.925604	1.001 L	81%	91%	1.051577		
				(0.644312)		(2.4556E-01)	(1.335898)	(1.335898)	(0.173205)			0.474321		
	06/01/12	RA-228	R	**4.937584**		2.33000E+00	10.921065	10.921065	1.001 L	81%	100%	1.166974		
				(0.710899)		(2.4474E-01)	(1.47452)	(1.47452)	(0.173205)			0.526371		
	06/01/12	RA-228	R	**5.056116**		2.15000E+00	11.183236	11.183236	1.001 L	81%	102%	1.295034		
				(0.747816)		(2.3728E-01)	(1.556655)	(1.556655)	(0.173205)			0.584133		
	06/01/12	RA-228	A	**4.827073**		2.27667E+00	10.676635	10.676635	1.001 L	81%	98%	0.67619		
				(0.405482)		(1.4004E-01)	(0.842088)	(0.842088)	(0.10)			0.305		

() - (1s Uncertainities), Q - Qualifier, U Result is Less Than Lc = 1.645 * TPU
IDC - Instrument Detection Level in Conc Units, MLcC - Method Decision Level in Conc Units, MDC- Minimum Detectable Concentration
Sr-89 Counts are Derived from the Combination of Each Sr-89/90 and Y-90 Count, All Result Digits May Not be Significants, Date/Time - mm/dd/yy hh:mm, 24hr Time

RecCnt:8

RADCALC v4.8.34
TestAmerica

Quality Assurance Report. Generated 11-JUN-2012 14:30:54.19

QA Filename : RDND07$DKA100:[QUAD3.QA]CHK.QAF;1

RA-228 Calib + bckg check

-- Multi-Test Full Report --

Description : quad 3a 1" beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 40.624569 Upper Bound : 44.900841

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 42.762688 Std Deviation : 0.673971

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
2-APR-2012 04:43	CHK		43.4000				
3-APR-2012 05:23	CHK		43.5000				
4-APR-2012 04:06	CHK		43.0000				
5-APR-2012 04:58	CHK		43.6000				
6-APR-2012 04:23	CHK		44.1000				
9-APR-2012 04:28	CHK		43.1000				
10-APR-2012 05:19	CHK		42.5000				
11-APR-2012 05:29	CHK		43.3000				
12-APR-2012 05:13	CHK		43.7000				
13-APR-2012 04:55	CHK		43.9000				
16-APR-2012 04:50	CHK		42.2000				
17-APR-2012 04:42	CHK		42.9000				
18-APR-2012 04:54	CHK		43.7000				
19-APR-2012 05:08	CHK		43.7000				
20-APR-2012 03:50	CHK		43.0000				
23-APR-2012 04:11	CHK		44.1000				
24-APR-2012 05:03	CHK		44.3000		In		
25-APR-2012 04:50	CHK		43.9000				
26-APR-2012 05:32	CHK		43.9000				
27-APR-2012 05:14	CHK		43.9000				
28-APR-2012 02:13	CHK		43.2000				
30-APR-2012 04:45	CHK		43.8000				

1-MAY-2012 04:26	CHK		43.9000	| |	|
2-MAY-2012 03:54	CHK		43.2000	| |	|
3-MAY-2012 05:01	CHK		44.0000	| |	|
4-MAY-2012 04:34	CHK		43.5000	| |	|
7-MAY-2012 04:31	CHK		42.6000	| |	|
8-MAY-2012 05:08	CHK		43.4000	| |	|
9-MAY-2012 04:44	CHK		42.4000	| |	|
10-MAY-2012 04:36	CHK		42.8000	| |	|
11-MAY-2012 04:33	CHK		42.1000	| |	|
14-MAY-2012 05:03	CHK		42.8000	| |	|
15-MAY-2012 04:02	CHK		43.8000	| |	|
16-MAY-2012 04:07	CHK		43.4000	| |	|
17-MAY-2012 04:42	CHK		43.6000	| |	|
18-MAY-2012 05:54	CHK		43.7000	| |	|
21-MAY-2012 04:43	CHK		43.4000	| |	|
22-MAY-2012 04:57	CHK		43.0000	| |	|

♀Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
23-MAY-2012 06:24	CHK		43.3000	| | | |
24-MAY-2012 04:45	CHK		42.9000	| | | |
25-MAY-2012 05:53	CHK		43.4000	| | | |
29-MAY-2012 04:53	CHK		43.4000	| | | |
30-MAY-2012 06:26	CHK		42.2000	| | | |
31-MAY-2012 04:58	CHK		43.0000	| | | |
1-JUN-2012 05:35	CHK ✓		42.8000	| | | |
4-JUN-2012 04:25	CHK		43.0000	| | | |
5-JUN-2012 04:18	CHK		43.6000	| | | |
6-JUN-2012 04:54	CHK		42.9000	| | | |
7-JUN-2012 04:39	CHK		42.8000	| | | |
8-JUN-2012 05:24	CHK		42.6000	| | | |

-- Multi-Test Full Report --

4-MAY-2012 04:34	CHK		44.5000			

♀Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
7-MAY-2012 04:31	CHK		43.7000				
8-MAY-2012 05:08	CHK		44.3000				
9-MAY-2012 04:44	CHK		44.0000				
10-MAY-2012 04:36	CHK		43.9000				
11-MAY-2012 04:33	CHK		44.5000				
14-MAY-2012 05:03	CHK		45.2000				
15-MAY-2012 04:02	CHK		44.4000				
16-MAY-2012 04:07	CHK		44.9000				
17-MAY-2012 04:42	CHK		44.7000				
18-MAY-2012 05:54	CHK		45.4000				
21-MAY-2012 04:43	CHK		45.1000				
22-MAY-2012 04:57	CHK		44.8000				
23-MAY-2012 06:24	CHK		45.1000				
24-MAY-2012 04:45	CHK		44.6000				
25-MAY-2012 05:53	CHK		44.3000				
29-MAY-2012 04:53	CHK		44.4000				
30-MAY-2012 06:26	CHK		44.1000				
31-MAY-2012 04:58	CHK		43.3000		In		
1-JUN-2012 05:35	CHK		44.1000				
4-JUN-2012 04:25	CHK		44.2000				
5-JUN-2012 04:18	CHK		45.1000				
6-JUN-2012 04:54	CHK		43.7000				
7-JUN-2012 04:39	CHK		44.3000				
8-JUN-2012 05:24	CHK		45.0000				

-- Multi-Test Full Report --

Description : quad 3c 1" beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 42.345211 Upper Bound : 46.802601

Investigate Level : 2.000000 Action Level : 3.000000

7-MAY-2012 04:31	CHK		44.7000	| |	|
8-MAY-2012 05:08	CHK		44.7000	| |	|
9-MAY-2012 04:44	CHK		45.4000	| |	|
10-MAY-2012 04:36	CHK		44.8000	| |	|
11-MAY-2012 04:33	CHK		45.1000	| |	|
14-MAY-2012 05:03	CHK		44.6000	| |	|
15-MAY-2012 04:02	CHK		44.8000	| |	|
16-MAY-2012 04:07	CHK		45.2000	| |	|
17-MAY-2012 04:42	CHK		44.7000	| |	|
18-MAY-2012 05:54	CHK		44.9000	| |	|
21-MAY-2012 04:43	CHK		45.0000	| |	|
22-MAY-2012 04:57	CHK		45.2000	| |	|
23-MAY-2012 06:24	CHK		44.6000	| |	|
24-MAY-2012 04:45	CHK		43.6000	| |	|
25-MAY-2012 05:53	CHK		44.9000	| |	|
29-MAY-2012 04:53	CHK		45.0000	| |	|
30-MAY-2012 06:26	CHK		44.4000	| |	|
31-MAY-2012 04:58	CHK		45.0000	| |	|
1-JUN-2012 05:35	CHK	✓	45.4000	| |	|
4-JUN-2012 04:25	CHK		45.3000	| |	|
5-JUN-2012 04:18	CHK		45.0000	| |	|
6-JUN-2012 04:54	CHK		45.0000	| |	|
7-JUN-2012 04:39	CHK		45.1000	| |	|
8-JUN-2012 05:24	CHK		44.2000	| |	|

-- Multi-Test Full Report --

Description : quad 3d 1" beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 41.807129 Upper Bound : 46.207878

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 44.007462 Std Deviation : 0.426672

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej

10-MAY-2012 04:36	CHK	44.4000	|	|	|
11-MAY-2012 04:33	CHK	44.5000	|	|	|
14-MAY-2012 05:03	CHK	44.2000	|	|	|
15-MAY-2012 04:02	CHK	44.5000	|	|	|
16-MAY-2012 04:07	CHK	44.3000	|	|	|
17-MAY-2012 04:42	CHK	44.8000	|	|	|
18-MAY-2012 05:54	CHK	44.8000	|	|	|
21-MAY-2012 04:43	CHK	45.0000	|In|		|
22-MAY-2012 04:57	CHK	44.7000	|	|	|
23-MAY-2012 06:24	CHK	44.2000	|	|	|
24-MAY-2012 04:45	CHK	44.0000	|	|	|
25-MAY-2012 05:53	CHK	44.6000	|	|	|
29-MAY-2012 04:53	CHK	44.7000	|	|	|
30-MAY-2012 06:26	CHK	44.6000	|	|	|
31-MAY-2012 04:58	CHK	43.8000	|	|	|
1-JUN-2012 05:35	CHK ✓	44.4000	|	|	|
4-JUN-2012 04:25	CHK	44.5000	|	|	|
5-JUN-2012 04:18	CHK	44.2000	|	|	|
6-JUN-2012 04:54	CHK	44.4000	|	|	|
7-JUN-2012 04:39	CHK	44.6000	|	|	|
8-JUN-2012 05:24	CHK	43.9000	|	|	|

♀
Quality Assurance Report. Generated 11-JUN-2012 14:30:54.71

QA Filename : RDND07$DKA100:[QUAD3.QA]BKG_1.QAF;3

-- Multi-Test Full Report --

Description : quad 3a 1" beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.379306 Std Deviation : 0.065995

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
3-APR-2012 04:38	BKG		0.3300	| | |
4-APR-2012 01:30	BKG		0.4400	| | |

11-MAY-2012 03:42	BKG		0.4400	|	|	|
12-MAY-2012 04:31	BKG		0.3700	|	|	|
12-MAY-2012 15:43	BKG		0.3600	|	|	|
15-MAY-2012 03:32	BKG		0.5000	|	|	|
16-MAY-2012 03:00	BKG		0.3200	|	|	|
17-MAY-2012 04:09	BKG		0.4100	|	|	|

♀Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
18-MAY-2012 05:26	BKG		0.3400	|	|	|	
19-MAY-2012 04:56	BKG		0.4000	|	|	|	
19-MAY-2012 16:49	BKG		0.2700	|	|	|	
22-MAY-2012 03:31	BKG		0.3100	|	|	|	
23-MAY-2012 03:31	BKG		0.3400	|	|	|	
24-MAY-2012 03:48	BKG		0.4000	|	|	|	
25-MAY-2012 03:27	BKG		0.3400	|	|	|	
26-MAY-2012 03:51	BKG		0.3100	|	|	|	
30-MAY-2012 05:21	BKG		0.3300	|	|	|	
31-MAY-2012 03:38	BKG		0.3600	|	|	|	
1-JUN-2012 04:04	BKG		0.4200	|	|	|	
2-JUN-2012 04:06	BKG		0.3200	|	|	|	
2-JUN-2012 04:06	BKG		0.3200	|	|	|	
3-JUN-2012 11:30	BKG		0.2700	|	|	|	
5-JUN-2012 03:29	BKG		0.3600	|	|	|	
6-JUN-2012 04:14	BKG		0.3200	|	|	|	
7-JUN-2012 03:15	BKG		0.4100	|	|	|	
8-JUN-2012 04:44	BKG		0.3200	|	|	|	
9-JUN-2012 02:47	BKG		0.3100	|	|	|	
9-JUN-2012 17:21	BKG		0.3400	|	|	|	

-- Multi-Test Full Report --

Description : quad 3b 1" beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

2-MAY-2012 01:25	BKG		0.4400		
2-MAY-2012 02:29	BKG		0.4300		
3-MAY-2012 03:36	BKG		0.3800		
4-MAY-2012 03:55	BKG		0.3800		
5-MAY-2012 01:22	BKG		0.4300		
5-MAY-2012 18:00	BKG		0.4600		
8-MAY-2012 03:16	BKG		0.4100		
9-MAY-2012 03:13	BKG		0.5200	In	
10-MAY-2012 03:11	BKG		0.4200		
11-MAY-2012 03:42	BKG		0.5100	In	
12-MAY-2012 04:31	BKG		0.4600		
12-MAY-2012 15:43	BKG		0.4400		
15-MAY-2012 03:32	BKG		0.3700		
16-MAY-2012 03:00	BKG		0.5000		
17-MAY-2012 04:09	BKG		0.4700		
18-MAY-2012 05:26	BKG		0.4400		
19-MAY-2012 04:56	BKG		0.5100	In	
19-MAY-2012 16:49	BKG		0.4900		
22-MAY-2012 03:31	BKG		0.5100	In	
23-MAY-2012 03:31	BKG		0.4200		
24-MAY-2012 03:48	BKG		0.4800		
25-MAY-2012 03:27	BKG		0.4900		
26-MAY-2012 03:51	BKG		0.4500		
30-MAY-2012 05:21	BKG		0.3900		
31-MAY-2012 03:38	BKG		0.4000		
1-JUN-2012 04:04	BKG	✓	0.3600		
2-JUN-2012 04:06	BKG		0.3400		
2-JUN-2012 04:06	BKG		0.3400		
3-JUN-2012 11:30	BKG		0.3200	In	
5-JUN-2012 03:29	BKG		0.4700		
6-JUN-2012 04:14	BKG		0.4500		
7-JUN-2012 03:15	BKG		0.3400		
8-JUN-2012 04:44	BKG		0.4100		

28-APR-2012 00:49	BKG		0.4300		
28-APR-2012 10:59	BKG		0.5800	Ac	
28-APR-2012 16:11	BKG		0.4200		
29-APR-2012 02:15	BKG		0.3800		
29-APR-2012 09:30	BKG		0.4000		
1-MAY-2012 03:27	BKG		0.3600		
2-MAY-2012 01:25	BKG		0.3500		
2-MAY-2012 02:29	BKG		0.3400		
3-MAY-2012 03:36	BKG		0.4100		
4-MAY-2012 03:55	BKG		0.3800		
5-MAY-2012 01:22	BKG		0.3600		
5-MAY-2012 18:00	BKG		0.3600		
8-MAY-2012 03:16	BKG		0.3900		
9-MAY-2012 03:13	BKG		0.4500		
10-MAY-2012 03:11	BKG		0.4100		
11-MAY-2012 03:42	BKG		0.4500		
12-MAY-2012 04:31	BKG		0.4600		
12-MAY-2012 15:43	BKG		0.3600		
15-MAY-2012 03:32	BKG		0.4600		
16-MAY-2012 03:00	BKG		0.3400		
17-MAY-2012 04:09	BKG		0.3700		
18-MAY-2012 05:26	BKG		0.3400		
19-MAY-2012 04:56	BKG		0.3800		
19-MAY-2012 16:49	BKG		0.3900		
22-MAY-2012 03:31	BKG		0.3800		
23-MAY-2012 03:31	BKG		0.3700		
24-MAY-2012 03:48	BKG		0.4000		
25-MAY-2012 03:27	BKG		0.3900		
26-MAY-2012 03:51	BKG		0.3800		
30-MAY-2012 05:21	BKG		0.3500		
31-MAY-2012 03:38	BKG		0.3400		
1-JUN-2012 04:04	BKG	✓	0.3900		
2-JUN-2012 04:06	BKG		0.3500		

22-MAY-2012 03:31	BKG		0.3900		
23-MAY-2012 03:31	BKG		0.3800		
24-MAY-2012 03:48	BKG		0.3900		
25-MAY-2012 03:27	BKG		0.4300		
26-MAY-2012 03:51	BKG		0.3300		
30-MAY-2012 05:21	BKG		0.3200		
31-MAY-2012 03:38	BKG		0.3400		
1-JUN-2012 04:04	BKG	✓	0.4100		
2-JUN-2012 04:06	BKG		0.3200		
2-JUN-2012 04:06	BKG		0.3200		
3-JUN-2012 11:30	BKG		0.2900		
5-JUN-2012 03:29	BKG		0.3500		
6-JUN-2012 04:14	BKG		0.3400		
7-JUN-2012 03:15	BKG		0.3300		
8-JUN-2012 04:44	BKG		0.3300		
9-JUN-2012 02:47	BKG		0.3500		
9-JUN-2012 17:21	BKG		0.2600		

1-MAY-2012 04:26	CHK		43.4000			
2-MAY-2012 03:54	CHK		43.0000			
3-MAY-2012 05:01	CHK		43.4000			
4-MAY-2012 04:34	CHK		42.5000			
7-MAY-2012 04:31	CHK		41.7000	In		
8-MAY-2012 05:08	CHK		42.5000			
9-MAY-2012 04:45	CHK		42.9000			
10-MAY-2012 04:36	CHK		42.6000			
11-MAY-2012 04:33	CHK		42.2000			
14-MAY-2012 05:03	CHK		42.9000			
15-MAY-2012 04:02	CHK		43.7000			
16-MAY-2012 04:07	CHK		43.8000			
17-MAY-2012 04:42	CHK		44.6000			
18-MAY-2012 05:54	CHK		44.3000			
21-MAY-2012 04:44	CHK		44.3000			
22-MAY-2012 04:57	CHK		44.5000			

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
23-MAY-2012 06:24	CHK		44.8000				
24-MAY-2012 04:46	CHK		45.0000				
25-MAY-2012 05:53	CHK		40.5000	Be	Ac		
29-MAY-2012 04:53	CHK		42.8000				
30-MAY-2012 06:26	CHK		43.6000				
31-MAY-2012 04:58	CHK		44.7000				
1-JUN-2012 05:35	CHK		45.7000	In			
4-JUN-2012 04:26	CHK		44.4000				
5-JUN-2012 04:18	CHK		44.7000				
6-JUN-2012 04:54	CHK		44.2000				
7-JUN-2012 04:39	CHK		44.3000				
8-JUN-2012 05:24	CHK		44.1000				

-- Multi-Test Full Report --

4-MAY-2012 04:34	CHK		41.6000	| |	|

♀Quality Assurance Multi-Test Full Report (continued) Page : 3

Measurement Time	Sample ID	Sample Analyst	Value	LU|SD|UD|BS Rej
7-MAY-2012 04:31	CHK		41.8000	| | |
8-MAY-2012 05:08	CHK		42.3000	| | |
9-MAY-2012 04:45	CHK		41.6000	| | |
10-MAY-2012 04:36	CHK		41.9000	| | |
11-MAY-2012 04:33	CHK		41.4000	| | |
14-MAY-2012 05:03	CHK		42.5000	| | |
15-MAY-2012 04:02	CHK		42.7000	| | |
16-MAY-2012 04:07	CHK		42.8000	| | |
17-MAY-2012 04:42	CHK		42.1000	| | |
18-MAY-2012 05:54	CHK		42.6000	| | |
21-MAY-2012 04:44	CHK		42.5000	| | |
22-MAY-2012 04:57	CHK		42.5000	| | |
23-MAY-2012 06:24	CHK		42.7000	| | |
24-MAY-2012 04:46	CHK		41.6000	| | |
25-MAY-2012 05:53	CHK		39.7000	| | |
29-MAY-2012 04:53	CHK		42.3000	| | |
30-MAY-2012 06:26	CHK		42.2000	| | |
31-MAY-2012 04:58	CHK		42.4000	| | |
1-JUN-2012 05:35	CHK		42.7000	| | |
4-JUN-2012 04:26	CHK		42.4000	| | |
5-JUN-2012 04:18	CHK		42.8000	| | |
6-JUN-2012 04:54	CHK		41.3000	| | |
7-JUN-2012 04:39	CHK		41.9000	| | |
8-JUN-2012 05:24	CHK		42.2000	| | |

-- Multi-Test Full Report --

Description : quad 4c 1" beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 40.572128 Upper Bound : 44.842880

Investigate Level : 2.000000 Action Level : 3.000000

7-MAY-2012 04:31	CHK		40.6000		In	
8-MAY-2012 05:08	CHK		40.9000			
9-MAY-2012 04:45	CHK		41.2000			
10-MAY-2012 04:36	CHK		41.6000			
11-MAY-2012 04:33	CHK		41.0000			
14-MAY-2012 05:03	CHK		42.4000			
15-MAY-2012 04:02	CHK		42.7000			
16-MAY-2012 04:07	CHK		41.0000			
17-MAY-2012 04:42	CHK		42.2000			
18-MAY-2012 05:54	CHK		42.5000			
21-MAY-2012 04:44	CHK		43.1000			
22-MAY-2012 04:57	CHK		43.3000			
23-MAY-2012 06:24	CHK		43.3000			
24-MAY-2012 04:46	CHK		43.9000			
25-MAY-2012 05:53	CHK		35.4000	Be	Ac	
29-MAY-2012 04:53	CHK		42.6000			
30-MAY-2012 06:26	CHK		42.1000			
31-MAY-2012 04:58	CHK		42.6000			
1-JUN-2012 05:35	CHK	✓	42.4000			
4-JUN-2012 04:26	CHK		42.0000			
5-JUN-2012 04:18	CHK		42.2000			
6-JUN-2012 04:54	CHK		42.5000			
7-JUN-2012 04:39	CHK		41.4000			
8-JUN-2012 05:24	CHK		42.2000			

-- Multi-Test Full Report --

Description : quad 4d 1" beta %eff
Parameter Units : percent Parameter Type : Generic

---- Lower/Upper Bounds Test Parameters ----
Lower Bound : 39.354610 Upper Bound : 43.497200

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 41.425926 Std Deviation : 0.623060

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej

10-MAY-2012 04:36	CHK	40.9000	|	|	|
11-MAY-2012 04:33	CHK	41.1000	|	|	|
14-MAY-2012 05:03	CHK	41.0000	|	|	|
15-MAY-2012 04:02	CHK	41.5000	|	|	|
16-MAY-2012 04:07	CHK	42.5000	|	|	|
17-MAY-2012 04:42	CHK	42.0000	|	|	|
18-MAY-2012 05:54	CHK	41.1000	|	|	|
21-MAY-2012 04:44	CHK	41.4000	|	|	|
22-MAY-2012 04:57	CHK	41.0000	|	|	|
23-MAY-2012 06:24	CHK	41.2000	|	|	|
24-MAY-2012 04:46	CHK	40.7000	|	|	|
25-MAY-2012 05:53	CHK	0.0000	Be	Ac	|	|
29-MAY-2012 04:53	CHK	41.3000	|	|	|
30-MAY-2012 06:26	CHK	41.2000	|	|	|
31-MAY-2012 04:58	CHK	40.4000	|	|	|
1-JUN-2012 05:35	CHK	40.8000	|	|	|
4-JUN-2012 04:26	CHK	41.9000	|	|	|
5-JUN-2012 04:18	CHK	41.5000	|	|	|
6-JUN-2012 04:54	CHK	40.9000	|	|	|
7-JUN-2012 04:39	CHK	40.7000	|	|	|
8-JUN-2012 05:24	CHK	40.6000	|	|	|

Quality Assurance Report. Generated 11-JUN-2012 14:33:39.44

QA Filename : RDND07$DKA100:[QUAD4.QA]BKG_1.QAF;3

-- Multi-Test Full Report --

Description : quad 4a 1" beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----
Start Date : 1-JUL-2011 00:00 End Date : 1-JAN-2012 00:00
Mean : 0.465780 Std Deviation : 0.046244

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
3-APR-2012 04:38	BKG		0.4400	|	|	|	
4-APR-2012 01:29	BKG		0.5200	|	|	|	

5-APR-2012 03:07	BKG		0.4600		
6-APR-2012 03:30	BKG		0.5200		
7-APR-2012 01:47	BKG		0.4700		
10-APR-2012 03:01	BKG		0.5800	In	
11-APR-2012 04:06	BKG		0.5800	In	
12-APR-2012 03:38	BKG		0.5000		
13-APR-2012 03:23	BKG		0.4900		
14-APR-2012 00:10	BKG		0.5800	In	
14-APR-2012 16:21	BKG		0.4500		
17-APR-2012 03:10	BKG		0.5500		
18-APR-2012 03:30	BKG		0.5500		
19-APR-2012 04:09	BKG		0.5600	In	
20-APR-2012 03:21	BKG		0.5000		
21-APR-2012 05:32	BKG		0.5300		
24-APR-2012 04:07	BKG		0.5800	In	
25-APR-2012 03:52	BKG		0.5800	In	
26-APR-2012 03:48	BKG		0.6200	Ac	
27-APR-2012 03:40	BKG		0.4400		
28-APR-2012 00:49	BKG		0.4600		
28-APR-2012 10:59	BKG		0.7800	Ac	
28-APR-2012 16:12	BKG		0.4900		
29-APR-2012 02:15	BKG		0.5200		
29-APR-2012 09:30	BKG		0.5200		
1-MAY-2012 03:27	BKG		0.5000		
2-MAY-2012 03:06	BKG		0.5300		
3-MAY-2012 03:37	BKG		0.5400		
4-MAY-2012 03:55	BKG		0.7900	Ac	
5-MAY-2012 01:31	BKG		0.4800		
5-MAY-2012 18:00	BKG		0.5100		
8-MAY-2012 03:16	BKG		0.5400		
9-MAY-2012 03:13	BKG		0.5000		
10-MAY-2012 03:16	BKG		0.4000		
11-MAY-2012 03:46	BKG		0.3900		

12-MAY-2012 04:31	BKG		0.4800			
12-MAY-2012 15:48	BKG		0.4600			
15-MAY-2012 03:34	BKG		0.4500			
16-MAY-2012 03:01	BKG		0.5400			
17-MAY-2012 04:09	BKG		0.5800	In		
18-MAY-2012 05:26	BKG		0.5200			

♀Quality Assurance Multi-Test Full Report (continued) Page : 2

Measurement Time	Sample ID	Sample Analyst	Value	LU	SD	UD	BS Rej
19-MAY-2012 04:56	BKG		0.5600	In			
19-MAY-2012 16:50	BKG		0.4500				
22-MAY-2012 03:31	BKG		0.5600	In			
23-MAY-2012 02:11	BKG		0.5900	In			
24-MAY-2012 03:48	BKG		0.5100				
25-MAY-2012 03:32	BKG		0.5000				
26-MAY-2012 03:53	BKG		0.5000				
30-MAY-2012 05:16	BKG		0.4700				
31-MAY-2012 03:38	BKG		0.4100				
1-JUN-2012 04:04	BKG ✓		0.5200				
2-JUN-2012 04:06	BKG		0.5300				
2-JUN-2012 04:06	BKG		0.5300				
3-JUN-2012 11:35	BKG		0.5000				
5-JUN-2012 03:29	BKG		0.4800				
6-JUN-2012 04:14	BKG		0.4500				
7-JUN-2012 03:15	BKG		0.4400				
8-JUN-2012 04:45	BKG		0.5200				
9-JUN-2012 02:47	BKG		0.4000				
9-JUN-2012 17:21	BKG		0.4500				

-- Multi-Test Full Report --

Description : quad 4b 1" beta bkg, cpm
Parameter Units : cpm Parameter Type : Generic

Investigate Level : 2.000000 Action Level : 3.000000

---- Sample Driven N-Sigma Test Parameters ----

3-MAY-2012 03:37	BKG		0.4900		
4-MAY-2012 03:55	BKG		0.5600	In	
5-MAY-2012 01:31	BKG		0.4200		
5-MAY-2012 18:00	BKG		0.3600		
8-MAY-2012 03:16	BKG		0.4300		
9-MAY-2012 03:13	BKG		0.4300		
10-MAY-2012 03:16	BKG		0.4300		
11-MAY-2012 03:46	BKG		0.3900		
12-MAY-2012 04:31	BKG		0.4700		
12-MAY-2012 15:48	BKG		0.4900		
15-MAY-2012 03:34	BKG		0.4000		
16-MAY-2012 03:01	BKG		0.4300		
17-MAY-2012 04:09	BKG		0.4200		
18-MAY-2012 05:26	BKG		0.5300	In	
19-MAY-2012 04:56	BKG		0.4500		
19-MAY-2012 16:50	BKG		0.4300		
22-MAY-2012 03:31	BKG		0.4500		
23-MAY-2012 02:11	BKG		0.4300		
24-MAY-2012 03:48	BKG		0.3900		
25-MAY-2012 03:32	BKG		0.5000		
26-MAY-2012 03:53	BKG		0.3900		
30-MAY-2012 05:16	BKG		0.3000		
31-MAY-2012 03:38	BKG		0.3300		
1-JUN-2012 04:04	BKG		0.4300		
2-JUN-2012 04:06	BKG		0.4100		
2-JUN-2012 04:06	BKG		0.4100		
3-JUN-2012 11:35	BKG		0.3900		
5-JUN-2012 03:29	BKG		0.4200		
6-JUN-2012 04:14	BKG		0.3300		
7-JUN-2012 03:15	BKG		0.3500		
8-JUN-2012 04:45	BKG		0.3800		
9-JUN-2012 02:47	BKG		0.3700		
9-JUN-2012 17:21	BKG		0.3500		

28-APR-2012 16:12	BKG		0.7900	|	|
29-APR-2012 02:15	BKG		0.6700	|In|	|
29-APR-2012 09:30	BKG		0.7600	|	|
1-MAY-2012 03:27	BKG		0.7900	|	|
2-MAY-2012 03:06	BKG		0.8400	|	|
3-MAY-2012 03:37	BKG		0.8600	|	|
4-MAY-2012 03:55	BKG		0.9600	|In|	|
5-MAY-2012 01:31	BKG		0.7500	|	|
5-MAY-2012 18:00	BKG		0.8000	|	|
8-MAY-2012 03:16	BKG		0.7400	|	|
9-MAY-2012 03:13	BKG		0.9000	|	|
10-MAY-2012 03:16	BKG		0.7200	|	|
11-MAY-2012 03:46	BKG		0.7500	|	|
12-MAY-2012 04:31	BKG		0.8400	|	|
12-MAY-2012 15:48	BKG		0.7800	|	|
15-MAY-2012 03:34	BKG		0.8700	|	|
16-MAY-2012 03:01	BKG		0.8100	|	|
17-MAY-2012 04:09	BKG		0.7500	|	|
18-MAY-2012 05:26	BKG		0.7600	|	|
19-MAY-2012 04:56	BKG		0.8800	|	|
19-MAY-2012 16:50	BKG		0.7600	|	|
22-MAY-2012 03:31	BKG		0.8500	|	|
23-MAY-2012 02:11	BKG		0.8200	|	|
24-MAY-2012 03:48	BKG		0.7900	|	|
25-MAY-2012 03:32	BKG		0.8300	|	|
26-MAY-2012 03:53	BKG		0.8400	|	|
30-MAY-2012 05:16	BKG		0.7100	|	|
31-MAY-2012 03:38	BKG		0.7700	|	|
1-JUN-2012 04:04	BKG		0.8500	|	|
2-JUN-2012 04:06	BKG		0.8100	|	|
2-JUN-2012 04:06	BKG		0.8100	|	|
3-JUN-2012 11:35	BKG		0.8600	|	|
5-JUN-2012 03:29	BKG		0.8800	|	|

26-MAY-2012 03:53	BKG		0.5300		
30-MAY-2012 05:16	BKG		0.5500		
31-MAY-2012 03:38	BKG		0.5400		
1-JUN-2012 04:04	BKG	✓	0.5700		
2-JUN-2012 04:06	BKG		0.5800		
2-JUN-2012 04:06	BKG		0.5800		
3-JUN-2012 11:35	BKG		0.5700		
5-JUN-2012 03:29	BKG		0.5300		
6-JUN-2012 04:14	BKG		0.5000		
7-JUN-2012 03:15	BKG		0.4800		
8-JUN-2012 04:45	BKG		0.5200		
9-JUN-2012 02:47	BKG		0.4000	Ac	
9-JUN-2012 17:21	BKG		0.5200		

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **T. AVANAVAGE** **DATE:** **JULY 6, 2012**

FROM: **A. COGNETTI** **COPIES:** **DV FILE**

SUBJECT: **ORGANIC AND INORGANIC DATA VALIDATION- VOC / SVOC / METALS MIDDLE RIVER COMPLEX GROUNDWATER SAMPLING – FULL REVIEW SAMPLE DELIVERY GROUP (SDG) 240-11568-1**

SAMPLES: 2/Aqueous/VOC

MRC-MW08B-052212 TB-052212

1/Aqueous/SVOC /Metals

MRC-MW08B-052212

Overview

The sample set for Middle River Complex Groundwater Sampling, SDG 240-11568-1 consists of one (1) aqueous environmental samples and a trip blank. All samples were analyzed for volatile organic compounds (VOCs). One (1) aqueous environmental sample was analyzed for semivolatile organic compounds (SVOCs) and total and dissolved metals. There are no field duplicate pairs included in this SDG.

The samples were collected on May 22, 2012 and analyzed by Test America Laboratories, Inc. Volatile organic compound analyses were conducted in accordance to SW-846 Method 8260B. The analyses for SVOCs followed SW-846 Method 8270D. Metal analyses followed SW-846 Method 6020A and mercury 7470A.

Summary

The data contained in this SDG were validated with regard to the following parameters: data completeness, system performance, holding times, GC/MS tuning, initial / continuing calibrations, laboratory method blank results, surrogate spike/internal standard recoveries, laboratory control sample results, matrix spike/matrix spike duplicate results, serial dilution, compound identification, chromatographic resolution, compound quantitation, and detection limits.

Areas of concern with respect to data quality are listed below.

Major Problems

- In the volatile initial calibration of instrument A3UX15 on April 29, 2012 and the continuing calibration on May 31, 2012 @ 10:09, tert-butyl alcohol had a relative response factor (RRF) less than the 0.05 quality control limit. In the initial calibration on April 29, 2012, vinyl acetate also had a RRF less than the 0.05 quality control limit. The nondetected vinyl acetate and tert-butyl alcohol results were qualified as rejected (UR) in the affected samples.

- MRC-MW08B-052212 contained Tentatively Identified Compounds (TICs) containing silanol or siloxanes. These compounds were qualified as rejected (R) because they are indictative of column bleed.

Minor Problems

- The initial calibration relative standard deviations (%RSDs) for 4-bromophenyl phenyl ether, 3,3'-dichlorobenzidine, benzo(b)fluoranthene, and dibenzo(a,h)anthracene were greater than the 15% quality control limit and 50%. The nondetected 4-bromophenyl phenyl ether, 3,3'-dichlorobenzidine, benzo(b)fluoranthene, and dibenzo(a,h)anthracene results were qualified as estimated (UJ).

- The laboratory control sample (LCS) percent recovery (%R) of 4,6-dinitro-2-methylphenol was less than the lower quality control limit in batch 240-45149/15. The nondetected 4,6-dinitro-2-methylphenol result was qualified as biased low (UL) in sample MRC-MW08B-052212.

- The CRQL %Rs of chromium were less than 90% in CRI-240-45845/9 and CRI-240-45945/25, The total chromium result was qualified as estimated (J) due to conflicting directional bias in sample MRC-MW08B-052212. The nondetected dissolved chromium result was qualified as biased low (UL) in sample MRC-MW08B-052212. In addition, the CRQL %R of zinc was greater than 110% in sample CRI 240-45845/25. No action was taken because the positive zinc results were qualified due to blank contamination.

- The CRQL %R of mercury was less than 80% in CRA 240-46141/9. The total and dissolved nondetected mercury results were qualified as biased low (UL) in sample MRC-MW08B-052212.

- Contamination was detected in the continuing calibration and method blanks for metals.

Contaminant	Maximum Concentration (ug/L)	Action Level (ug/L)
Barium [(1)]	0.728	3.64
Copper [(1)]	0.421	2.11
Molybdenum [(2)]	0.748	3.74
Zinc [(1)]	11.3	56.5
Thallium [(2)]	0.414	2.07

(1) Maximum concentration detected in laboratory method blank 240-45614/1.
(2) Maximum concentration detected in the continuing calibration blank (CCB) 240-45845/15 analyzed on May 31, 2012 @ 7:40.
(3) Maximum concentration detected in the CCB analyzed on May 31, 2012 @ 8:37.

An action level of 5X the maximum concentration of contaminant was established in order to evaluate samples for blank contamination. Sample aliquot and dilution factors were taken into account when applying the action level. Positive results less than the action level were qualified as (B) due to blank contamination.

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) for the organic analyses were qualified as estimated, (J).

Notes

The continuing calibration percent differences (%Ds) for chloroethane, 1,1,2,-trichlorotrifluoroethane, acetone, 2-chloroethyl vinyl ether, 2-hexanone, 1,2,4-trichlorobenzene, hexachlorobutadiene, and 1,2,3-trichlorobenzene were greater than the 20% quality control limit and less than 50% on May 31, 2012 @ 10:09 on instrument A3UX15. No action was taken on the nondetected chloroethane, 1,1,2,-trichlorotrifluoroethane, acetone, 2-chloroethyl vinyl ether, 2-hexanone, 1,2,4-trichlorobenzene,

hexachlorobutadiene, and 1,2,3-trichlorobenzene results.

The matrix spike/ matrix spike duplicate (MS/MSD) %Rs of 2-hexanone were greater than the upper quality control limit in sample 240-11548-B-2. In addition, the MSD %Rs of tert-butyl alcohol, m&p xylenes and total xylenes were greater than the upper quality control limit. No action taken because this is not a sample in this SDG.

Nondetected results were reported to the MDL.

EXECUTIVE SUMMARY

Laboratory Performance Issues: Tert-butyl alcohol and vinyl acetate had RRFs less than quality control limits in the initial and continuing calibrations. The initial calibration %RSDs for several SVOCs exceeded quality control limits. The LCS %R of 4,6-dinitro-2-methylphenol was less than the lower quality control limit. The CRQL %Rs of chromium were less than 90%. The CRQL %R of mercury was less than 80%. Contamination was detected in the metals fraction.

Other Factors Affecting Data Quality: TICs were detected.

The data for these analyses were reviewed with reference to the Region III EPA Functional Guidelines for Organic Data Validation (9/94)and Region III EPA Functional Guidelines for Inorganic Data Validation (April 1993). The text of this report has been formulated to address only those problem areas affecting data quality.

Ann Cognetti

Tetra Tech
Ann Cognetti
Chemist/Data Validator

Tetra Tech
Joseph A. Samchuck
Data Validation Quality Assurance Officer

Attachments:
Appendix A – Qualified Analytical Results
Appendix B – Results as Reported by the Laboratory
Appendix C – Support Documentation

Appendix A

Qualified Analytical Results

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04036	NSAMPLE	MRC-MW08B-052212			TB-052212		
SDG: 240-11568-1	LAB_ID	240-11568-2			240-11568-1		
FRACTION: OV	SAMP_DATE	5/22/2012			5/22/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
1,1,1,2-TETRACHLOROETHANE		0.23	U		0.23	U	
1,1,1-TRICHLOROETHANE		0.22	U		0.22	U	
1,1,2,2-TETRACHLOROETHANE		0.18	U		0.18	U	
1,1,2-TRICHLOROTRIFLUOROETHANE		0.28	U		0.28	U	
1,1-DICHLOROETHANE		0.15	U		0.15	U	
1,1-DICHLOROETHENE		0.19	U		0.19	U	
1,1-DICHLOROPROPENE		0.13	U		0.13	U	
1,2,3-TRICHLOROBENZENE		0.17	U		0.17	U	
1,2,3-TRICHLOROPROPANE		0.43	U		0.43	U	
1,2,3-TRIMETHYLBENZENE		0.0059	U		0.0059	U	
1,2,4-TRICHLOROBENZENE		0.15	U		0.15	U	
1,2,4-TRIMETHYLBENZENE		0.12	U		0.12	U	
1,2-DIBROMO-3-CHLOROPROPANE		0.67	U		0.67	U	
1,2-DIBROMOETHANE		0.24	U		0.24	U	
1,2-DICHLOROBENZENE		0.13	U		0.13	U	
1,2-DICHLOROETHANE		0.22	U		0.22	U	
1,2-DICHLOROPROPANE		0.18	U		0.18	U	
1,3-DICHLOROBENZENE		0.14	U		0.14	U	
1,3-DICHLOROPROPANE		0.16	U		0.16	U	
1,4-DICHLOROBENZENE		0.13	U		0.13	U	
2,2-DICHLOROPROPANE		0.13	U		0.13	U	
2-BUTANONE		0.57	U		0.57	U	
2-CHLOROETHYL VINYL ETHER		0.99	U		0.99	U	
2-CHLOROTOLUENE		0.11	U		0.11	U	
2-HEXANONE		0.41	U		0.41	U	
4-CHLOROTOLUENE		0.18	U		0.18	U	
4-ISOPROPYLTOLUENE		0.12	U		0.12	U	
4-METHYL-2-PENTANONE		0.32	U		0.32	U	
ACETONE		1.1	U		1.1	U	
BENZENE		0.13	U		0.13	U	
BROMOBENZENE		0.13	U		0.13	U	
BROMOCHLOROMETHANE		0.29	U		0.29	U	
BROMODICHLOROMETHANE		0.15	U		0.15	U	
BROMOFORM		0.64	U		0.64	U	
BROMOMETHANE		0.41	U		0.41	U	

PROJ_NO: 04036	NSAMPLE	MRC-MW08B-052212			TB-052212		
SDG: 240-11568-1	LAB_ID	240-11568-2			240-11568-1		
FRACTION: OV	SAMP_DATE	5/22/2012			5/22/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
CARBON DISULFIDE		0.13	U		0.13	U	
CARBON TETRACHLORIDE		0.13	U		0.13	U	
CHLOROBENZENE		0.15	U		0.15	U	
CHLORODIBROMOMETHANE		0.18	U		0.18	U	
CHLOROETHANE		0.29	U		0.29	U	
CHLOROFORM		0.16	U		0.16	U	
CHLOROMETHANE		0.3	U		0.3	U	
CIS-1,2-DICHLOROETHENE		0.17	U		0.17	U	
CIS-1,3-DICHLOROPROPENE		0.14	U		0.14	U	
DIBROMOMETHANE		0.28	U		0.28	U	
DICHLORODIFLUOROMETHANE		0.31	U		0.31	U	
DIISOPROPYL ETHER		1.5	U		1.5	U	
ETHYL TERT-BUTYL ETHER		0.11	U		0.11	U	
ETHYLBENZENE		0.17	U		0.17	U	
HEXACHLOROBUTADIENE		0.3	U		0.3	U	
ISOPROPYLBENZENE		0.13	U		0.13	U	
M+P-XYLENES		0.24	U		0.24	U	
METHYL TERT-BUTYL ETHER		0.17	U		0.17	U	
METHYLENE CHLORIDE		0.33	U		0.33	U	
NAPHTHALENE		0.24	U		0.24	U	
N-BUTYLBENZENE		0.12	U		0.12	U	
N-PROPYLBENZENE		0.14	U		0.14	U	
O-XYLENE		0.14	U		0.14	U	
SEC-BUTYLBENZENE		0.13	U		0.13	U	
SILANOL, TRIMETHYL-		1.3	R	Z2			
STYRENE		0.11	U		0.11	U	
TERT-AMYL METHYL ETHER		0.067	U		0.067	U	
TERT-BUTYLBENZENE		0.13	U		0.13	U	
TERTIARY-BUTYL ALCOHOL		3.9	UR	C	3.9	UR	C
TETRACHLOROETHENE		0.29	U		0.29	U	
TOLUENE		0.13	U		0.13	U	
TOTAL XYLENES		0.28	U		0.28	U	
TRANS-1,2-DICHLOROETHENE		0.19	U		0.19	U	
TRANS-1,3-DICHLOROPROPENE		0.19	U		0.19	U	
TRICHLOROETHENE		1.1			0.17	U	

PROJ_NO: 04036	NSAMPLE	MRC-MW08B-052212			TB-052212		
SDG: 240-11568-1	LAB_ID	240-11568-2			240-11568-1		
FRACTION: OV	SAMP_DATE	5/22/2012			5/22/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
TRICHLOROFLUOROMETHANE		0.21	U		0.21	U	
VINYL ACETATE		0.19	UR	C	0.19	UR	C
VINYL CHLORIDE		0.22	U		0.22	U	

PROJ_NO: 04036	NSAMPLE	MRC-MW08B-052212		
SDG: 240-11568-1	LAB_ID	240-11568-2		
FRACTION: OS	SAMP_DATE	5/22/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
1,1-BIPHENYL		0.78	U	
1,4-DIOXANE		0.48	U	
2,2'-OXYBIS(1-CHLOROPROPANE)		0.39	U	
2,4,5-TRICHLOROPHENOL		0.29	U	
2,4,6-TRICHLOROPHENOL		0.78	U	
2,4-DICHLOROPHENOL		0.78	U	
2,4-DIMETHYLPHENOL		0.78	U	
2,4-DINITROPHENOL		2.3	U	
2,4-DINITROTOLUENE		0.26	U	
2,6-DINITROTOLUENE		0.78	U	
2-CHLORONAPHTHALENE		0.097	U	
2-CHLOROPHENOL		0.28	U	
2-METHYLNAPHTHALENE		0.097	U	
2-METHYLPHENOL		0.78	U	
2-NITROANILINE		0.78	U	
2-NITROPHENOL		0.27	U	
3&4-METHYLPHENOL		0.73	U	
3,3'-DICHLOROBENZIDINE		0.36	UJ	C
3-NITROANILINE		0.27	U	
4,6-DINITRO-2-METHYLPHENOL		2.3	UL	E
4-BROMOPHENYL PHENYL ETHER		0.78	UJ	C
4-CHLORO-3-METHYLPHENOL		0.78	U	
4-CHLOROANILINE		0.78	U	
4-CHLOROPHENYL PHENYL ETHER		0.29	U	
4-NITROANILINE		0.78	U	
4-NITROPHENOL		2.3	U	
ACENAPHTHENE		0.097	U	
ACENAPHTHYLENE		0.097	U	
ACETOPHENONE		0.33	U	
ANTHRACENE		0.097	U	
ATRAZINE		0.33	U	
BENZALDEHYDE		0.38	U	
BENZO(A)ANTHRACENE		0.097	U	
BENZO(A)PYRENE		0.097	U	
BENZO(B)FLUORANTHENE		0.097	UJ	C

PROJ_NO: 04036	NSAMPLE	MRC-MW08B-052212		
SDG: 240-11568-1	LAB_ID	240-11568-2		
FRACTION: OS	SAMP_DATE	5/22/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
BENZO(G,H,I)PERYLENE		0.097	U	
BENZO(K)FLUORANTHENE		0.097	U	
BIS(2-CHLOROETHOXY)METHANE		0.31	U	
BIS(2-CHLOROETHYL)ETHER		0.097	U	
BIS(2-ETHYLHEXYL)PHTHALATE		0.78	U	
BUTYL BENZYL PHTHALATE		0.78	U	
CAPROLACTAM		0.78	U	
CARBAZOLE		0.27	U	
CHRYSENE		0.097	U	
DIBENZO(A,H)ANTHRACENE		0.097	UJ	C
DIBENZOFURAN		0.097	U	
DIETHYL PHTHALATE		0.58	U	
DIMETHYL PHTHALATE		0.28	U	
DI-N-BUTYL PHTHALATE		0.65	U	
DI-N-OCTYL PHTHALATE		0.78	U	
FLUORANTHENE		0.097	U	
FLUORENE		0.097	U	
HEXACHLOROBENZENE		0.097	U	
HEXACHLOROBUTADIENE		0.26	U	
HEXACHLOROCYCLOPENTADIENE		0.78	U	
HEXACHLOROETHANE		0.78	U	
INDENO(1,2,3-CD)PYRENE		0.097	U	
ISOPHORONE		0.26	U	
NAPHTHALENE		0.097	U	
NITROBENZENE		0.039	U	
N-NITROSODIMETHYLAMINE		0.3	U	
N-NITROSO-DI-N-PROPYLAMINE		0.78	U	
N-NITROSODIPHENYLAMINE		0.3	U	
PENTACHLOROPHENOL		2.3	U	
PHENANTHRENE		0.097	U	
PHENOL		0.58	U	
PYRENE		0.097	U	

PROJ_NO: 04036	NSAMPLE	MRC-MW08B-052212		
SDG: 240-11568-1	LAB_ID	240-11568-2		
FRACTION: M	SAMP_DATE	5/22/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.18	J	P
ARSENIC		0.85	J	P
BARIUM		18		
BERYLLIUM		0.56	J	P
CADMIUM		0.13	U	
CHROMIUM		1.2	J	CP
COBALT		16		
COPPER		4.8		
LEAD		0.22	J	P
MERCURY		0.12	UL	C
MOLYBDENUM		0.42	B	A
NICKEL		25		
SELENIUM		0.57	U	
SILVER		0.08	U	
THALLIUM		0.45	B	A
VANADIUM		2.8	J	P
ZINC		49	B	A

PROJ_NO: 04036	NSAMPLE	MRC-MW08B-052212		
SDG: 240-11568-1	LAB_ID	240-11568-2		
FRACTION: MF	SAMP_DATE	5/22/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
ANTIMONY		0.22	J	P
ARSENIC		0.9	J	P
BARIUM		14		
BERYLLIUM		0.56	J	P
CADMIUM		0.13	U	
CHROMIUM		0.71	UL	C
COBALT		15		
COPPER		4		
LEAD		0.18	U	
MERCURY		0.12	UL	C
MOLYBDENUM		0.37	B	A
NICKEL		24		
SELENIUM		0.57	U	
SILVER		0.08	U	
THALLIUM		0.55	B	A
VANADIUM		1.3	J	P
ZINC		40	B	A

Appendix B

Results as Reported by the Laboratory

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 Lab Sample ID: 240-11568-2

Matrix: Water Lab File ID: UXC4192.D

Analysis Method: 8260B Date Collected: 05/22/2012 10:15

Sample wt/vol: 5(mL) Date Analyzed: 05/31/2012 18:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45839 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 | Lab Sample ID: 240-11568-2

Matrix: Water | Lab File ID: UXC4192.D

Analysis Method: 8260B | Date Collected: 05/22/2012 10:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/31/2012 18:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.1		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 | Lab Sample ID: 240-11568-2

Matrix: Water | Lab File ID: UXC4192.D

Analysis Method: 8260B | Date Collected: 05/22/2012 10:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/31/2012 18:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	92		66-117
1868-53-7	Dibromofluoromethane (Surr)	92		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	111		63-129
2037-26-5	Toluene-d8 (Surr)	97		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 Lab Sample ID: 240-11568-2

Matrix: Water Lab File ID: UXC4192.D

Analysis Method: 8260B Date Collected: 05/22/2012 10:15

Sample wt/vol: 5(mL) Date Analyzed: 05/31/2012 18:32

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45839 Units: ug/L

Number TICs Found: 1 TIC Result Total: 1.3

CAS NO.	COMPOUND NAME	RT	RESULT	Q
1066-40-6	Silanol, trimethyl-	3.68	1.3	T J N

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: TB-052212 | Lab Sample ID: 240-11568-1

Matrix: Water | Lab File ID: UXC4191.D

Analysis Method: 8260B | Date Collected: 05/22/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/31/2012 18:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Client Sample ID: TB-052212 Lab Sample ID: 240-11568-1

Matrix: Water Lab File ID: UXC4191.D

Analysis Method: 8260B Date Collected: 05/22/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/31/2012 18:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45839 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: TB-052212 | Lab Sample ID: 240-11568-1

Matrix: Water | Lab File ID: UXC4191.D

Analysis Method: 8260B | Date Collected: 05/22/2012 00:00

Sample wt/vol: 5(mL) | Date Analyzed: 05/31/2012 18:10

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	95		66-117
1868-53-7	Dibromofluoromethane (Surr)	92		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	109		63-129
2037-26-5	Toluene-d8 (Surr)	96		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Client Sample ID: TB-052212 Lab Sample ID: 240-11568-1

Matrix: Water Lab File ID: UXC4191.D

Analysis Method: 8260B Date Collected: 05/22/2012 00:00

Sample wt/vol: 5(mL) Date Analyzed: 05/31/2012 18:10

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45839 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 | Lab Sample ID: 240-11568-2

Matrix: Water | Lab File ID: 0530040.D

Analysis Method: 8270D | Date Collected: 05/22/2012 10:15

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1030(mL) | Date Analyzed: 05/30/2012 21:06

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45635 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	0.19	U	0.19	0.097
208-96-8	Acenaphthylene	0.19	U	0.19	0.097
98-86-2	Acetophenone	0.97	U	0.97	0.33
120-12-7	Anthracene	0.19	U	0.19	0.097
1912-24-9	Atrazine	0.97	U	0.97	0.33
100-52-7	Benzaldehyde	0.97	U	0.97	0.38
56-55-3	Benzo[a]anthracene	0.19	U	0.19	0.097
205-99-2	Benzo[b]fluoranthene	0.19	U	0.19	0.097
207-08-9	Benzo[k]fluoranthene	0.19	U	0.19	0.097
191-24-2	Benzo[g,h,i]perylene	0.19	U	0.19	0.097
50-32-8	Benzo[a]pyrene	0.19	U	0.19	0.097
85-68-7	Butyl benzyl phthalate	0.97	U	0.97	0.78
92-52-4	1,1'-Biphenyl	0.97	U	0.97	0.78
111-91-1	Bis(2-chloroethoxy)methane	0.97	U	0.97	0.31
111-44-4	Bis(2-chloroethyl)ether	0.97	U	0.97	0.097
117-81-7	Bis(2-ethylhexyl) phthalate	1.9	U	1.9	0.78
101-55-3	4-Bromophenyl phenyl ether	1.9	U	1.9	0.78
105-60-2	Caprolactam	4.9	U	4.9	0.78
86-74-8	Carbazole	0.97	U	0.97	0.27
106-47-8	4-Chloroaniline	1.9	U	1.9	0.78
59-50-7	4-Chloro-3-methylphenol	1.9	U	1.9	0.78
91-58-7	2-Chloronaphthalene	0.97	U	0.97	0.097
95-57-8	2-Chlorophenol	0.97	U	0.97	0.28
7005-72-3	4-Chlorophenyl phenyl ether	1.9	U	1.9	0.29
218-01-9	Chrysene	0.19	U	0.19	0.097
91-57-6	2-Methylnaphthalene	0.19	U	0.19	0.097
15831-10-4	3 & 4 Methylphenol	1.9	U	1.9	0.73
53-70-3	Dibenzo(a,h)anthracene	0.19	U	0.19	0.097
132-64-9	Dibenzofuran	0.97	U	0.97	0.097
91-94-1	3,3'-Dichlorobenzidine	4.9	U	4.9	0.36
120-83-2	2,4-Dichlorophenol	1.9	U	1.9	0.78
84-66-2	Diethyl phthalate	0.97	U	0.97	0.58
105-67-9	2,4-Dimethylphenol	1.9	U	1.9	0.78
131-11-3	Dimethyl phthalate	0.97	U	0.97	0.28

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 | Lab Sample ID: 240-11568-2

Matrix: Water | Lab File ID: 0530040.D

Analysis Method: 8270D | Date Collected: 05/22/2012 10:15

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1030(mL) | Date Analyzed: 05/30/2012 21:06

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45635 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
534-52-1	4,6-Dinitro-2-methylphenol	4.9	U *	4.9	2.3
51-28-5	2,4-Dinitrophenol	4.9	U	4.9	2.3
121-14-2	2,4-Dinitrotoluene	4.9	U	4.9	0.26
84-74-2	Di-n-butyl phthalate	0.97	U	0.97	0.65
117-84-0	Di-n-octyl phthalate	0.97	U	0.97	0.78
123-91-1	1,4-Dioxane	0.97	U	0.97	0.48
206-44-0	Fluoranthene	0.19	U	0.19	0.097
86-73-7	Fluorene	0.19	U	0.19	0.097
118-74-1	Hexachlorobenzene	0.19	U	0.19	0.097
87-68-3	Hexachlorobutadiene	0.97	U	0.97	0.26
77-47-4	Hexachlorocyclopentadiene	9.7	U	9.7	0.78
67-72-1	Hexachloroethane	0.97	U	0.97	0.78
193-39-5	Indeno[1,2,3-cd]pyrene	0.19	U	0.19	0.097
78-59-1	Isophorone	0.97	U	0.97	0.26
95-48-7	2-Methylphenol	0.97	U	0.97	0.78
91-20-3	Naphthalene	0.19	U	0.19	0.097
88-74-4	2-Nitroaniline	1.9	U	1.9	0.78
99-09-2	3-Nitroaniline	1.9	U	1.9	0.27
100-01-6	4-Nitroaniline	1.9	U	1.9	0.78
98-95-3	Nitrobenzene	0.97	U	0.97	0.039
88-75-5	2-Nitrophenol	1.9	U	1.9	0.27
100-02-7	4-Nitrophenol	4.9	U	4.9	2.3
62-75-9	N-Nitrosodimethylamine	0.97	U	0.97	0.30
86-30-6	N-Nitrosodiphenylamine	0.97	U	0.97	0.30
621-64-7	N-Nitrosodi-n-propylamine	0.97	U	0.97	0.78
108-60-1	2,2'-oxybis[1-chloropropane]	0.97	U	0.97	0.39
87-86-5	Pentachlorophenol	4.9	U	4.9	2.3
85-01-8	Phenanthrene	0.19	U	0.19	0.097
108-95-2	Phenol	0.97	U	0.97	0.58
129-00-0	Pyrene	0.19	U	0.19	0.097
95-95-4	2,4,5-Trichlorophenol	4.9	U	4.9	0.29
88-06-2	2,4,6-Trichlorophenol	4.9	U	4.9	0.78
606-20-2	2,6-Dinitrotoluene	4.9	U	4.9	0.78

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 | Lab Sample ID: 240-11568-2

Matrix: Water | Lab File ID: 0530040.D

Analysis Method: 8270D | Date Collected: 05/22/2012 10:15

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1030(mL) | Date Analyzed: 05/30/2012 21:06

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45635 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	39		28-110
367-12-4	2-Fluorophenol (Surr)	48		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	53		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	41		27-111
4165-62-2	Phenol-d5 (Surr)	47		10-110
1718-51-0	Terphenyl-d14 (Surr)	65		37-119

COVER PAGE
METALS

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG No.:

Project: MRC 2012 GW

Client Sample ID	Lab Sample ID
MRC-MW08B-052212	240-11568-2

Comments:

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS

Client Sample ID: MRC-MW08B-052212 Lab Sample ID: 240-11568-2

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG ID.:

Matrix: Water Date Sampled: 05/22/2012 10:15

Reporting Basis: WET Date Received: 05/23/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW08B-052212 Lab Sample ID: 240-11568-2

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG ID.:

Matrix: Water Date Sampled: 05/22/2012 10:15

Reporting Basis: WET Date Received: 05/23/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.18	2.0	0.13	ug/L	J		1	6020A
7440-38-2	Arsenic	0.85	5.0	0.40	ug/L	J		1	6020A
7440-39-3	Barium	18	5.0	0.19	ug/L		B	1	6020A
7440-41-7	Beryllium	0.56	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020A
7440-48-4	Cobalt	16	1.0	0.058	ug/L			1	6020A
7440-47-3	Chromium	1.2	2.0	0.71	ug/L	J		1	6020A
7440-50-8	Copper	4.8	2.0	0.29	ug/L		B	1	6020A
7439-98-7	Molybdenum	0.42	10	0.093	ug/L	J	B	1	6020A
7440-02-0	Nickel	25	2.0	0.20	ug/L			1	6020A
7439-92-1	Lead	0.22	1.0	0.18	ug/L	J		1	6020A
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020A
7440-28-0	Thallium	0.45	2.0	0.14	ug/L	J	B	1	6020A
7440-62-2	Vanadium	2.8	20	0.44	ug/L	J		1	6020A
7440-66-6	Zinc	49	20	2.3	ug/L		B	1	6020A
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020A

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - DISSOLVED

Client Sample ID: MRC-MW08B-052212 Lab Sample ID: 240-11568-2

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG ID.:

Matrix: Water Date Sampled: 05/22/2012 10:15

Reporting Basis: WET Date Received: 05/23/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020A
7440-38-2	Arsenic	0.90	5.0	0.40	ug/L	J		1	6020A
7440-39-3	Barium	14	5.0	0.19	ug/L		B	1	6020A
7440-41-7	Beryllium	0.56	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020A
7440-48-4	Cobalt	15	1.0	0.058	ug/L			1	6020A
7440-47-3	Chromium	2.0	2.0	0.71	ug/L	U		1	6020A
7440-50-8	Copper	4.0	2.0	0.29	ug/L		B	1	6020A
7439-98-7	Molybdenum	0.37	10	0.093	ug/L	J	B	1	6020A
7440-02-0	Nickel	24	2.0	0.20	ug/L			1	6020A
7439-92-1	Lead	1.0	1.0	0.18	ug/L	U		1	6020A
7440-36-0	Antimony	0.22	2.0	0.13	ug/L	J		1	6020A
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020A
7440-62-2	Vanadium	1.3	20	0.44	ug/L	J		1	6020A
7440-66-6	Zinc	40	20	2.3	ug/L		B	1	6020A
7440-28-0	Thallium	0.55	2.0	0.14	ug/L	J	B	1	6020A
7439-97-6	Mercury	0.20	0.20	0.12	ug/L	U		1	7470A

Appendix C

Support Documentation

CASE NARRATIVE

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Project: MRC 2012 GW

Report Number: 240-11568-1

With the exceptions noted as flags or footnotes, standard analytical protocols were followed in the analysis of the samples and no problems were encountered or anomalies observed. In addition all laboratory quality control samples were within established control limits, with any exceptions noted below. Each sample was analyzed to achieve the lowest possible reporting limit within the constraints of the method. In some cases, due to interference or analytes present at high concentrations, samples were diluted. For diluted samples, the reporting limits are adjusted relative to the dilution required.

TestAmerica North Canton attests to the validity of the laboratory data generated by TestAmerica facilities reported herein. All analyses performed by TestAmerica facilities were done using established laboratory SOPs that incorporate QA/QC procedures described in the application methods. TestAmerica's operations groups have reviewed the data for compliance with the laboratory QA/QC plan, and data have been found to be compliant with laboratory protocols unless otherwise noted below.

The test results in this report meet all NELAP requirements for parameters for which accreditation is required or available. Any exceptions to NELAP requirements are noted in this report. Pursuant to NELAP, this report may not be reproduced, except in full, without the written approval of the laboratory.

Calculations are performed before rounding to avoid round-off errors in calculated results.

All holding times were met and proper preservation noted for the methods performed on these samples, unless otherwise detailed in the individual sections below.

This laboratory report is confidential and is intended for the sole use of TestAmerica and its client.

RECEIPT

The samples were received on 05/23/2012; the samples arrived in good condition, properly preserved and on ice. The temperature of the cooler at receipt was 1.3 C.

VOLATILE ORGANIC COMPOUNDS (GC-MS)

Samples TB-052212 (240-11568-1) and MRC-MW08B-052212 (240-11568-2) were analyzed for volatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8260B. The samples were analyzed on 05/31/2012.

2-Hexanone failed the recovery criteria high for the MS of sample 240-11548-2 in batch 240-45839. 2-Hexanone, m-Xylene & p-Xylene, tert-Butyl alcohol and Xylenes, Total failed the recovery criteria high for the MSD of sample 240-11548-2 in batch 240-45839.

Refer to the QC report for details.

No other difficulties were encountered during the VOCs analyses. All other quality control parameters were within the acceptance limits.

SEMIVOLATILE ORGANIC COMPOUNDS (GC-MS)

Sample MRC-MW08B-052212 (240-11568-2) was analyzed for semivolatile organic compounds (GC-MS) in accordance with EPA SW-846 Method 8270D. The samples were prepared on 05/24/2012 and analyzed on 05/30/2012.

Surrogates are added during the extraction process prior to dilution. When the sample is diluted, surrogate recoveries are diluted out and no corrective action is required.

4,6-Dinitro-2-methylphenol failed the recovery criteria low for LCS 240-45149/15-A. Refer to the QC report for details.

No other difficulties were encountered during the SVOCs analysis. All other quality control parameters were within the acceptance limits.

DISSOLVED METALS (ICPMS)

Sample MRC-MW08B-052212 (240-11568-2) was analyzed for dissolved metals (ICPMS) in accordance with EPA SW-846 Methods 6020A. The samples were prepared on 05/30/2012 and analyzed on 05/31/2012.

No difficulties were encountered during the metals analysis. All quality control parameters were within the acceptance limits.

METALS (ICPMS)
Sample MRC-MW08B-052212 (240-11568-2) was analyzed for metals (ICPMS) in accordance with EPA SW-846 Method 6020A. The samples were prepared on 05/30/2012 and analyzed on 05/31/2012.

Several analytes were detected in method blank MB 240-45614/1-A at levels that were above the method detection limit but below the reporting limit. The values should be considered estimates, and have been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the metals analysis. All other quality control parameters were within the acceptance limits.

DISSOLVED MERCURY
Sample MRC-MW08B-052212 (240-11568-2) was analyzed for dissolved mercury (CVAA) in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/29/2012 and analyzed on 06/05/2012.

No difficulties were encountered during the mercury analysis. All quality control parameters were within the acceptance limits.

TOTAL MERCURY
Sample MRC-MW08B-052212 (240-11568-2) was analyzed for total mercury in accordance with EPA SW-846 Methods 7470A. The samples were prepared on 05/29/2012 and analyzed on 06/05/2012.

Mercury was detected in method blank MB 240-45395/1-A at a level that was above the method detection limit but below the reporting limit. The value should be considered an estimate, and has been flagged "J". If the associated sample reported a result above the MDL and/or RL, the result has been "B" flagged. Refer to the QC report for details.

No other difficulties were encountered during the mercury analysis. All other quality control parameters were within the acceptance limits.

Test America

0127

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MRC Ground Water Sampling	Project Number:
Project Manager: Tony Aparaugo	Report CC:
Company/Address: Tetra Tech INC 20251 Century Blvd STE 200 Germantown MD 20874	
Phone #: 301 528-3021	E-mail:
Sampler's Signature:	Sampler's Printed Name: Walt Payon

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	VOCs	Total metals	Diss metals	1,4 Dioxane	SVOCs	REMARKS/ ALTERNATE DESCRIPTION
TB-052212		5-22-12	—	Water	2								X					
MRC-MW08B-052212				1015	9								X	X	X	X	X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
____ **RUSH** (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
____ **Standard**

REQUESTED REPORT DATE
_____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ____ Yes ____ No

INVOICE INFORMATION
PO #:
BILL TO:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature: Walt Payon	Signature: N. Sutek	Signature	Signature	Signature	Signature
Printed Name: Walt Payon	Printed Name: N. SUTEK	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Tt INC.	Firm: TA NC	Firm	Firm	Firm	Firm
Date/Time: 5-22-12 / 1500	Date/Time: 5-23-12 915	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

05/07/2013

TestAmerica North Canton Sample Receipt Form/Narrative Login # : 11568

Client Tetra Tech Site Name _____ By: _____

Cooler Received on 5-23-12 Opened on 5-23-12 (Signature)

FedEx: 1st Grd (Exp) UPS FAS Stetson Client Drop Off TestAmerica Courier Other _____

TestAmerica Cooler # None Foam Box Client Cooler Box Other _____

Packing material used: (Bubble Wrap) Foam Plastic Bag None Other _____

COOLANT: (Wet Ice) Blue Ice Dry Ice Water None

1. Cooler temperature upon receipt

IR GUN# 1	(CF -2°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 4G	(CF -1°C)	Observed Sample Temp. 2.3 °C	Corrected Sample Temp. 1.3 °C	☐ Multiple on Back
IR GUN# 5G	(CF -1°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	
IR GUN# 6Y	(CF -2°C)	Observed Sample Temp. _____ °C	Corrected Sample Temp. _____ °C	

2. Were custody seals on the outside of the cooler(s)? If Yes Quantity _____ Yes (No)
   -Were custody seals on the outside of the cooler(s) signed & dated? Yes No (NA)
   -Were custody seals on the bottle(s)? Yes (No)
3. Shippers' packing slip attached to the cooler(s)? (Yes) No
4. Did custody papers accompany the sample(s)? (Yes) No
5. Were the custody papers relinquished & signed in the appropriate place? (Yes) No
6. Did all bottles arrive in good condition (Unbroken)? (Yes) No
7. Could all bottle labels be reconciled with the COC? (Yes) No
8. Were correct bottle(s) used for the test(s) indicated? (Yes) No
9. Sufficient quantity received to perform indicated analyses? (Yes) No
10. Were sample(s) at the correct pH upon receipt? (Yes) No NA
11. Were VOAs on the COC? (Yes) No
12. Were air bubbles >6 mm in any VOA vials? Yes (No) NA
13. Was a trip blank present in the cooler(s)? (Yes) No

Contacted PM _____ Date _____ by _____ via Verbal Voice Mail Other

Concerning _____

14. CHAIN OF CUSTODY & SAMPLE DISCREPANCIES

15. SAMPLE CONDITION

Sample(s) _____ were received after the recommended holding time had expired.

Sample(s) _____ were received in a broken container.

Sample(s) _____ were received with bubble >6 mm in diameter. (Notify PM)

16. SAMPLE PRESERVATION

Sample(s) _____ were further preserved in Sample Receiving to meet recommended pH level(s). Nitric Acid Lot# 110410-HNO3; Sulfuric Acid Lot# 041911-H2SO4; Sodium Hydroxide Lot# 121809 - NaOH; Hydrochloric Acid Lot# 041911-HCl; Sodium Hydroxide and Zinc Acetate Lot# 100108-(CH3COO)2ZN/NaOH. What time was preservative added to sample(s)? _____

Client ID	pH	Date	Initials
MW08B	<2 <2	5-23-12	MS

Cooler #	Observed Sample Temp. °C	Corrected Sample Temp. °C	IR #	Coolant

Login Sample Receipt Checklist

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11568-1

Login Number: 11568

List Source: TestAmerica Canton

List Number: 1

Creator: Sutek, Nick

Question	Answer	Comment
Radioactivity either was not measured or, if measured, is at or below background	N/A	
The cooler's custody seal, if present, is intact.	True	
The cooler or samples do not appear to have been compromised or tampered with.	True	
Samples were received on ice.	True	
Cooler Temperature is acceptable.	True	
Cooler Temperature is recorded.	True	
COC is present.	True	
COC is filled out in ink and legible.	True	
COC is filled out with all pertinent information.	True	
Is the Field Sampler's name present on COC?	True	
There are no discrepancies between the sample IDs on the containers and the COC.	True	
Samples are received within Holding Time.	True	
Sample containers have legible labels.	True	
Containers are not broken or leaking.	True	
Sample collection date/times are provided.	True	
Appropriate sample containers are used.	True	
Sample bottles are completely filled.	True	
Sample Preservation Verified.	True	
There is sufficient vol. for all requested analyses, incl. any requested MS/MSDs	True	
VOA sample vials do not have headspace or bubble is <6mm (1/4") in diameter.	True	
Multiphasic samples are not present.	True	
Samples do not require splitting or compositing.	True	
Residual Chlorine Checked.	N/A	

SAMPLE SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11568-1

Lab Sample ID	Client Sample ID	Client Matrix	Date/Time Sampled	Date/Time Received
240-11568-1	TB-052212	Water	05/22/2012 0000	05/23/2012 0915
240-11568-2	MRC-MW08B-052212	Water	05/22/2012 1015	05/23/2012 0915

METHOD SUMMARY

Client: Tetra Tech, Inc formerly Tetra Tech NUS

Job Number: 240-11568-1

Description	Lab Location	Method	Preparation Method
Matrix Water			
Volatile Organic Compounds (GC/MS)	TAL NC	SW846 8260B	
Purge and Trap	TAL NC		SW846 5030B
Semivolatile Organic Compounds (GC/MS)	TAL NC	SW846 8270D	
Liquid-Liquid Extraction (Continuous)	TAL NC		SW846 3520C
Metals (ICP/MS)	TAL NC	SW846 6020A	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Metals (ICP/MS)	TAL NC	SW846 6020A	
Preparation, Total Recoverable or Dissolved Metals	TAL NC		SW846 3005A
Sample Filtration, Field			FIELD_FLTRD
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Mercury (CVAA)	TAL NC	SW846 7470A	
Preparation, Mercury	TAL NC		SW846 7470A
Sample Filtration, Field			FIELD_FLTRD

Lab References:

TAL NC = TestAmerica Canton

Method References:

SW846 = "Test Methods For Evaluating Solid Waste, Physical/Chemical Methods", Third Edition, November 1986 And Its Updates.

HOLDTIME

SDG 240-11568-1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
HG	UG/L	MRC-MW08B-052212	240-11568-2	NM	5/22/2012	5/29/2012	6/5/2012	7	7	14
M	UG/L	MRC-MW08B-052212	240-11568-2	NM	5/22/2012	5/30/2012	5/31/2012	8	1	9
HGF	UG/L	MRC-MW08B-052212	240-11568-2	NM	5/22/2012	5/29/2012	6/5/2012	7	7	14
MF	UG/L	MRC-MW08B-052212	240-11568-2	NM	5/22/2012	5/30/2012	5/31/2012	8	1	9
OS	UG/L	MRC-MW08B-052212	240-11568-2	NM	5/22/2012	5/24/2012	5/30/2012	2	6	8
OV	UG/L	TB-052212	240-11568-1	NM	5/22/2012	5/31/2012	5/31/2012	9	0	9
OV	UG/L	MRC-MW08B-052212	240-11568-2	NM	5/22/2012	5/31/2012	5/31/2012	9	0	9

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab File ID: BFB951.D BFB Injection Date: 04/29/2012

Instrument ID: A3UX15 BFB Injection Time: 09:08

Analysis Batch No.: 42081

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.0	
75	30.0 - 60.0 % of mass 95	52.0	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	7.4	
173	Less than 2.0 % of mass 174	0.2	(0.3)1
174	50.0 - 120.00 % of mass 95	85.7	
175	5.0 - 9.0 % of mass 174	5.9	(6.9)1
176	95.0 - 101.0 % of mass 174	83.5	(97.5)1
177	5.0 - 9.0 % of mass 176	5.4	(6.5)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD8260 240-42081/2	UXC3076.D	04/29/2012	11:24
	STD8260 240-42081/3	UXC3077.D	04/29/2012	11:47
	STD8260 240-42081/4	UXC3078.D	04/29/2012	12:09
	STD8260 240-42081/5	UXC3079.D	04/29/2012	12:32
	STD8260 240-42081/6	UXC3080.D	04/29/2012	12:54
	STD8260 240-42081/7	UXC3081.D	04/29/2012	13:17
	STD6 240-42081/8	UXC3082.D	04/29/2012	13:40
	STD5 240-42081/9	UXC3083.D	04/29/2012	14:02
	STD4 240-42081/10	UXC3084.D	04/29/2012	14:25
	STD3 240-42081/11	UXC3085.D	04/29/2012	14:48
	STD2 240-42081/12	UXC3086.D	04/29/2012	15:10
	STD1 240-42081/13	UXC3087.D	04/29/2012	15:33
	ICV 240-42081/14	UXC3088.D	04/29/2012	15:55

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 11:24 Calibration End Date: 04/29/2012 13:17 Calibration ID: 8421

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD8260 240-42081/7	UXC3081.D
Level 2	STD8260 240-42081/6	UXC3080.D
Level 3	STD8260 240-42081/5	UXC3079.D
Level 4	STD8260 240-42081/4	UXC3078.D
Level 5	STD8260 240-42081/3	UXC3077.D
Level 6	STD8260 240-42081/2	UXC3076.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorodifluoromethane	0.2437 0.3586	0.2981	0.3071	0.3553	0.3059	Ave		0.3114				14.0		15.0			
Chloromethane	0.3874 0.3501	0.4080	0.4029	0.3817	0.3559	Ave		0.3810			0.1000	6.3		15.0			
Vinyl chloride	0.3486 0.3582	0.3563	0.3660	0.3713	0.3400	Ave		0.3567				3.2		15.0			
Bromomethane	0.1890 0.1391	0.2017	0.1749	0.1802	0.1567	Ave		0.1736				13.0		15.0			
Chloroethane	0.2019 0.1758	0.2062	0.2011	0.2019	0.1781	Ave		0.1942				6.9		15.0			
Trichlorofluoromethane	0.3612 0.4612	0.4068	0.4160	0.4718	0.4151	Ave		0.4220				9.5		15.0			
Acrolein	0.0354 0.0390	0.0360	0.0412	0.0385	0.0385	Ave		0.0381				5.5		15.0			
1,1-Dichloroethene	0.2606 0.3002	0.2701	0.3027	0.2933	0.2878	Ave		0.2858				5.9		15.0			
1,1,2-Trichloro-1,2,2-trichfluoroethane	0.1699 0.2664	0.2463	0.2599	0.2797	0.2418	Lin1	-0.066	0.2647							0.9970		0.9900
Acetone	0.1464 0.0778	0.1098	0.0915	0.0837	0.0790	Lin1	0.1407	0.0761							1.0000		0.9900
Iodomethane	0.5809 0.5547	0.5936	0.6061	0.5616	0.5663	Ave		0.5772				3.5		15.0			
Carbon disulfide	0.7340 0.9863	0.8373	0.8869	0.9028	0.9191	Ave		0.8777				9.7		15.0			
Acetonitrile	0.0291 0.0267	0.0296	0.0305	0.0294	0.0288	Ave		0.0291				4.4		15.0			
Methyl acetate	0.2008 0.1934	0.1999	0.2171	0.1952	0.2023	Ave		0.2014				4.2		15.0			
Methylene Chloride	0.5873 0.3347	0.4885	0.4223	0.3674	0.3557	Lin1	0.2926	0.3346							0.9990		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 11:24 Calibration End Date: 04/29/2012 13:17 Calibration ID: 8421

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0136 0.0125	0.0147	0.0150	0.0147	0.0151	Ave		0.0143				7.0		15.0			
Acrylonitrile	0.0980 0.0984	0.1003	0.1029	0.1021	0.1010	Ave		0.1004				2.0		15.0			
Methyl tert-butyl ether	0.7516 0.7618	0.7815	0.8147	0.7487	0.7720	Ave		0.7717				3.2		15.0			
trans-1,2-Dichloroethene	0.3444 0.3299	0.3478	0.3590	0.3273	0.3332	Ave		0.3403				3.6		15.0			
Hexane	0.0375 0.0695	0.0610	0.0564	0.0691	0.0606	Lin1	-0.028	0.0679							0.9950		0.9900
1,1-Dichloroethane	0.5836 0.5697	0.6058	0.6199	0.5644	0.5890	Ave		0.5887			0.1000	3.6		15.0			
Vinyl acetate	0.0286 0.0466	0.0365	0.0439	0.0417	0.0473	Lin1	-0.020	0.0470							0.9990		0.9900
2,2-Dichloropropane	0.2762 0.3365	0.2942	0.3279	0.3174	0.3214	Ave		0.3123				7.3		15.0			
cis-1,2-Dichloroethene	0.3692 0.3507	0.3749	0.3943	0.3537	0.3664	Ave		0.3682				4.3		15.0			
2-Butanone	0.1098 0.1065	0.1098	0.1208	0.1033	0.1116	Ave		0.1103				5.4		15.0			
Bromochloromethane	0.1670 0.1706	0.1824	0.1854	0.1735	0.1762	Ave		0.1758				4.0		15.0			
Tetrahydrofuran	0.0715 0.0661	0.0679	0.0721	0.0692	0.0709	Ave		0.0696				3.3		15.0			
Chloroform	0.6200 0.5908	0.6401	0.6524	0.5886	0.6127	Ave		0.6174				4.2		15.0			
1,1,1-Trichloroethane	0.3865 0.4831	0.4443	0.4647	0.4592	0.4699	Ave		0.4513				7.6		15.0			
Cyclohexane	0.3227 0.5677	0.4828	0.5322	0.5647	0.5104	Lin1	-0.205	0.5608							0.9970		0.9900
1,1-Dichloropropene	0.3773 0.4533	0.4544	0.4504	0.4509	0.4526	Ave		0.4398				7.0		15.0			
Carbon tetrachloride	0.2383 0.4269	0.3514	0.3714	0.3843	0.3934	Lin1	-0.187	0.4193							0.9980		0.9900
Benzene	1.3052 1.2705	1.3308	1.3607	1.2305	1.2934	Ave		1.2985				3.5		15.0			
1,2-Dichloroethane	0.4296 0.4396	0.4756	0.4725	0.4328	0.4641	Ave		0.4524				4.6		15.0			
Trichloroethene	0.3385 0.3447	0.3510	0.3477	0.3335	0.3508	Ave		0.3444				2.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 11:24 Calibration End Date: 04/29/2012 13:17 Calibration ID: 8421

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Methylcyclohexane	0.2857 0.5039	0.4241	0.4325	0.4953	0.4470	Lin1	-0.201	0.4943							0.9970		0.9900
1,2-Dichloropropane	0.2709 0.2863	0.2964	0.3076	0.2818	0.2938	Ave		0.2895				4.4		15.0			
Dibromomethane	0.1539 0.1649	0.1605	0.1721	0.1582	0.1701	Ave		0.1633				4.3		15.0			
1,4-Dioxane	0.0014 0.0015	0.0018	0.0030	0.0026	0.0026	Qua	-0.178	0.0038	0						0.9940		0.9900
Bromodichloromethane	0.2909 0.3604	0.3021	0.3331	0.3139	0.3609	Ave		0.3269				9.1		15.0			
2-Chloroethyl vinyl ether	0.0992 0.1091	0.0938	0.1128	0.0989	0.1161	Ave		0.1050				8.5		15.0			
cis-1,3-Dichloropropene	0.2349 0.3795	0.2697	0.3171	0.3173	0.3821	Lin1	-0.199	0.3788							0.9970		0.9900
4-Methyl-2-pentanone	0.1765 0.2058	0.1891	0.2131	0.1960	0.2150	Ave		0.1993				7.5		15.0			
Toluene	1.9161 1.9047	1.8662	1.9982	1.7542	1.9102	Ave		1.8916				4.2		15.0			
trans-1,3-Dichloropropene	0.3141 0.4412	0.3140	0.3609	0.3496	0.4297	Ave		0.3683				15.0		15.0			
Ethyl methacrylate	0.3098 0.4258	0.3776	0.4174	0.3868	0.4359	Ave		0.3922				12.0		15.0			
1,1,2-Trichloroethane	0.3262 0.3007	0.3134	0.3313	0.2971	0.3166	Ave		0.3142				4.3		15.0			
Tetrachloroethene	0.3858 0.3859	0.3756	0.3991	0.3773	0.3838	Ave		0.3846				2.2		15.0			
1,3-Dichloropropane	0.5974 0.5593	0.5592	0.5927	0.5286	0.5749	Ave		0.5687				4.5		15.0			
2-Hexanone	0.1787 0.1854	0.1732	0.1972	0.1804	0.2018	Ave		0.1861				6.0		15.0			
Dibromochloromethane	0.2749 0.3468	0.2513	0.3065	0.2828	0.3389	Ave		0.3002				12.0		15.0			
1,2-Dibromoethane	0.3068 0.3045	0.2751	0.3065	0.2850	0.3251	Ave		0.3005				5.9		15.0			
Chlorobenzene	1.2400 1.1209	1.1909	1.2240	1.0799	1.1677	Ave		1.1706			0.3000	5.2		15.0			
1,1,1,2-Tetrachloroethane	0.3197 0.4199	0.3668	0.3986	0.3861	0.4190	Ave		0.3850				9.8		15.0			
Ethylbenzene	0.6176 0.6177	0.5971	0.6645	0.5990	0.6284	Ave		0.6207				4.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 11:24 Calibration End Date: 04/29/2012 13:17 Calibration ID: 8421

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
m-Xylene & p-Xylene	1.5176 1.5491	1.5455	1.6281	1.5016	1.5882	Ave		1.5550				3.0		15.0			
o-Xylene	0.7759 0.7617	0.7930	0.8314	0.7515	0.7835	Ave		0.7828				3.6		15.0			
Styrene	1.1892 1.1915	1.2076	1.2895	1.1486	1.2415	Ave		1.2113				4.0		15.0			
Bromoform	0.1321 0.1884	0.1523	0.1515	0.1518	0.1853	Ave		0.1602			0.1000	14.0		15.0			
Isopropylbenzene	1.7171 1.9089	1.8085	1.9726	1.8518	1.9721	Ave		1.8718				5.3		15.0			
Bromobenzene	0.9398 0.9453	0.9188	1.0085	0.9241	0.9604	Ave		0.9495				3.4		15.0			
1,1,2,2-Tetrachloroethane	0.7296 0.7349	0.7330	0.7797	0.7228	0.7468	Ave		0.7411			0.3000	2.8		15.0			
1,2,3-Trichloropropane	0.2781 0.2451	0.2474	0.2494	0.2385	0.2556	Ave		0.2524				5.5		15.0			
trans-1,4-Dichloro-2-butene	0.0950 0.0957	0.1049	0.1143	0.1033	0.1289	Ave		0.1070				12.0		15.0			
n-Propylbenzene	0.7693 0.9517	0.8972	0.9729	0.9191	0.9241	Ave		0.9057				7.9		15.0			
2-Chlorotoluene	0.8295 0.8755	0.8598	0.9059	0.8626	0.8785	Ave		0.8687				2.9		15.0			
1,3,5-Trimethylbenzene	2.6488 2.9564	2.7181	2.9495	2.7753	2.9407	Ave		2.8315				4.8		15.0			
4-Chlorotoluene	2.7250 2.7974	2.8497	2.9460	2.7189	2.8387	Ave		2.8126				3.0		15.0			
tert-Butylbenzene	1.8754 2.4909	2.0950	2.3141	2.2759	2.4091	Ave		2.2434				10.0		15.0			
1,2,4-Trimethylbenzene	2.6889 2.9811	2.9189	3.0723	2.9016	3.0005	Ave		2.9272				4.5		15.0			
sec-Butylbenzene	2.5251 3.3244	2.9153	3.2535	3.1802	3.2440	Ave		3.0737				9.9		15.0			
1,3-Dichlorobenzene	1.7883 1.6325	1.8202	1.7917	1.6722	1.7052	Ave		1.7350				4.4		15.0			
p-Isopropyltoluene	2.3312 2.8386	2.6287	2.8864	2.7363	2.8699	Ave		2.7152				7.8		15.0			
1,4-Dichlorobenzene	1.9777 1.6881	1.8507	1.8834	1.6965	1.7485	Ave		1.8075				6.4		15.0			
1,2-Dichlorobenzene	1.8184 1.6301	1.7370	1.8480	1.6916	1.7145	Ave		1.7399				4.7		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 11:24 Calibration End Date: 04/29/2012 13:17 Calibration ID: 8421

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
n-Butylbenzene	2.0987 2.3590	2.3764	2.4633	2.3556	2.4187	Ave		2.3453				5.4		15.0			
1,2-Dibromo-3-Chloropropane	0.1119 0.1136	0.1119	0.1143	0.1216	0.1249	Ave		0.1164				4.7		15.0			
1,3,5-Trichlorobenzene	1.3882 1.0678	1.4159	1.4042	1.2771	1.2396	Ave		1.2988				10.0		15.0			
1,2,4-Trichlorobenzene	1.3121 0.9546	1.3125	1.4079	1.2089	1.1472	Ave		1.2239				13.0		15.0			
Hexachlorobutadiene	0.6411 0.4170	0.7425	0.6785	0.6214	0.5715	Qua	-0.026	0.7166	-0.007						1.0000		0.9900
Naphthalene	2.4104 1.9822	2.4696	2.8259	2.6642	2.3789	Ave		2.4552				12.0		15.0			
1,2,3-Trichlorobenzene	1.2111 0.6861	1.2650	1.2843	1.1033	0.9240	Qua	0.3797	1.1674	-0.012						0.9990		0.9900
Dibromofluoromethane (Surr)	0.3187 0.3074	0.3212	0.3241	0.2912	0.3056	Ave		0.3114				4.0		15.0			
1,2-Dichloroethane-d4 (Surr)	0.3798 0.3617	0.3937	0.3879	0.3647	0.3640	Ave		0.3753				3.7		15.0			
Toluene-d8 (Surr)	1.6570 1.6274	1.6443	1.6529	1.5337	1.5994	Ave		1.6191				2.9		15.0			
4-Bromofluorobenzene (Surr)	0.5149 0.4802	0.5436	0.5458	0.4731	0.4962	Ave		0.5090				6.1		15.0			

Note: The ml coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 13:40 Calibration End Date: 04/29/2012 15:33 Calibration ID: 8423

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-42081/13	UXC3087.D
Level 2	STD2 240-42081/12	UXC3086.D
Level 3	STD3 240-42081/11	UXC3085.D
Level 4	STD4 240-42081/10	UXC3084.D
Level 5	STD5 240-42081/9	UXC3083.D
Level 6	STD6 240-42081/8	UXC3082.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Dichlorofluoromethane	0.4685 0.4664	0.4509	0.4970	0.4894	0.5022	Ave		0.4791				4.2		15.0			
Ethyl ether	0.2354 0.2393	0.2292	0.2420	0.2372	0.2447	Ave		0.2380				2.3		15.0			
3-Chloro-1-propene	0.1381 0.1731	0.1289	0.1536	0.1525	0.1658	Ave		0.1520				11.0		15.0			
Diisopropyl ether	0.2758 0.2980	0.2629	0.2943	0.2826	0.2941	Ave		0.2846				4.7		15.0			
2-Chloro-1,3-butadiene	0.4994 0.5516	0.4894	0.5318	0.4986	0.5352	Ave		0.5177				4.8		15.0			
Ethyl-t-butyl ether (ETBE)	0.7683 0.8662	0.7309	0.8330	0.7956	0.8354	Ave		0.8049				6.2		15.0			
Ethyl acetate	0.1826 0.1936	0.1596	0.1792	0.1909	0.1947	Ave		0.1834				7.2		15.0			
Propionitrile	0.0210 0.0322	0.0235	0.0329	0.0310	0.0320	Lin1	-0.025	0.0326							0.9990		0.9900
Methacrylonitrile	0.1424 0.1589	0.1418	0.1569	0.1555	0.1591	Ave		0.1524				5.3		15.0			
Isobutyl alcohol	0.0042 0.0053	0.0038	0.0056	0.0058	0.0061	Lin1	-0.034	0.0057							0.9920		0.9900
Tert-amyl-methyl ether (TAME)	0.5893 0.6815	0.5622	0.6460	0.6317	0.6712	Ave		0.6303				7.4		15.0			
n-Heptane	0.0459 0.0531	0.0438	0.0415	0.0458	0.0476	Ave		0.0463				8.5		15.0			
n-Butanol	0.0031 0.0035	0.0024	0.0038	0.0043	0.0049	Qua	-0.161	0.0064	0						0.9930		0.9900
Methyl methacrylate	0.1413 0.1824	0.1618	0.1733	0.1797	0.1894	Ave		0.1713				10.0		15.0			
2-Nitropropane	0.0197 0.0290	0.0201	0.0208	0.0232	0.0275	Lin1	-0.031	0.0282							0.9930		0.9900

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 13:40 Calibration End Date: 04/29/2012 15:33 Calibration ID: 8423

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
Cyclohexanone	0.0458 0.0566	0.0444	0.0597	0.0538	0.0535	Ave		0.0523				12.0		15.0			
1,2,3-Trimethylbenzene	2.5293 3.2953	2.5490	2.9199	2.9253	3.2092	Ave		2.9046				11.0		15.0			
2-Methylnaphthalene	1.0538 1.2814	1.1648	1.3453	1.2924	1.4071	Ave		1.2575				10.0		15.0			
n-Butyl acetate	0.2207 0.2977	0.2370	0.2507	0.2849	0.3052	Ave		0.2661				13.0		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICV 240-42081/14 Calibration Date: 04/29/2012 15:55

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 11:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 13:17

Lab File ID: UXC3088.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3114	0.2392		7.68	10.0	-23.2	50.0
Chloromethane	Ave	0.3810	0.3171	0.1000	8.32	10.0	-16.8	50.0
Vinyl chloride	Ave	0.3567	0.3167		8.88	10.0	-11.2	20.0
Bromomethane	Ave	0.1736	0.1240		7.15	10.0	-28.5	50.0
Chloroethane	Ave	0.1942	0.1640		8.44	10.0	-15.6	50.0
Trichlorofluoromethane	Ave	0.4220	0.4132		9.79	10.0	-2.1	50.0
1,1-Dichloroethene	Ave	0.2858	0.2898		10.1	10.0	1.4	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Lin1		0.2602		10.1	10.0	1.0	50.0
Acetone	Lin1		0.0824		19.8	20.0	-1.0	50.0
Iodomethane	Ave	0.5772	0.5318		9.21	10.0	-7.9	50.0
Carbon disulfide	Ave	0.8777	0.8042		9.16	10.0	-8.4	50.0
Methyl acetate	Ave	0.2014	0.2379		11.8	10.0	18.1	50.0
Methylene Chloride	Lin1		0.3460		9.47	10.0	-5.3	50.0
tert-Butyl alcohol	Ave	0.0143	0.0129		180	200	-9.9	50.0
Methyl tert-butyl ether	Ave	0.7717	0.7054		9.14	10.0	-8.6	50.0
trans-1,2-Dichloroethene	Ave	0.3403	0.3172		9.32	10.0	-6.8	50.0
Hexane	Lin1		0.0650		10.0	10.0	0.0	20.0
1,1-Dichloroethane	Ave	0.5887	0.5656	0.1000	9.61	10.0	-3.9	50.0
Vinyl acetate	Lin1		0.0339		7.64	10.0	-23.6	50.0
2,2-Dichloropropane	Ave	0.3123	0.2702		8.65	10.0	-13.5	50.0
cis-1,2-Dichloroethene	Ave	0.3682	0.3428		9.31	10.0	-6.9	50.0
2-Butanone	Ave	0.1103	0.1039		18.8	20.0	-5.8	50.0
Bromochloromethane	Ave	0.1758	0.1645		9.36	10.0	-6.4	50.0
Tetrahydrofuran	Ave	0.0696	0.0682		9.79	10.0	-2.1	50.0
Chloroform	Ave	0.6174	0.5564		9.01	10.0	-9.9	20.0
1,1,1-Trichloroethane	Ave	0.4513	0.4129		9.15	10.0	-8.5	50.0
Cyclohexane	Lin1		0.4932		9.16	10.0	-8.4	50.0
1,1-Dichloropropene	Ave	0.4398	0.4123		9.38	10.0	-6.2	50.0
Carbon tetrachloride	Lin1		0.3394		8.54	10.0	-14.6	50.0
Benzene	Ave	1.299	1.196		9.21	10.0	-7.9	50.0
1,2-Dichloroethane	Ave	0.4524	0.4280		9.46	10.0	-5.4	50.0
Trichloroethene	Ave	0.3444	0.3255		9.45	10.0	-5.5	50.0
Methylcyclohexane	Lin1		0.4231		8.97	10.0	-10.3	50.0
1,2-Dichloropropane	Ave	0.2895	0.2626		9.07	10.0	-9.3	20.0
Dibromomethane	Ave	0.1633	0.1596		9.77	10.0	-2.3	50.0
Bromodichloromethane	Ave	0.3269	0.3112		9.52	10.0	-4.8	50.0
2-Chloroethyl vinyl ether	Ave	0.1050	0.1047		9.98	10.0	-0.2	50.0
cis-1,3-Dichloropropene	Lin1		0.2882		8.13	10.0	-18.7	50.0
4-Methyl-2-pentanone	Ave	0.1993	0.2024		20.3	20.0	1.6	50.0
Toluene	Ave	1.892	1.698		8.98	10.0	-10.2	20.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICV 240-42081/14 Calibration Date: 04/29/2012 15:55

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 11:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 13:17

Lab File ID: UXC3088.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
trans-1,3-Dichloropropene	Ave	0.3683	0.3335		9.06	10.0	-9.4	50.0
1,1,2-Trichloroethane	Ave	0.3142	0.3030		9.64	10.0	-3.6	50.0
Tetrachloroethene	Ave	0.3846	0.3516		9.14	10.0	-8.6	50.0
1,3-Dichloropropane	Ave	0.5687	0.5340		9.39	10.0	-6.1	50.0
2-Hexanone	Ave	0.1861	0.1890		20.3	20.0	1.5	50.0
Dibromochloromethane	Ave	0.3002	0.2670		8.90	10.0	-11.0	50.0
1,2-Dibromoethane	Ave	0.3005	0.2864		9.53	10.0	-4.7	50.0
Chlorobenzene	Ave	1.171	1.055	0.3000	9.01	10.0	-9.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3850	0.3470		9.01	10.0	-9.9	50.0
Ethylbenzene	Ave	0.6207	0.5630		9.07	10.0	-9.3	20.0
m-Xylene & p-Xylene	Ave	1.555	1.413		18.2	20.0	-9.2	50.0
o-Xylene	Ave	0.7828	0.7132		9.11	10.0	-8.9	50.0
Styrene	Ave	1.211	1.102		9.10	10.0	-9.0	50.0
Bromoform	Ave	0.1602	0.1462	0.1000	9.12	10.0	-8.8	50.0
Isopropylbenzene	Ave	1.872	1.702		9.09	10.0	-9.1	50.0
Bromobenzene	Ave	0.9495	0.8552		9.01	10.0	-9.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7411	0.6881	0.3000	9.28	10.0	-7.2	50.0
1,2,3-Trichloropropane	Ave	0.2524	0.2437		9.66	10.0	-3.4	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1070	0.1077		20.1	20.0	0.6	50.0
n-Propylbenzene	Ave	0.9057	0.8310		9.17	10.0	-8.3	50.0
2-Chlorotoluene	Ave	0.8687	0.7934		9.13	10.0	-8.7	50.0
1,3,5-Trimethylbenzene	Ave	2.831	2.549		9.00	10.0	-10.0	50.0
4-Chlorotoluene	Ave	2.813	2.499		8.88	10.0	-11.2	50.0
tert-Butylbenzene	Ave	2.243	2.041		9.10	10.0	-9.0	50.0
1,2,4-Trimethylbenzene	Ave	2.927	2.703		9.23	10.0	-7.7	50.0
sec-Butylbenzene	Ave	3.074	2.756		8.97	10.0	-10.3	50.0
1,3-Dichlorobenzene	Ave	1.735	1.519		8.75	10.0	-12.5	50.0
p-Isopropyltoluene	Ave	2.715	2.541		9.36	10.0	-6.4	50.0
1,4-Dichlorobenzene	Ave	1.807	1.533		8.48	10.0	-15.2	50.0
1,2-Dichlorobenzene	Ave	1.740	1.547		8.89	10.0	-11.1	50.0
n-Butylbenzene	Ave	2.345	2.088		8.90	10.0	-11.0	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1164	0.1229		10.6	10.0	5.6	50.0
1,2,4-Trichlorobenzene	Ave	1.224	1.023		8.36	10.0	-16.4	50.0
Hexachlorobutadiene	Qua		0.4447		6.71	10.0	-32.9	50.0
Naphthalene	Ave	2.455	2.363		9.62	10.0	-3.8	50.0
1,2,3-Trichlorobenzene	Qua		0.9425		8.51	10.0	-14.9	50.0
Dibromofluoromethane (Surr)	Ave	0.3114	0.2984		8.53	8.90	-4.2	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3753	0.3714		8.81	8.90	-1.1	50.0
Toluene-d8 (Surr)	Ave	1.619	1.580		8.69	8.90	-2.4	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5090	0.5031		8.80	8.90	-1.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICV 240-42081/14 Calibration Date: 04/29/2012 15:55

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 13:40

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 15:33

Lab File ID: UXC3088.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Ethyl ether	Ave	0.2380	0.2290		9.62	10.0	-3.8	50.0
Diisopropyl ether	Ave	0.2846	0.2555		8.98	10.0	-10.2	50.0
Isobutyl alcohol	Lin1		0.0054		483	500	-3.4	50.0
Cyclohexanone	Ave	0.0523	0.0141		54.1	200	-73.0*	50.0
1,2,3-Trimethylbenzene	Ave	2.905	2.807		9.67	10.0	-3.3	50.0

FORM V
GC/MS VOA INSTRUMENT PERFORMANCE CHECK
BROMOFLUOROBENZENE (BFB)

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab File ID: BFB980.D BFB Injection Date: 05/31/2012

Instrument ID: A3UX15 BFB Injection Time: 09:23

Analysis Batch No.: 45839

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
50	15.0 - 40.0 % of mass 95	19.9	
75	30.0 - 60.0 % of mass 95	54.2	
95	Base Peak, 100% relative abundance	100.0	
96	5.0 - 9.0 % of mass 95	5.7	
173	Less than 2.0 % of mass 174	0.3	(0.3)1
174	50.0 - 120.00 % of mass 95	81.1	
175	5.0 - 9.0 % of mass 174	5.7	(7.1)1
176	95.0 - 101.0 % of mass 174	77.8	(95.9)1
177	5.0 - 9.0 % of mass 176	5.3	(6.8)2

1-Value is % mass 174 2-Value is % mass 176

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	CCVIS 240-45839/2	UXC4170.D	05/31/2012	10:09
	CCV 240-45839/3	UXC4171.D	05/31/2012	10:31
	LCS 240-45839/4	UXC4172.D	05/31/2012	10:54
	MB 240-45839/5	UXC4174.D	05/31/2012	11:39
TB-052212	240-11568-1	UXC4191.D	05/31/2012	18:10
MRC-MW08B-052212	240-11568-2	UXC4192.D	05/31/2012	18:32
	240-11548-B-2 MS	UXC4195.D	05/31/2012	19:39
	240-11548-B-2 MSD	UXC4196.D	05/31/2012	20:02

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: CCVIS 240-45839/2 Calibration Date: 05/31/2012 10:09

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 11:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 13:17

Lab File ID: UXC4170.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorodifluoromethane	Ave	0.3114	0.3079		9.89	10.0	-1.1	50.0
Chloromethane	Ave	0.3810	0.3562	0.1000	9.35	10.0	-6.5	50.0
Vinyl chloride	Ave	0.3567	0.3098		8.69	10.0	-13.1	20.0
Bromomethane	Ave	0.1736	0.1405		8.10	10.0	-19.0	50.0
Chloroethane	Ave	0.1942	0.1120		5.77	10.0	-42.3	50.0
Trichlorofluoromethane	Ave	0.4220	0.4021		9.53	10.0	-4.7	50.0
Acrolein	Ave	0.0381	0.0486		128	100	27.6	50.0
1,1-Dichloroethene	Ave	0.2858	0.2767		9.68	10.0	-3.2	20.0
1,1,2-Trichloro-1,2,2-trichfluoroethane	Lin1		0.2011		7.85	10.0	-21.5	50.0
Acetone	Lin1		0.1070		26.3	20.0	31.5	50.0
Iodomethane	Ave	0.5772	0.5067		8.78	10.0	-12.2	50.0
Carbon disulfide	Ave	0.8777	0.8539		9.73	10.0	-2.7	50.0
Acetonitrile	Ave	0.0291	0.0352		121	100	21.2	50.0
Methyl acetate	Ave	0.2014	0.2057		20.4	20.0	2.1	50.0
Methylene Chloride	Lin1		0.3945		10.9	10.0	9.0	50.0
tert-Butyl alcohol	Ave	0.0143	0.0137		192	200	-3.8	50.0
Acrylonitrile	Ave	0.1004	0.1064		21.2	20.0	5.9	50.0
Methyl tert-butyl ether	Ave	0.7717	0.7009		9.08	10.0	-9.2	50.0
trans-1,2-Dichloroethene	Ave	0.3403	0.3179		9.34	10.0	-6.6	50.0
Hexane	Lin1		0.0469		7.33	10.0	-26.7*	20.0
1,1-Dichloroethane	Ave	0.5887	0.5807	0.1000	9.86	10.0	-1.4	50.0
Vinyl acetate	Lin1		0.0545		12.0	10.0	20.0	50.0
2,2-Dichloropropane	Ave	0.3123	0.3148		10.1	10.0	0.8	50.0
cis-1,2-Dichloroethene	Ave	0.3682	0.3458		9.39	10.0	-6.1	50.0
2-Butanone	Ave	0.1103	0.1267		23.0	20.0	14.8	50.0
Bromochloromethane	Ave	0.1758	0.1657		9.43	10.0	-5.7	50.0
Tetrahydrofuran	Ave	0.0696	0.0730		10.5	10.0	4.9	50.0
Chloroform	Ave	0.6174	0.6174		10.0	10.0	-0.0	20.0
1,1,1-Trichloroethane	Ave	0.4513	0.4570		10.1	10.0	1.3	50.0
Cyclohexane	Lin1		0.4321		8.07	10.0	-19.3	50.0
1,1-Dichloropropene	Ave	0.4398	0.4339		9.86	10.0	-1.4	50.0
Carbon tetrachloride	Lin1		0.3842		9.61	10.0	-3.9	50.0
Benzene	Ave	1.299	1.267		9.76	10.0	-2.4	50.0
1,2-Dichloroethane	Ave	0.4524	0.4959		11.0	10.0	9.6	50.0
Trichloroethene	Ave	0.3444	0.3227		9.37	10.0	-6.3	50.0
Methylcyclohexane	Lin1		0.3491		7.47	10.0	-25.3	50.0
1,2-Dichloropropane	Ave	0.2895	0.2886		9.97	10.0	-0.3	20.0
Dibromomethane	Ave	0.1633	0.1686		10.3	10.0	3.2	50.0
1,4-Dioxane	Qua		0.0022		380	500	-23.9	50.0
Bromodichloromethane	Ave	0.3269	0.3768		11.5	10.0	15.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: CCVIS 240-45839/2 Calibration Date: 05/31/2012 10:09

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 11:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 13:17

Lab File ID: UXC4170.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2-Chloroethyl vinyl ether	Ave	0.1050	0.1309		24.9	20.0	24.7	50.0
cis-1,3-Dichloropropene	Lin1		0.3668		10.2	10.0	2.0	50.0
4-Methyl-2-pentanone	Ave	0.1993	0.2273		22.8	20.0	14.1	50.0
Toluene	Ave	1.892	1.919		10.1	10.0	1.5	20.0
trans-1,3-Dichloropropene	Ave	0.3683	0.4314		11.7	10.0	17.1	50.0
Ethyl methacrylate	Ave	0.3922	0.4178		10.7	10.0	6.5	50.0
1,1,2-Trichloroethane	Ave	0.3142	0.3198		10.2	10.0	1.8	50.0
Tetrachloroethene	Ave	0.3846	0.3657		9.51	10.0	-4.9	50.0
1,3-Dichloropropane	Ave	0.5687	0.5937		10.4	10.0	4.4	50.0
2-Hexanone	Ave	0.1861	0.2310		24.8	20.0	24.1	50.0
Dibromochloromethane	Ave	0.3002	0.3580		11.9	10.0	19.3	50.0
1,2-Dibromoethane	Ave	0.3005	0.3196		10.6	10.0	6.4	50.0
Chlorobenzene	Ave	1.171	1.136	0.3000	9.71	10.0	-2.9	50.0
1,1,1,2-Tetrachloroethane	Ave	0.3850	0.4153		10.8	10.0	7.9	50.0
Ethylbenzene	Ave	0.6207	0.6192		9.98	10.0	-0.2	20.0
m-Xylene & p-Xylene	Ave	1.555	1.558		20.0	20.0	0.2	50.0
o-Xylene	Ave	0.7828	0.7307		9.33	10.0	-6.7	50.0
Styrene	Ave	1.211	1.192		9.84	10.0	-1.6	50.0
Bromoform	Ave	0.1602	0.1827	0.1000	11.4	10.0	14.0	50.0
Isopropylbenzene	Ave	1.872	1.743		9.31	10.0	-6.9	50.0
Bromobenzene	Ave	0.9495	0.8935		9.41	10.0	-5.9	50.0
1,1,2,2-Tetrachloroethane	Ave	0.7411	0.7441	0.3000	10.0	10.0	0.4	50.0
1,2,3-Trichloropropane	Ave	0.2524	0.2461		9.75	10.0	-2.5	50.0
trans-1,4-Dichloro-2-butene	Ave	0.1070	0.1594		14.9	10.0	49.0	50.0
n-Propylbenzene	Ave	0.9057	0.8515		9.40	10.0	-6.0	50.0
2-Chlorotoluene	Ave	0.8687	0.8241		9.49	10.0	-5.1	50.0
1,3,5-Trimethylbenzene	Ave	2.831	2.723		9.62	10.0	-3.8	50.0
4-Chlorotoluene	Ave	2.813	2.797		9.95	10.0	-0.5	50.0
tert-Butylbenzene	Ave	2.243	2.171		9.68	10.0	-3.2	50.0
1,2,4-Trimethylbenzene	Ave	2.927	2.817		9.62	10.0	-3.8	50.0
sec-Butylbenzene	Ave	3.074	2.856		9.29	10.0	-7.1	50.0
1,3-Dichlorobenzene	Ave	1.735	1.529		8.81	10.0	-11.9	50.0
p-Isopropyltoluene	Ave	2.715	2.511		9.25	10.0	-7.5	50.0
1,4-Dichlorobenzene	Ave	1.807	1.625		8.99	10.0	-10.1	50.0
1,2-Dichlorobenzene	Ave	1.740	1.513		8.69	10.0	-13.1	50.0
n-Butylbenzene	Ave	2.345	2.111		9.00	10.0	-10.0	50.0
1,2-Dibromo-3-Chloropropane	Ave	0.1164	0.1225		10.5	10.0	5.3	50.0
1,3,5-Trichlorobenzene	Ave	1.299	1.068		8.22	10.0	-17.8	50.0
1,2,4-Trichlorobenzene	Ave	1.224	0.9403		7.68	10.0	-23.2	50.0
Hexachlorobutadiene	Qua		0.4616		6.99	10.0	-30.1	50.0
Naphthalene	Ave	2.455	2.077		8.46	10.0	-15.4	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: CCVIS 240-45839/2 Calibration Date: 05/31/2012 10:09

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 11:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 13:17

Lab File ID: UXC4170.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,2,3-Trichlorobenzene	Qua		0.8777		7.84	10.0	-21.6	50.0
Dibromofluoromethane (Surr)	Ave	0.3114	0.3299		9.43	8.90	5.9	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3753	0.4055		9.62	8.90	8.1	50.0
Toluene-d8 (Surr)	Ave	1.619	1.779		9.78	8.90	9.9	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5090	0.5256		9.19	8.90	3.3	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: CCV 240-45839/3 Calibration Date: 05/31/2012 10:31

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 11:24

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 13:17

Lab File ID: UXC4171.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dibromofluoromethane (Surr)	Ave	0.3114	0.3092		8.84	8.90	-0.7	50.0
1,2-Dichloroethane-d4 (Surr)	Ave	0.3753	0.4120		9.77	8.90	9.8	50.0
Toluene-d8 (Surr)	Ave	1.619	1.631		8.96	8.90	0.7	50.0
4-Bromofluorobenzene (Surr)	Ave	0.5090	0.5196		9.09	8.90	2.1	50.0

FORM VII
GC/MS VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: CCV 240-45839/3 Calibration Date: 05/31/2012 10:31

Instrument ID: A3UX15 Calib Start Date: 04/29/2012 13:40

GC Column: DB-624 ID: 0.18(mm) Calib End Date: 04/29/2012 15:33

Lab File ID: UXC4171.D Conc. Units: ug/L Heated Purge: (Y/N) N

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Dichlorofluoromethane	Ave	0.4791	0.5676		11.8	10.0	18.5	50.0
Ethyl ether	Ave	0.2380	0.2564		10.8	10.0	7.7	50.0
3-Chloro-1-propene	Ave	0.1520	0.1573		10.4	10.0	3.5	50.0
Diisopropyl ether	Ave	0.2846	0.2914		51.2	50.0	2.4	50.0
2-Chloro-1,3-butadiene	Ave	0.5177	0.5507		10.6	10.0	6.4	50.0
Ethyl-t-butyl ether (ETBE)	Ave	0.8049	0.8224		10.2	10.0	2.2	50.0
Ethyl acetate	Ave	0.1834	0.1975		21.5	20.0	7.7	50.0
Propionitrile	Lin1		0.0346		22.0	20.0	10.0	50.0
Methacrylonitrile	Ave	0.1524	0.1624		10.7	10.0	6.5	50.0
Isobutyl alcohol	Lin1		0.0064		231	200	15.5	50.0
Tert-amyl-methyl ether (TAME)	Ave	0.6303	0.6540		10.4	10.0	3.8	50.0
n-Heptane	Ave	0.0463	0.0469		10.1	10.0	1.4	50.0
n-Butanol	Qua		0.0033		138	200	-31.2	50.0
Methyl methacrylate	Ave	0.1713	0.1811		10.6	10.0	5.7	50.0
2-Nitropropane	Lin1		0.0327		24.3	20.0	21.5	50.0
Cyclohexanone	Ave	0.0523	0.0439		83.9	100	-16.1	50.0
1,2,3-Trimethylbenzene	Ave	2.905	2.987		10.3	10.0	2.8	50.0
2-Methylnaphthalene	Ave	1.257	0.9552		15.2	20.0	-24.0	50.0

FORM IV
GC/MS VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab File ID: UXC4174.D Lab Sample ID: MB 240-45839/5

Matrix: Water Heated Purge:(Y/N) N

Instrument ID: A3UX15 Date Analyzed: 05/31/2012 11:39

GC Column: DB-624 ID: 0.18(mm)

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-45839/4	UXC4172.D	05/31/2012 10:54
TB-052212	240-11568-1	UXC4191.D	05/31/2012 18:10
MRC-MW08B-052212	240-11568-2	UXC4192.D	05/31/2012 18:32
	240-11548-B-2 MS	UXC4195.D	05/31/2012 19:39
	240-11548-B-2 MSD	UXC4196.D	05/31/2012 20:02

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-45839/5

Matrix: Water Lab File ID: UXC4174.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/31/2012 11:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45839 Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
67-64-1	Acetone	5.0	U	5.0	1.1
71-43-2	Benzene	1.0	U	1.0	0.13
108-86-1	Bromobenzene	1.0	U	1.0	0.13
74-97-5	Bromochloromethane	1.0	U	1.0	0.29
75-27-4	Bromodichloromethane	1.0	U	1.0	0.15
75-25-2	Bromoform	1.0	U	1.0	0.64
74-83-9	Bromomethane	1.0	U	1.0	0.41
78-93-3	2-Butanone	5.0	U	5.0	0.57
75-15-0	Carbon disulfide	1.0	U	1.0	0.13
56-23-5	Carbon tetrachloride	1.0	U	1.0	0.13
108-90-7	Chlorobenzene	1.0	U	1.0	0.15
75-00-3	Chloroethane	1.0	U	1.0	0.29
110-75-8	2-Chloroethyl vinyl ether	10	U	10	0.99
67-66-3	Chloroform	1.0	U	1.0	0.16
74-87-3	Chloromethane	1.0	U	1.0	0.30
95-49-8	2-Chlorotoluene	1.0	U	1.0	0.11
106-43-4	4-Chlorotoluene	1.0	U	1.0	0.18
156-59-2	cis-1,2-Dichloroethene	1.0	U	1.0	0.17
10061-01-5	cis-1,3-Dichloropropene	1.0	U	1.0	0.14
124-48-1	Dibromochloromethane	1.0	U	1.0	0.18
96-12-8	1,2-Dibromo-3-Chloropropane	5.0	U	5.0	0.67
106-93-4	1,2-Dibromoethane	1.0	U	1.0	0.24
74-95-3	Dibromomethane	1.0	U	1.0	0.28
95-50-1	1,2-Dichlorobenzene	1.0	U	1.0	0.13
541-73-1	1,3-Dichlorobenzene	1.0	U	1.0	0.14
106-46-7	1,4-Dichlorobenzene	1.0	U	1.0	0.13
75-71-8	Dichlorodifluoromethane	1.0	U	1.0	0.31
75-34-3	1,1-Dichloroethane	1.0	U	1.0	0.15
107-06-2	1,2-Dichloroethane	1.0	U	1.0	0.22
75-35-4	1,1-Dichloroethene	1.0	U	1.0	0.19
78-87-5	1,2-Dichloropropane	1.0	U	1.0	0.18
142-28-9	1,3-Dichloropropane	1.0	U	1.0	0.16
594-20-7	2,2-Dichloropropane	1.0	U	1.0	0.13
563-58-6	1,1-Dichloropropene	1.0	U	1.0	0.13
108-20-3	Diisopropyl ether	5.0	U	5.0	1.5
100-41-4	Ethylbenzene	1.0	U	1.0	0.17

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45839/5

Matrix: Water | Lab File ID: UXC4174.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/31/2012 11:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.0	U	1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45839/5

Matrix: Water | Lab File ID: UXC4174.D

Analysis Method: 8260B | Date Collected:

Sample wt/vol: 5(mL) | Date Analyzed: 05/31/2012 11:39

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
1330-20-7	Xylenes, Total	2.0	U	2.0	0.28

CAS NO.	SURROGATE	%REC	Q	LIMITS
460-00-4	4-Bromofluorobenzene (Surr)	97		66-117
1868-53-7	Dibromofluoromethane (Surr)	97		75-121
17060-07-0	1,2-Dichloroethane-d4 (Surr)	106		63-129
2037-26-5	Toluene-d8 (Surr)	97		74-115

FORM I
GC/MS VOA ORGANICS ANALYSIS DATA SHEET
TENTATIVELY IDENTIFIED COMPOUNDS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Client Sample ID: Lab Sample ID: MB 240-45839/5

Matrix: Water Lab File ID: UXC4174.D

Analysis Method: 8260B Date Collected:

Sample wt/vol: 5(mL) Date Analyzed: 05/31/2012 11:39

Soil Aliquot Vol: Dilution Factor: 1

Soil Extract Vol.: GC Column: DB-624 ID: 0.18(mm)

% Moisture: Level: (low/med) Low

Analysis Batch No.: 45839 Units: ug/L

Number TICs Found: 0 TIC Result Total: 0

CAS NO.	COMPOUND NAME	RT	RESULT	Q
	Tentatively Identified Compound		None	

FORM II
GC/MS VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): DB-624 ID: 0.18 (mm)

Client Sample ID	Lab Sample ID	DBFM #	DCA #	TOL #	BFB #
TB-052212	240-11568-1	92	109	96	95
MRC-MW08B-052212	240-11568-2	92	111	97	92
	MB 240-45839/5	97	106	97	97
	LCS 240-45839/4	97	108	100	104
	240-11548-B-2 MS	97	111	101	105
	240-11548-B-2 MSD	100	108	104	103

	QC LIMITS
DBFM = Dibromofluoromethane (Surr)	75-121
DCA = 1,2-Dichloroethane-d4 (Surr)	63-129
TOL = Toluene-d8 (Surr)	74-115
BFB = 4-Bromofluorobenzene (Surr)	66-117

Column to be used to flag recovery values

FORM II 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC4172.D

Lab ID: LCS 240-45839/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acetone	20.0	18.8	94	43-136	
Benzene	10.0	9.44	94	83-112	
Bromobenzene	10.0	9.29	93	76-115	
Bromochloromethane	10.0	9.17	92	77-120	
Bromodichloromethane	10.0	10.6	106	72-121	
Bromoform	10.0	10.2	102	40-131	
Bromomethane	10.0	8.58	86	11-185	
2-Butanone	20.0	20.3	102	60-126	
Carbon disulfide	10.0	9.55	96	62-142	
Carbon tetrachloride	10.0	9.83	98	66-128	
Chlorobenzene	10.0	9.29	93	85-110	
Chloroethane	10.0	5.89	59	25-153	
2-Chloroethyl vinyl ether	10.0	10.4	104	52-131	
Chloroform	10.0	9.42	94	79-117	
Chloromethane	10.0	8.85	89	44-126	
2-Chlorotoluene	10.0	9.28	93	76-116	
4-Chlorotoluene	10.0	9.84	98	77-115	
cis-1,2-Dichloroethene	10.0	9.20	92	80-113	
cis-1,3-Dichloropropene	10.0	9.13	91	61-115	
Dibromochloromethane	10.0	10.3	103	64-119	
1,2-Dibromo-3-Chloropropane	10.0	9.87	99	42-136	
1,2-Dibromoethane	10.0	9.97	100	79-113	
Dibromomethane	10.0	10.6	106	81-120	
1,2-Dichlorobenzene	10.0	8.63	86	81-110	
1,3-Dichlorobenzene	10.0	8.79	88	80-110	
1,4-Dichlorobenzene	10.0	8.90	89	82-110	
Dichlorodifluoromethane	10.0	11.4	114	19-129	
1,1-Dichloroethane	10.0	9.94	99	82-115	
1,2-Dichloroethane	10.0	10.6	106	71-127	
1,1-Dichloroethene	10.0	10.1	101	78-131	
1,2-Dichloropropane	10.0	9.63	96	81-115	
1,3-Dichloropropane	10.0	9.81	98	79-116	
2,2-Dichloropropane	10.0	10.4	104	50-129	
1,1-Dichloropropene	10.0	10.1	101	83-114	
Diisopropyl ether	10.0	8.83	88	77-118	
Ethylbenzene	10.0	9.54	95	83-112	
Hexachlorobutadiene	10.0	6.59	66	36-134	
2-Hexanone	20.0	21.5	108	55-133	
Isopropylbenzene	10.0	9.04	90	75-114	
Methylene Chloride	10.0	9.46	95	66-131	
4-Methyl-2-pentanone	20.0	21.6	108	63-128	
Methyl tert-butyl ether	10.0	9.09	91	52-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC4172.D

Lab ID: LCS 240-45839/4 Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	20.0	19.3	97	83-113	
Naphthalene	10.0	8.11	81	32-141	
n-Butylbenzene	10.0	9.24	92	66-125	
n-Propylbenzene	10.0	9.72	97	74-121	
o-Xylene	10.0	9.31	93	83-113	
p-Isopropyltoluene	10.0	9.54	95	74-120	
sec-Butylbenzene	10.0	9.25	93	70-117	
Styrene	10.0	9.47	95	79-114	
tert-Butyl alcohol	200	171	85	70-130	
tert-Butylbenzene	10.0	9.48	95	71-115	
1,1,1,2-Tetrachloroethane	10.0	9.97	100	72-116	
1,1,2,2-Tetrachloroethane	10.0	10.1	101	68-118	
Tetrachloroethene	10.0	9.42	94	79-114	
Toluene	10.0	9.59	96	84-111	
trans-1,2-Dichloroethene	10.0	9.41	94	83-117	
trans-1,3-Dichloropropene	10.0	10.9	109	58-117	
1,2,3-Trichlorobenzene	10.0	7.41	74	54-126	
1,2,4-Trichlorobenzene	10.0	7.09	71	48-135	
1,1,1-Trichloroethane	10.0	10.3	103	74-118	
Trichloroethene	10.0	9.27	93	76-117	
Trichlorofluoromethane	10.0	12.1	121	49-157	
1,2,3-Trichloropropane	10.0	10.1	101	73-129	
1,1,2-Trichloro-1,2,2-trichfluoroethane	10.0	10.2	102	74-151	
1,2,3-Trimethylbenzene	10.0	9.96	100	70-130	
1,2,4-Trimethylbenzene	10.0	9.41	94	76-120	
Vinyl acetate	10.0	9.10	91	46-161	
Vinyl chloride	10.0	9.13	91	53-127	
Xylenes, Total	30.0	28.6	95	83-112	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC4195.D

Lab ID: 240-11548-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
Acetone	2000	500 U	2430	122	33-145	
Benzene	1000	330	1270	94	72-121	
Bromobenzene	1000	100 U	872	87	71-116	
Bromochloromethane	1000	100 U	876	88	73-121	
Bromodichloromethane	1000	100 U	1010	101	67-120	
Bromoform	1000	100 U	870	87	32-128	
Bromomethane	1000	100 U	709	71	10-186	
2-Butanone	2000	500 U	2400	120	54-129	
Carbon disulfide	1000	100 U	845	85	57-147	
Carbon tetrachloride	1000	100 U	865	87	59-129	
Chlorobenzene	1000	100 U	894	89	80-110	
Chloroethane	1000	100 U	506	51	21-165	
2-Chloroethyl vinyl ether	1000	1000 U	438 J	44	10-150	
Chloroform	1000	100 U	904	90	76-118	
Chloromethane	1000	100 U	912	91	33-132	
2-Chlorotoluene	1000	100 U	881	88	69-117	
4-Chlorotoluene	1000	100 U	1010	101	71-116	
cis-1,2-Dichloroethene	1000	100 U	894	89	70-120	
cis-1,3-Dichloropropene	1000	100 U	874	87	51-110	
Dibromochloromethane	1000	100 U	956	96	56-118	
1,2-Dibromo-3-Chloropropane	1000	500 U	945	95	32-139	
1,2-Dibromoethane	1000	100 U	1020	102	74-113	
Dibromomethane	1000	100 U	1100	110	77-121	
1,2-Dichlorobenzene	1000	100 U	852	85	75-111	
1,3-Dichlorobenzene	1000	100 U	834	83	73-110	
1,4-Dichlorobenzene	1000	100 U	820	82	75-110	
Dichlorodifluoromethane	1000	100 U	942	94	17-128	
1,1-Dichloroethane	1000	100 U	940	94	79-116	
1,2-Dichloroethane	1000	100 U	1090	109	68-129	
1,1-Dichloroethene	1000	100 U	896	90	74-135	
1,2-Dichloropropane	1000	100 U	959	96	78-115	
1,3-Dichloropropane	1000	100 U	1030	103	74-118	
2,2-Dichloropropane	1000	100 U	830	83	38-127	
1,1-Dichloropropene	1000	100 U	949	95	80-114	
Diisopropyl ether	1000	500 U	841	84	73-118	
Ethylbenzene	1000	260	1210	95	75-116	
Hexachlorobutadiene	1000	100 U	578	58	27-132	
2-Hexanone	2000	500 U	2940	147	47-139	F
Isopropylbenzene	1000	130	1010	89	68-116	
Methylene Chloride	1000	100 U	928	93	63-128	
4-Methyl-2-pentanone	2000	500 U	2330	117	56-131	
Methyl tert-butyl ether	1000	500 U	932	93	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC4195.D

Lab ID: 240-11548-B-2 MS Client ID:

COMPOUND	SPIKE ADDED (ug/L)	SAMPLE CONCENTRATION (ug/L)	MS CONCENTRATION (ug/L)	MS % REC	QC LIMITS REC	#
m-Xylene & p-Xylene	2000	5500	7360	94	75-117	
Naphthalene	1000	760	1670	91	15-158	
n-Butylbenzene	1000	57 J	924	87	56-127	
n-Propylbenzene	1000	110	1010	90	64-124	
o-Xylene	1000	1300	2230	91	76-116	
p-Isopropyltoluene	1000	34 J	901	87	64-122	
sec-Butylbenzene	1000	100 U	883	88	60-119	
Styrene	1000	41 J	966	92	71-117	
tert-Butyl alcohol	20000	1100 J	25900	124	70-130	
tert-Butylbenzene	1000	100 U	906	91	61-119	
1,1,1,2-Tetrachloroethane	1000	100 U	918	92	64-118	
1,1,2,2-Tetrachloroethane	1000	100 U	1000	100	63-122	
Tetrachloroethene	1000	100 U	843	84	70-117	
Toluene	1000	88 J	1000	91	78-114	
trans-1,2-Dichloroethene	1000	100 U	866	87	80-119	
trans-1,3-Dichloropropene	1000	100 U	990	99	46-116	
1,2,3-Trichlorobenzene	1000	100 U	742	74	45-129	
1,2,4-Trichlorobenzene	1000	100 U	738	74	38-138	
1,1,1-Trichloroethane	1000	100 U	922	92	68-121	
Trichloroethene	1000	100 U	898	90	66-120	
Trichlorofluoromethane	1000	100 U	1020	102	46-157	
1,2,3-Trichloropropane	1000	100 U	1050	105	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	1000	100 U	952	95	70-152	
1,2,3-Trimethylbenzene	1000	1200	2140	97	70-130	
1,2,4-Trimethylbenzene	1000	3500	4250	75	67-124	E
Vinyl acetate	1000	200 U	921	92	43-157	
Vinyl chloride	1000	100 U	857	86	49-130	
Xylenes, Total	3000	6800	9590	93	76-116	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC4196.D

Lab ID: 240-11548-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
Acetone	2000	2440	122	0	30	33-145	
Benzene	1000	1360	103	7	30	72-121	
Bromobenzene	1000	908	91	4	30	71-116	
Bromochloromethane	1000	940	94	7	30	73-121	
Bromodichloromethane	1000	1080	108	7	30	67-120	
Bromoform	1000	991	99	13	30	32-128	
Bromomethane	1000	880	88	22	30	10-186	
2-Butanone	2000	2430	122	1	30	54-129	
Carbon disulfide	1000	903	90	7	30	57-147	
Carbon tetrachloride	1000	891	89	3	30	59-129	
Chlorobenzene	1000	987	99	10	30	80-110	
Chloroethane	1000	636	64	23	30	21-165	
2-Chloroethyl vinyl ether	1000	430 J	43	2	30	10-150	
Chloroform	1000	1000	100	10	30	76-118	
Chloromethane	1000	984	98	8	30	33-132	
2-Chlorotoluene	1000	967	97	9	30	69-117	
4-Chlorotoluene	1000	1080	108	7	30	71-116	
cis-1,2-Dichloroethene	1000	981	98	9	30	70-120	
cis-1,3-Dichloropropene	1000	930	93	6	30	51-110	
Dibromochloromethane	1000	1000	100	4	30	56-118	
1,2-Dibromo-3-Chloropropane	1000	1030	103	9	30	32-139	
1,2-Dibromoethane	1000	1060	106	4	30	74-113	
Dibromomethane	1000	1130	113	3	30	77-121	
1,2-Dichlorobenzene	1000	923	92	8	30	75-111	
1,3-Dichlorobenzene	1000	892	89	7	30	73-110	
1,4-Dichlorobenzene	1000	879	88	7	30	75-110	
Dichlorodifluoromethane	1000	848	85	11	30	17-128	
1,1-Dichloroethane	1000	1030	103	9	30	79-116	
1,2-Dichloroethane	1000	1150	115	5	30	68-129	
1,1-Dichloroethene	1000	951	95	6	30	74-135	
1,2-Dichloropropane	1000	1050	105	9	30	78-115	
1,3-Dichloropropane	1000	1100	110	7	30	74-118	
2,2-Dichloropropane	1000	921	92	10	30	38-127	
1,1-Dichloropropene	1000	979	98	3	30	80-114	
Diisopropyl ether	1000	959	96	13	30	73-118	
Ethylbenzene	1000	1290	103	6	30	75-116	
Hexachlorobutadiene	1000	648	65	11	30	27-132	
2-Hexanone	2000	3080	154	5	30	47-139	F
Isopropylbenzene	1000	1110	99	9	30	68-116	
Methylene Chloride	1000	1050	105	12	30	63-128	
4-Methyl-2-pentanone	2000	2450	123	5	30	56-131	
Methyl tert-butyl ether	1000	1030	103	10	30	46-144	

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM III
GC/MS VOA MATRIX SPIKE DUPLICATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: UXC4196.D

Lab ID: 240-11548-B-2 MSD Client ID:

COMPOUND	SPIKE ADDED (ug/L)	MSD CONCENTRATION (ug/L)	MSD % REC	% RPD	QC LIMITS RPD	QC LIMITS REC	#
m-Xylene & p-Xylene	2000	7960	124	8	30	75-117	F
Naphthalene	1000	1850	109	10	30	15-158	
n-Butylbenzene	1000	1010	95	9	30	56-127	
n-Propylbenzene	1000	1070	96	6	30	64-124	
o-Xylene	1000	2450	113	9	30	76-116	
p-Isopropyltoluene	1000	964	93	7	30	64-122	
sec-Butylbenzene	1000	942	94	6	30	60-119	
Styrene	1000	1060	102	9	30	71-117	
tert-Butyl alcohol	20000	27400	132	6	30	70-130	F
tert-Butylbenzene	1000	990	99	9	30	61-119	
1,1,1,2-Tetrachloroethane	1000	1050	105	13	30	64-118	
1,1,2,2-Tetrachloroethane	1000	1020	102	2	30	63-122	
Tetrachloroethene	1000	874	87	4	30	70-117	
Toluene	1000	1100	101	10	30	78-114	
trans-1,2-Dichloroethene	1000	975	98	12	30	80-119	
trans-1,3-Dichloropropene	1000	1070	107	8	30	46-116	
1,2,3-Trichlorobenzene	1000	860	86	15	30	45-129	
1,2,4-Trichlorobenzene	1000	843	84	13	30	38-138	
1,1,1-Trichloroethane	1000	978	98	6	30	68-121	
Trichloroethene	1000	991	99	10	30	66-120	
Trichlorofluoromethane	1000	982	98	4	30	46-157	
1,2,3-Trichloropropane	1000	1070	107	2	30	67-132	
1,1,2-Trichloro-1,2,2-trichfluoroethane	1000	891	89	7	30	70-152	
1,2,3-Trimethylbenzene	1000	2330	116	9	30	70-130	
1,2,4-Trimethylbenzene	1000	4650	115	9	30	67-124	E
Vinyl acetate	1000	932	93	1	30	43-157	
Vinyl chloride	1000	895	90	4	30	49-130	
Xylenes, Total	3000	10400	120	8	30	76-116	F

Column to be used to flag recovery and RPD values

FORM III 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Sample No.: STD8260 240-42081/4 Date Analyzed: 04/29/2012 12:09

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm)

Lab File ID (Standard): UXC3078.D Heated Purge: (Y/N) N

Calibration ID: 8421

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		1555823	4.66	1052295	7.30	548707	9.51
UPPER LIMIT		3111646	5.16	2104590	7.80	1097414	10.01
LOWER LIMIT		777912	4.16	526148	6.80	274354	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-42081/14		1579447	4.67	1033620	7.30	538234	9.51
CCVIS 240-45839/2		1004958	4.67	643979	7.30	332442	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM VIII
GC/MS VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Sample No.: CCVIS 240-45839/2 Date Analyzed: 05/31/2012 10:09

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18 (mm)

Lab File ID (Standard): UXC4170.D Heated Purge: (Y/N) N

Calibration ID: 8423

		FB		CBZ		DCB	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
12/24 HOUR STD		1004958	4.67	643979	7.30	332442	9.51
UPPER LIMIT		2009916	5.17	1287958	7.80	664884	10.01
LOWER LIMIT		502479	4.17	321990	6.80	166221	9.01
LAB SAMPLE ID	CLIENT SAMPLE ID						
CCV 240-45839/3		938984	4.66	587283	7.30	302030	9.51
LCS 240-45839/4		999448	4.67	645787	7.30	333654	9.51
MB 240-45839/5		925178	4.67	605918	7.30	305736	9.51
240-11568-1	TB-052212	991000	4.67	664235	7.30	333163	9.51
240-11568-2	MRC-MW08B-052212	959689	4.67	639224	7.30	319325	9.51
240-11548-B-2 MS		994141	4.67	673473	7.30	355456	9.51
240-11548-B-2 MSD		985480	4.67	651282	7.30	352986	9.51

FB = Fluorobenzene
CBZ = Chlorobenzene-d5
DCB = 1,4-Dichlorobenzene-d4

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8260B

FORM V
GC/MS SEMI VOA INSTRUMENT PERFORMANCE CHECK
DECAFLUOROTRIPHENYLPHOSPHINE (DFTPP)

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab File ID: 0530001.D DFTPP Injection Date: 05/30/2012

Instrument ID: A4AG2 DFTPP Injection Time: 09:34

Analysis Batch No.: 45635

M/E	ION ABUNDANCE CRITERIA	% RELATIVE ABUNDANCE	
51	30.0- 80.0% of mass 198	42.1	
68	Less than 2.0% of mass 69	0.0	(0.0)1
69	Mass 69 relative abundance	49.3	
70	Less than 2.0% of mass 69	0.3	(0.6)1
127	25.0 - 75.0% of mass 198	62.3	
197	Less than 1.0% of mass 198	0.0	
198	Base Peak, 100% relative abundance	100.0	
199	5.0 to 9.0% of mass 198	6.9	
275	10.0- 30.0% of mass 198	27.6	
365	Greater than 0.75% of mass 198	3.2	
441	Present, but less than mass 443	7.3	
442	40.0 - 110.0% of mass 198	50.2	
443	15.0 - 24.0% of mass 442	10.0	(19.9)2

1-Value is % mass 69 2-Value is % mass 442

THIS CHECK APPLIES TO THE FOLLOWING SAMPLES, MS, MSD, BLANKS AND STANDARDS:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED	TIME ANALYZED
	STD9 240-45635/2	0530002.D	05/30/2012	09:52
	STD8 240-45635/3	0530003.D	05/30/2012	10:10
	STD7 240-45635/4	0530004.D	05/30/2012	10:27
	STD6 240-45635/5	0530005.D	05/30/2012	10:45
	STD5 240-45635/6	0530006.D	05/30/2012	11:03
	STD4 240-45635/7	0530007.D	05/30/2012	11:21
	STD3 240-45635/8	0530008.D	05/30/2012	11:38
	STD2 240-45635/9	0530009.D	05/30/2012	11:56
	STD1 240-45635/10	0530010.D	05/30/2012	12:14
	ICV 240-45635/11	0530011.D	05/30/2012	12:31
	MB 240-45149/14-A	0530024.D	05/30/2012	16:22
	LCS 240-45149/15-A	0530025.D	05/30/2012	16:40
MRC-MW08B-052212	240-11568-2	0530040.D	05/30/2012	21:06

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 45635

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/30/2012 09:52 Calibration End Date: 05/30/2012 12:14 Calibration ID: 9047

Calibration Files:

LEVEL:	LAB SAMPLE ID:	LAB FILE ID:
Level 1	STD1 240-45635/10	0530010.D
Level 2	STD2 240-45635/9	0530009.D
Level 3	STD3 240-45635/8	0530008.D
Level 4	STD4 240-45635/7	0530007.D
Level 5	STD5 240-45635/6	0530006.D
Level 6	STD6 240-45635/5	0530005.D
Level 7	STD7 240-45635/4	0530004.D
Level 8	STD8 240-45635/3	0530003.D
Level 9	STD9 240-45635/2	0530002.D

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
1,4-Dioxane	0.5308	0.5660 0.5234	0.5711 0.5204	0.5246 0.4931	0.5445	Ave		0.5342				4.8		20.0			
N-Nitrosodimethylamine	0.9106	0.9649 0.9378	1.0168 0.9077	0.9872 0.9383	0.9420	Ave		0.9507				3.9		20.0			
Pyridine	1.5593	1.3856 1.6085	1.5879 1.6386	1.5813 1.6474	1.5176	Ave		1.5658				5.4		20.0			
Ethyl methacrylate	1.2254	1.2503 1.2358	1.2868 1.2039	1.2196 1.1553	1.1861	Ave		1.2204				3.3		20.0			
3-Chloropropionitrile	0.8269	0.8480 0.8431	0.8552 0.8248	0.8268 0.8209	0.8083	Ave		0.8317				1.9		20.0			
Malononitrile	1.8870	1.8119 1.8632	1.8914 1.7799	1.9590 1.7480	1.8006	Ave		1.8426				3.8		20.0			
Benzaldehyde	1.4284	1.7454 1.2447	1.5633 +++++	1.5937 +++++	1.4910	Ave		1.5127			0.0100	10.0		20.0			
Phenol	2.0785	1.9774 2.1399	2.0321 2.1077	2.0393 2.1660	1.9979	Ave		2.0673			0.8000	3.3		20.0			
Aniline	2.5705	2.4847 2.6204	2.4746 2.6862	2.5213 2.7057	2.4844	Ave		2.5685				3.6		20.0			
Bis(2-chloroethyl)ether	1.8307	1.9052 1.9621	2.1246 1.8641	1.8981 2.0800	1.8932	Ave		1.9448			0.7000	5.4		20.0			
2-Chlorophenol	1.6239	1.5457 1.6982	1.5645 1.6915	1.5251 1.7606	1.5707	Ave		1.6225			0.8000	5.3		20.0			
1,3-Dichlorobenzene	1.7259	1.6806 1.7982	1.7343 1.8045	1.6918 1.8195	1.6888	Ave		1.7430				3.3		20.0			
1,4-Dichlorobenzene	1.6062	1.5733 1.6733	1.6485 1.6761	1.5818 1.7023	1.5494	Ave		1.6264				3.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 45635

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/30/2012 09:52 Calibration End Date: 05/30/2012 12:14 Calibration ID: 9047

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Benzyl alcohol	1.1143	0.9846 1.1361	1.0091 1.1358	1.0710 1.1967	1.0767	Ave		1.0905				6.4		20.0			
1,2-Dichlorobenzene	1.6966	1.6586 1.7683	1.6838 1.7911	1.6298 1.7710	1.6268	Ave		1.7033				3.9		20.0			
2-Methylphenol	1.5827	1.5420 1.6180	1.5975 1.6243	1.5516 1.6688	1.5413	Ave		1.5908			0.7000	2.9		20.0			
2,2'-oxybis[1-chloropropane]	1.9562	2.0638 1.9131	2.1265 1.8761	2.0942 1.8932	2.0296	Ave		1.9941				4.9		20.0			
Benzoic acid	0.2178	+++++ 0.2511	0.0541 0.2608	0.1218 0.2613	0.1915	Qua	-0.505	0.2444	0.0006						0.9990		0.9900
3 & 4 Methylphenol	1.6295	1.4494 1.6665	1.4461 1.6577	1.5779 1.7448	1.5796	Ave		1.5939				6.6		20.0			
N-Nitrosodi-n-propylamine	1.1788	1.1403 1.2036	1.1489 1.1879	1.1756 1.2064	1.1997	Ave		1.1801			0.5000	2.1		20.0			
Acetophenone	2.2570	2.1758 2.3118	2.2325 2.2747	2.2484 2.3298	2.2422	Ave		2.2590			0.0100	2.1		20.0			
Hexachloroethane	0.6800	0.6597 0.7106	0.6775 0.7049	0.6684 0.7113	0.6737	Ave		0.6858			0.3000	3.0		20.0			
Nitrobenzene	0.4535	0.4117 0.4771	0.4478 0.4670	0.4415 0.4781	0.4393	Ave		0.4520			0.2000	4.9		20.0			
Isophorone	0.7289	0.6882 0.7651	0.7047 0.7527	0.7231 0.7739	0.7386	Ave		0.7344			0.4000	4.0		20.0			
2,4-Dimethylphenol	0.4038	0.3603 0.4262	0.3938 0.4153	0.3889 0.4000	0.3928	Ave		0.3976			0.2000	4.9		20.0			
2-Nitrophenol	0.2053	0.1506 0.2199	0.1528 0.2150	0.1734 0.2040	0.1894	Ave		0.1888			0.1000	14.0		20.0			
1,3,5-Trichlorobenzene	0.3152	0.2769 0.3404	0.2870 0.3401	0.2824 0.3116	0.2920	Ave		0.3057				8.2		20.0			
Bis(2-chloroethoxy)methane	0.4941	0.4858 0.5192	0.4841 0.5088	0.4825 0.5234	0.4914	Ave		0.4987			0.3000	3.3		20.0			
2,4-Dinitrophenol	0.1849	+++++ 0.2114	+++++ 0.2242	0.0908 0.2312	0.1485	Qua	-0.548	0.2022	0.0008		0.0100				0.9990		0.9900
2,4-Dichlorophenol	0.2571	0.2083 0.2761	0.2161 0.2774	0.2294 0.2986	0.2449	Ave		0.2510			0.2000	13.0		20.0			
1,2,4-Trichlorobenzene	0.3043	0.2769 0.3340	0.2810 0.3404	0.2817 0.3451	0.2871	Ave		0.3063				9.5		20.0			
Naphthalene	1.1988 1.0585	1.0110 1.1133	1.0387 0.9955	1.0225 0.8930	1.0345	Ave		1.0407			0.7000	8.0		20.0			
4-Chloroaniline	0.4608	0.4142 0.5016	0.4323 0.4850	0.4297 0.5085	0.4513	Ave		0.4604			0.0100	7.6		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 45635

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/30/2012 09:52 Calibration End Date: 05/30/2012 12:14 Calibration ID: 9047

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Hexachlorobutadiene	0.1513	0.1296 0.1705	0.1363 0.1746	0.1336 0.1818	0.1420	Ave		0.1525			0.0100	13.0		20.0			
1,2,3-Trichlorobenzene	0.2823	0.2605 0.3075	0.2649 0.3108	0.2617 0.3234	0.2667	Ave		0.2847				8.9		20.0			
Caprolactam	0.1218	0.0975 0.1230	0.0953 0.1248	0.1175 0.1182	0.1267	Ave		0.1156			0.0100	11.0		20.0			
4-Chloro-3-methylphenol	0.3262	0.2688 0.3453	0.2936 0.3458	0.3067 0.3619	0.3295	Ave		0.3222			0.2000	9.6		20.0			
2-Methylnaphthalene	0.6890 0.6801	0.6360 0.7241	0.6520 0.7263	0.6365 0.7379	0.6656	Ave		0.6831			0.4000	5.7		20.0			
1-Methylnaphthalene	0.6514 0.6516	0.6069 0.6964	0.6184 0.6984	0.6184 0.7061	0.6370	Ave		0.6538				5.8		20.0			
4-Nitrophenol	0.2167	+++++ 0.2378	0.0897 0.2361	0.1417 0.2401	0.2021	Qua	-0.182	0.2386	0.0004						1.0000		0.9900
Hexachlorocyclopentadiene	0.3860	0.2073 0.4156	0.2193 0.4269	0.2652 0.4124	0.3183	Qua	-0.267	0.4204	0.0004		0.0500				0.9980		0.9900
1,2,3,5-Tetrachlorobenzene	0.5653	0.4509 0.6006	0.4699 0.6107	0.4655 0.5829	0.5052	Ave		0.5314				12.0		20.0			
2,4,6-Trichlorophenol	0.3245	0.2311 0.3521	0.2281 0.3661	0.2738 0.3805	0.2916	Ave		0.3060			0.2000	19.0		20.0			
2,4,5-Trichlorophenol	0.3490	0.2892 0.3697	0.2534 0.3927	0.3167 0.3993	0.3227	Ave		0.3366			0.2000	15.0		20.0			
1,2,3,4 -Tetrachlorobenzene	0.5459	0.4274 0.5764	0.4528 0.5890	0.4477 0.5538	0.4860	Ave		0.5099				12.0		20.0			
1,1'-Biphenyl	1.6010 1.5707	1.3593 1.5940	1.3995 1.6016	1.4017 1.3828	1.4787	Ave		1.4877			0.0100	7.0		20.0			
2-Chloronaphthalene	1.3722 1.2956	1.1266 1.3383	1.2152 1.3819	1.1580 1.3260	1.1992	Ave		1.2681			0.8000	7.5		20.0			
2-Nitroaniline	0.3946	0.3433 0.4042	0.3278 0.4046	0.3635 0.3999	0.3866	Ave		0.3781			0.0100	7.8		20.0			
4,6-Dinitro-2-methylphenol	0.1408	+++++ 0.1571	0.0536 0.1718	0.0882 0.1808	0.1178	Qua	-0.096	0.1302	0.0022		0.0100				1.0000		0.9900
Dimethyl phthalate	1.2561	1.1161 1.3190	1.1961 1.3505	1.1746 1.3661	1.2165	Ave		1.2494			0.0100	7.2		20.0			
2,6-Dinitrotoluene	0.3204	0.2399 0.3473	0.2540 0.3602	0.2835 0.3661	0.3084	Ave		0.3100				15.0		20.0			
1,2-Dinitrobenzene	0.1581	0.1181 0.1689	0.1227 0.1691	0.1409 0.1707	0.1490	Ave		0.1497				14.0		20.0			
Acenaphthylene	2.0799 1.9467	1.7661 2.0600	1.8104 2.0274	1.7842 1.7355	1.8693	Ave		1.8977			0.9000	7.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 45635

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/30/2012 09:52 Calibration End Date: 05/30/2012 12:14 Calibration ID: 9047

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
3-Nitroaniline	0.3804	0.3083 0.3978	0.3079 0.4062	0.3450 0.4041	0.3648	Ave		0.3643			0.0100	11.0		20.0			
Acenaphthene	1.3595 1.2614	1.1294 1.2966	1.1655 1.3132	1.1376 1.2505	1.1867	Ave		1.2334			0.9000	6.7		20.0			
Pentachlorophenol	0.1567	+++++ 0.1818	0.0832 0.1858	0.1227 0.1982	0.1334	Qua	-0.174	0.1501	0.0010		0.0500				0.9990		0.9900
2,4-Dinitrotoluene	0.4412	0.3356 0.4724	0.3459 0.4888	0.3915 0.4915	0.4249	Ave		0.4240			0.2000	14.0		20.0			
Dibenzofuran	1.6464 1.5882	1.3979 1.7019	1.4725 1.7370	1.4375 1.6665	1.4957	Ave		1.5715			0.8000	7.9		20.0			
2,3,5,6-Tetrachlorophenol	0.2788	0.2054 0.3176	0.2111 0.3351	0.2322 0.3539	0.2550	Qua	-0.055	0.2514	0.0042						1.0000		0.9900
Diethyl phthalate	1.3550	1.2286 1.4155	1.2761 1.4675	1.2839 1.4587	1.3188	Ave		1.3505			0.0100	6.6		20.0			
4-Chlorophenyl phenyl ether	0.6487	0.5414 0.7113	0.5720 0.7331	0.5677 0.7263	0.6079	Ave		0.6386			0.4000	12.0		20.0			
Fluorene	1.3996 1.4059	1.1863 1.4904	1.2561 1.5184	1.2582 1.4799	1.3264	Ave		1.3690			0.9000	8.6		20.0			
4-Nitroaniline	0.4148	0.3146 0.4214	0.2882 0.4467	0.3716 0.4491	0.3915	Ave		0.3872			0.0100	15.0		20.0			
N-Nitrosodiphenylamine	0.6909	0.5961 0.7502	0.6430 0.7655	0.6279 0.7660	0.6473	Ave		0.6859			0.0100	9.8		20.0			
1,2-Diphenylhydrazine(as Azobenzene)	1.0835	1.0187 1.1145	1.0882 1.1091	1.0614 0.9876	1.0598	Ave		1.0656				4.1		20.0			
Azobenzene	1.0846	1.0189 1.1145	1.0882 1.1091	1.0606 0.9876	1.0614	Ave		1.0656				4.1		20.0			
4-Bromophenyl phenyl ether	0.2487	0.2108 0.2788	0.2232 0.2903	0.2087 0.3080	0.2230	Ave		0.2489			0.1000	16.0		20.0			
Hexachlorobenzene	0.2401 0.2261	0.1970 0.2578	0.2110 0.2692	0.2020 0.2942	0.2041	Ave		0.2335			0.1000	15.0		20.0			
Atrazine	0.1852	0.1644 0.1924	0.1732 0.1946	0.1705 0.1659	0.1749	Ave		0.1776			0.0100	6.6		20.0			
Phenanthrene	1.2606 1.2362	1.0836 1.3351	1.0979 1.3417	1.0943 1.2306	1.1442	Ave		1.2027			0.7000	8.4		20.0			
Anthracene	1.3001 1.2898	1.1362 1.3915	1.1680 1.3383	1.1526 1.1730	1.1930	Ave		1.2381			0.7000	7.5		20.0			
Carbazole	1.2175	1.0700 1.3140	1.1155 1.3339	1.1211 1.2406	1.1447	Ave		1.1947			0.0100	8.1		20.0			
Di-n-butyl phthalate	1.5866	1.4285 1.5972	1.4450 1.5392	1.4692 1.1852	1.5063	Ave		1.4697			0.0100	8.9		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 45635

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/30/2012 09:52 Calibration End Date: 05/30/2012 12:14 Calibration ID: 9047

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
Fluoranthene	1.2786 1.2730	1.0330 1.3961	1.1072 1.4077	1.1084 1.3203	1.1696	Ave		1.2326			0.6000	11.0		20.0			
Benzidine	 0.8246	0.4717 0.8385	0.6247 0.8409	0.7770 0.8162	0.7521	Ave		0.7432				18.0		20.0			
Pyrene	1.5332 1.3709	1.2898 1.4159	1.3113 1.4175	1.2873 1.2783	1.2870	Ave		1.3546			0.6000	6.4		20.0			
Butyl benzyl phthalate	 0.7387	0.7231 0.7557	0.7350 0.7509	0.7312 0.7290	0.7120	Ave		0.7345			0.0100	1.9		20.0			
3,3'-Dimethoxybenzidine	 0.3846	0.2478 0.4306	0.2988 0.4312	0.3262 0.3999	0.3466	Ave		0.3582				18.0		20.0			
Bis(2-ethylhexyl) phthalate	 1.0627	1.0636 1.0778	1.0237 1.0493	1.0483 0.9254	1.0284	Ave		1.0349			0.0100	4.6		20.0			
4,4'-Methylene bis(2-chloroaniline)	 0.2716	0.2079 0.2857	0.2154 0.2750	0.2233 0.2505	0.2429	Ave		0.2465				12.0		20.0			
3,3'-Dichlorobenzidine	 0.5483	0.4535 0.5673	0.4611 0.5655	0.4876 0.5515	0.5073	Ave		0.5178			0.0100	9.0		20.0			
Benzo[a]anthracene	1.4688 1.2656	1.1894 1.3136	1.2152 1.3155	1.2186 1.2949	1.2196	Ave		1.2779			0.8000	6.7		20.0			
Chrysene	1.3192 1.1580	1.0856 1.2142	1.1261 1.1904	1.0832 1.1355	1.1061	Ave		1.1576			0.7000	6.5		20.0			
Di-n-octyl phthalate	 2.3628	1.8532 2.5213	1.9440 2.5426	2.0250 2.1982	2.1849	Ave		2.2040			0.0100	12.0		20.0			
Benzo[b]fluoranthene	1.4465 1.5827	1.2657 1.7737	1.3388 1.8556	1.3536 2.0883	1.5093	Ave		1.5794			0.7000	17.0		20.0			
Benzo[k]fluoranthene	1.6667 1.7611	1.4938 1.9555	1.5537 1.9358	1.4776 2.0014	1.5107	Ave		1.7063			0.7000	13.0		20.0			
Benzo[a]pyrene	1.4750 1.5210	1.2400 1.6864	1.2821 1.7474	1.2921 1.8169	1.3925	Ave		1.4948			0.7000	14.0		20.0			
Indeno[1,2,3-cd]pyrene	1.4785 1.7581	1.4179 1.9169	1.4931 1.9643	1.5055 2.0720	1.6154	Ave		1.6913			0.5000	14.0		20.0			
Dibenzo(a,h)anthracene	1.2667 1.5231	1.1540 1.6858	1.2424 1.7558	1.2448 1.8531	1.3561	Ave		1.4535			0.4000	18.0		20.0			
Benzo[g,h,i]perylene	1.3023 1.3828	1.1798 1.5006	1.2692 1.5214	1.2079 1.5930	1.2930	Ave		1.3611			0.5000	11.0		20.0			
2-Fluorophenol (Surr)	 1.4873	1.3655 1.5130	1.4797 1.5046	1.4395 1.5570	1.4167	Ave		1.4704				4.1		20.0			
Phenol-d5 (Surr)	 1.9826	1.9078 2.0434	1.9248 2.0324	1.9058 2.1123	1.9336	Ave		1.9803				3.8		20.0			
Nitrobenzene-d5 (Surr)	0.4898 0.4523	0.4150 0.4808	0.4433 0.4733	0.4358 0.4795	0.4451	Ave		0.4572				5.5		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VI
GC/MS SEMI VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 45635

SDG No.:

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm) Heated Purge: (Y/N) N

Calibration Start Date: 05/30/2012 09:52 Calibration End Date: 05/30/2012 12:14 Calibration ID: 9047

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2 LVL 7	LVL 3 LVL 8	LVL 4 LVL 9	LVL 5		B	M1	M2								
2-Fluorobiphenyl (Surr)	1.5304 1.5150	1.2894 1.5783	1.3527 1.6164	1.3381 1.4890	1.3869	Ave		1.4551				8.0		20.0			
2,4,6-Tribromophenol (Surr)	 0.1432	0.1242 0.1557	0.1216 0.1656	0.1374 0.1841	0.1389	Ave		0.1463				14.0		20.0			
Terphenyl-d14 (Surr)	0.9045 0.9233	0.8049 0.9524	0.8360 0.9579	0.8469 0.9176	0.8555	Ave		0.8888				6.1		20.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICV 240-45635/11 Calibration Date: 05/30/2012 12:31

Instrument ID: A4AG2 Calib Start Date: 05/30/2012 09:52

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/30/2012 12:14

Lab File ID: 0530011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
1,4-Dioxane	Ave	0.5342	0.5808		10.9	10.0	8.7	30.0
N-Nitrosodimethylamine	Ave	0.9507	0.9707		10.2	10.0	2.1	30.0
Pyridine	Ave	1.566	1.708		10.9	10.0	9.1	30.0
Ethyl methacrylate	Ave	1.220	1.322		10.8	10.0	8.3	30.0
3-Chloropropionitrile	Ave	0.8317	0.8468		10.2	10.0	1.8	30.0
Malononitrile	Ave	1.843	1.925		10.4	10.0	4.5	30.0
Phenol	Ave	2.067	2.068	0.8000	10.0	10.0	0.0	30.0
Benzaldehyde	Ave	1.513	1.471	0.0100	9.72	10.0	-2.8	30.0
Aniline	Ave	2.568	2.545		9.91	10.0	-0.9	30.0
Bis(2-chloroethyl)ether	Ave	1.945	1.944	0.7000	10.0	10.0	-0.0	30.0
2-Chlorophenol	Ave	1.623	1.619	0.8000	9.98	10.0	-0.2	30.0
1,3-Dichlorobenzene	Ave	1.743	1.749		10.0	10.0	0.4	30.0
1,4-Dichlorobenzene	Ave	1.626	1.624		9.99	10.0	-0.1	30.0
Benzyl alcohol	Ave	1.091	1.063		9.75	10.0	-2.5	30.0
1,2-Dichlorobenzene	Ave	1.703	1.696		9.96	10.0	-0.4	30.0
2-Methylphenol	Ave	1.591	1.561	0.7000	9.81	10.0	-1.9	30.0
2,2'-oxybis[1-chloropropane]	Ave	1.994	2.000		10.0	10.0	0.3	30.0
3 & 4 Methylphenol	Ave	1.594	1.569		9.84	10.0	-1.6	30.0
N-Nitrosodi-n-propylamine	Ave	1.180	1.154	0.5000	9.78	10.0	-2.2	30.0
Acetophenone	Ave	2.259	2.211	0.0100	9.79	10.0	-2.1	30.0
Hexachloroethane	Ave	0.6858	0.7016	0.3000	10.2	10.0	2.3	30.0
Nitrobenzene	Ave	0.4520	0.4621	0.2000	10.2	10.0	2.2	30.0
Isophorone	Ave	0.7344	0.7460	0.4000	10.2	10.0	1.6	30.0
2,4-Dimethylphenol	Ave	0.3976	0.4038	0.2000	10.2	10.0	1.6	30.0
2-Nitrophenol	Ave	0.1888	0.1933	0.1000	10.2	10.0	2.4	30.0
1,3,5-Trichlorobenzene	Ave	0.3057	0.3085		10.1	10.0	0.9	30.0
Benzoic acid	Qua		0.2049		18.0	20.0	-10.0	30.0
Bis(2-chloroethoxy)methane	Ave	0.4987	0.5039	0.3000	10.1	10.0	1.0	30.0
2,4-Dichlorophenol	Ave	0.2510	0.2519	0.2000	10.0	10.0	0.4	30.0
1,2,4-Trichlorobenzene	Ave	0.3063	0.2989		9.76	10.0	-2.4	30.0
Naphthalene	Ave	1.041	1.067	0.7000	10.3	10.0	2.5	30.0
4-Chloroaniline	Ave	0.4604	0.4607	0.0100	10.0	10.0	0.0	30.0
Hexachlorobutadiene	Ave	0.1525	0.1475	0.0100	9.68	10.0	-3.2	30.0
1,2,3-Trichlorobenzene	Ave	0.2847	0.2759		9.69	10.0	-3.1	30.0
Caprolactam	Ave	0.1156	0.1225	0.0100	10.6	10.0	6.0	30.0
4-Chloro-3-methylphenol	Ave	0.3222	0.3267	0.2000	10.1	10.0	1.4	30.0
2-Methylnaphthalene	Ave	0.6831	0.6718	0.4000	9.83	10.0	-1.7	30.0
1-Methylnaphthalene	Ave	0.6538	0.6438		9.85	10.0	-1.5	30.0
1,2,3,5-Tetrachlorobenzene	Ave	0.5314	0.5474		10.3	10.0	3.0	30.0
Hexachlorocyclopentadiene	Qua		0.3504	0.0500	8.90	10.0	-11.0	30.0
2,4,6-Trichlorophenol	Ave	0.3060	0.3077	0.2000	10.1	10.0	0.6	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICV 240-45635/11 Calibration Date: 05/30/2012 12:31

Instrument ID: A4AG2 Calib Start Date: 05/30/2012 09:52

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/30/2012 12:14

Lab File ID: 0530011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
2,4,5-Trichlorophenol	Ave	0.3366	0.3347	0.2000	9.94	10.0	-0.6	30.0
1,2,3,4 -Tetrachlorobenzene	Ave	0.5099	0.5197		10.2	10.0	1.9	30.0
1,1'-Biphenyl	Ave	1.488	1.553	0.0100	10.4	10.0	4.4	30.0
2-Chloronaphthalene	Ave	1.268	1.263	0.8000	9.96	10.0	-0.4	30.0
2-Nitroaniline	Ave	0.3781	0.3941	0.0100	10.4	10.0	4.3	30.0
Dimethyl phthalate	Ave	1.249	1.230	0.0100	9.84	10.0	-1.6	30.0
2,6-Dinitrotoluene	Ave	0.3100	0.3149		10.2	10.0	1.6	30.0
1,2-Dinitrobenzene	Ave	0.1497	0.1543		10.3	10.0	3.1	30.0
Acenaphthylene	Ave	1.898	1.940	0.9000	10.2	10.0	2.2	30.0
3-Nitroaniline	Ave	0.3643	0.3652	0.0100	10.0	10.0	0.2	30.0
Acenaphthene	Ave	1.233	1.235	0.9000	10.0	10.0	0.1	30.0
2,4-Dinitrophenol	Qua		0.1548	0.0100	16.9	20.0	-15.5	30.0
4-Nitrophenol	Qua		0.2088		9.38	10.0	-6.2	30.0
2,4-Dinitrotoluene	Ave	0.4240	0.4261	0.2000	10.1	10.0	0.5	30.0
Dibenzofuran	Ave	1.572	1.570	0.8000	10.0	10.0	-0.1	30.0
2,3,5,6-Tetrachlorophenol	Qua		0.2597		9.14	10.0	-8.6	30.0
Diethyl phthalate	Ave	1.350	1.339	0.0100	9.91	10.0	-0.9	30.0
4-Chlorophenyl phenyl ether	Ave	0.6386	0.6149	0.4000	9.63	10.0	-3.7	30.0
4-Nitroaniline	Ave	0.3872	0.3915	0.0100	10.1	10.0	1.1	30.0
Fluorene	Ave	1.369	1.361	0.9000	9.94	10.0	-0.6	30.0
4,6-Dinitro-2-methylphenol	Qua		0.1285	0.0100	9.17	10.0	-8.3	30.0
N-Nitrosodiphenylamine	Ave	0.6859	0.6937	0.0100	10.1	10.0	1.1	30.0
1,2-Diphenylhydrazine(as Azobenzene)	Ave	1.066	1.166		10.9	10.0	9.4	30.0
Azobenzene	Ave	1.066	1.166		10.9	10.0	9.4	30.0
4-Bromophenyl phenyl ether	Ave	0.2489	0.2466	0.1000	9.91	10.0	-0.9	30.0
Hexachlorobenzene	Ave	0.2335	0.2290	0.1000	9.81	10.0	-1.9	30.0
Atrazine	Ave	0.1776	0.1857	0.0100	10.5	10.0	4.6	30.0
Pentachlorophenol	Qua		0.1464	0.0500	18.3	20.0	-8.5	30.0
Phenanthrene	Ave	1.203	1.232	0.7000	10.2	10.0	2.5	30.0
Anthracene	Ave	1.238	1.300	0.7000	10.5	10.0	5.0	30.0
Carbazole	Ave	1.195	1.218	0.0100	10.2	10.0	1.9	30.0
Di-n-butyl phthalate	Ave	1.470	1.617	0.0100	11.0	10.0	10.0	30.0
Fluoranthene	Ave	1.233	1.260	0.6000	10.2	10.0	2.3	30.0
Benzidine	Ave	0.7432	0.7727		10.4	10.0	4.0	30.0
Pyrene	Ave	1.355	1.391	0.6000	10.3	10.0	2.7	30.0
Butyl benzyl phthalate	Ave	0.7345	0.7671	0.0100	10.4	10.0	4.4	30.0
3,3'-Dimethoxybenzidine	Ave	0.3582	0.3677		10.3	10.0	2.6	30.0
Bis(2-ethylhexyl) phthalate	Ave	1.035	1.100	0.0100	10.6	10.0	6.3	30.0
4,4'-Methylene bis(2-chloroaniline)	Ave	0.2465	0.2644		10.7	10.0	7.3	30.0
3,3'-Dichlorobenzidine	Ave	0.5178	0.5412	0.0100	10.5	10.0	4.5	30.0

FORM VII
GC/MS SEMI VOA CONTINUING CALIBRATION DATA

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICV 240-45635/11 Calibration Date: 05/30/2012 12:31

Instrument ID: A4AG2 Calib Start Date: 05/30/2012 09:52

GC Column: RXI-5SILMS ID: 0.45(mm) Calib End Date: 05/30/2012 12:14

Lab File ID: 0530011.D Conc. Units: ng/uL

ANALYTE	CURVE TYPE	AVE RRF	RRF	MIN RRF	CALC AMOUNT	SPIKE AMOUNT	%D	MAX %D
Benzo[a]anthracene	Ave	1.278	1.278	0.8000	10.0	10.0	0.0	30.0
Chrysene	Ave	1.158	1.154	0.7000	9.97	10.0	-0.3	30.0
Di-n-octyl phthalate	Ave	2.204	2.286	0.0100	10.4	10.0	3.7	30.0
Benzo[b]fluoranthene	Ave	1.579	1.625	0.7000	10.3	10.0	2.9	30.0
Benzo[k]fluoranthene	Ave	1.706	1.617	0.7000	9.48	10.0	-5.2	30.0
Benzo[a]pyrene	Ave	1.495	1.479	0.7000	9.90	10.0	-1.0	30.0
Indeno[1,2,3-cd]pyrene	Ave	1.691	1.714	0.5000	10.1	10.0	1.4	30.0
Dibenzo(a,h)anthracene	Ave	1.454	1.448	0.4000	9.96	10.0	-0.4	30.0
Benzo[g,h,i]perylene	Ave	1.361	1.390	0.5000	10.2	10.0	2.1	30.0
2-Fluorophenol (Surr)	Ave	1.470	1.573		10.7	10.0	7.0	30.0
Phenol-d5 (Surr)	Ave	1.980	1.979		10.0	10.0	-0.0	30.0
Nitrobenzene-d5 (Surr)	Ave	0.4572	0.4582		10.0	10.0	0.2	30.0
2-Fluorobiphenyl (Surr)	Ave	1.455	1.484		10.2	10.0	2.0	30.0
2,4,6-Tribromophenol (Surr)	Ave	0.1463	0.1470		10.0	10.0	0.4	30.0
Terphenyl-d14 (Surr)	Ave	0.8888	0.9124		10.3	10.0	2.7	30.0

FORM IV
GC/MS SEMI VOA METHOD BLANK SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab File ID: 0530024.D Lab Sample ID: MB 240-45149/14-A

Matrix: Water Date Extracted: 05/24/2012 08:20

Instrument ID: A4AG2 Date Analyzed: 05/30/2012 16:22

Level: (Low/Med) Low

THIS METHOD BLANK APPLIES TO THE FOLLOWING SAMPLES:

CLIENT SAMPLE ID	LAB SAMPLE ID	LAB FILE ID	DATE ANALYZED
	LCS 240-45149/15-A	0530025.D	05/30/2012 16:40
MRC-MW08B-052212	240-11568-2	0530040.D	05/30/2012 21:06

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45149/14-A

Matrix: Water | Lab File ID: 0530024.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1000(mL) | Date Analyzed: 05/30/2012 16:22

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45635 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
83-32-9	Acenaphthene	0.20	U	0.20	0.10
208-96-8	Acenaphthylene	0.20	U	0.20	0.10
98-86-2	Acetophenone	1.0	U	1.0	0.34
120-12-7	Anthracene	0.20	U	0.20	0.10
1912-24-9	Atrazine	1.0	U	1.0	0.34
100-52-7	Benzaldehyde	1.0	U	1.0	0.39
56-55-3	Benzo[a]anthracene	0.20	U	0.20	0.10
205-99-2	Benzo[b]fluoranthene	0.20	U	0.20	0.10
207-08-9	Benzo[k]fluoranthene	0.20	U	0.20	0.10
191-24-2	Benzo[g,h,i]perylene	0.20	U	0.20	0.10
50-32-8	Benzo[a]pyrene	0.20	U	0.20	0.10
85-68-7	Butyl benzyl phthalate	1.0	U	1.0	0.80
92-52-4	1,1'-Biphenyl	1.0	U	1.0	0.80
111-91-1	Bis(2-chloroethoxy)methane	1.0	U	1.0	0.32
111-44-4	Bis(2-chloroethyl)ether	1.0	U	1.0	0.10
117-81-7	Bis(2-ethylhexyl) phthalate	2.0	U	2.0	0.80
101-55-3	4-Bromophenyl phenyl ether	2.0	U	2.0	0.80
105-60-2	Caprolactam	5.0	U	5.0	0.80
86-74-8	Carbazole	1.0	U	1.0	0.28
106-47-8	4-Chloroaniline	2.0	U	2.0	0.80
59-50-7	4-Chloro-3-methylphenol	2.0	U	2.0	0.80
91-58-7	2-Chloronaphthalene	1.0	U	1.0	0.10
95-57-8	2-Chlorophenol	1.0	U	1.0	0.29
7005-72-3	4-Chlorophenyl phenyl ether	2.0	U	2.0	0.30
218-01-9	Chrysene	0.20	U	0.20	0.10
91-57-6	2-Methylnaphthalene	0.20	U	0.20	0.10
15831-10-4	3 & 4 Methylphenol	2.0	U	2.0	0.75
53-70-3	Dibenzo(a,h)anthracene	0.20	U	0.20	0.10
132-64-9	Dibenzofuran	1.0	U	1.0	0.10
91-94-1	3,3'-Dichlorobenzidine	5.0	U	5.0	0.37
120-83-2	2,4-Dichlorophenol	2.0	U	2.0	0.80
84-66-2	Diethyl phthalate	1.0	U	1.0	0.60
105-67-9	2,4-Dimethylphenol	2.0	U	2.0	0.80
131-11-3	Dimethyl phthalate	1.0	U	1.0	0.29

FORM I
GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45149/14-A

Matrix: Water | Lab File ID: 0530024.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1000(mL) | Date Analyzed: 05/30/2012 16:22

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45635 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
534-52-1	4,6-Dinitro-2-methylphenol	5.0	U	5.0	2.4
51-28-5	2,4-Dinitrophenol	5.0	U	5.0	2.4
121-14-2	2,4-Dinitrotoluene	5.0	U	5.0	0.27
84-74-2	Di-n-butyl phthalate	1.0	U	1.0	0.67
117-84-0	Di-n-octyl phthalate	1.0	U	1.0	0.80
123-91-1	1,4-Dioxane	1.0	U	1.0	0.49
206-44-0	Fluoranthene	0.20	U	0.20	0.10
86-73-7	Fluorene	0.20	U	0.20	0.10
118-74-1	Hexachlorobenzene	0.20	U	0.20	0.10
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.27
77-47-4	Hexachlorocyclopentadiene	10	U	10	0.80
67-72-1	Hexachloroethane	1.0	U	1.0	0.80
193-39-5	Indeno[1,2,3-cd]pyrene	0.20	U	0.20	0.10
78-59-1	Isophorone	1.0	U	1.0	0.27
95-48-7	2-Methylphenol	1.0	U	1.0	0.80
91-20-3	Naphthalene	0.20	U	0.20	0.10
88-74-4	2-Nitroaniline	2.0	U	2.0	0.80
99-09-2	3-Nitroaniline	2.0	U	2.0	0.28
100-01-6	4-Nitroaniline	2.0	U	2.0	0.80
98-95-3	Nitrobenzene	1.0	U	1.0	0.040
88-75-5	2-Nitrophenol	2.0	U	2.0	0.28
100-02-7	4-Nitrophenol	5.0	U	5.0	2.4
62-75-9	N-Nitrosodimethylamine	1.0	U	1.0	0.31
86-30-6	N-Nitrosodiphenylamine	1.0	U	1.0	0.31
621-64-7	N-Nitrosodi-n-propylamine	1.0	U	1.0	0.80
108-60-1	2,2'-oxybis[1-chloropropane]	1.0	U	1.0	0.40
87-86-5	Pentachlorophenol	5.0	U	5.0	2.4
85-01-8	Phenanthrene	0.20	U	0.20	0.10
108-95-2	Phenol	1.0	U	1.0	0.60
129-00-0	Pyrene	0.20	U	0.20	0.10
95-95-4	2,4,5-Trichlorophenol	5.0	U	5.0	0.30
88-06-2	2,4,6-Trichlorophenol	5.0	U	5.0	0.80
606-20-2	2,6-Dinitrotoluene	5.0	U	5.0	0.80

FORM I

GC/MS SEMI VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: | Lab Sample ID: MB 240-45149/14-A

Matrix: Water | Lab File ID: 0530024.D

Analysis Method: 8270D | Date Collected:

Extract. Method: 3520C | Date Extracted: 05/24/2012 08:20

Sample wt/vol: 1000(mL) | Date Analyzed: 05/30/2012 16:22

Con. Extract Vol.: 2(mL) | Dilution Factor: 1

Injection Volume: 1(uL) | Level: (low/med) Low

% Moisture: | GPC Cleanup:(Y/N) N

Analysis Batch No.: 45635 | Units: ug/L

CAS NO.	SURROGATE	%REC	Q	LIMITS
321-60-8	2-Fluorobiphenyl (Surr)	38		28-110
367-12-4	2-Fluorophenol (Surr)	47		10-110
118-79-6	2,4,6-Tribromophenol (Surr)	33		22-120
4165-60-0	Nitrobenzene-d5 (Surr)	42		27-111
4165-62-2	Phenol-d5 (Surr)	47		10-110
1718-51-0	Terphenyl-d14 (Surr)	68		37-119

FORM II
GC/MS SEMI VOA SURROGATE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low

GC Column (1): RXI-5SILMS ID: 0.45 (mm)

Client Sample ID	Lab Sample ID	2FP #	PHL #	NBZ #	FBP #	TBP #	TPH #
MRC-MW08B-052212	240-11568-2	48	47	41	39	53	65
	MB 240-45149/14-A	47	47	42	38	33	68
	LCS 240-45149/15-A	66	64	56	54	68	69

	QC LIMITS
2FP = 2-Fluorophenol (Surr)	10-110
PHL = Phenol-d5 (Surr)	10-110
NBZ = Nitrobenzene-d5 (Surr)	27-111
FBP = 2-Fluorobiphenyl (Surr)	28-110
TBP = 2,4,6-Tribromophenol (Surr)	22-120
TPH = Terphenyl-d14 (Surr)	37-119

Column to be used to flag recovery values

FORM II 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0530025.D

Lab ID: LCS 240-45149/15-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Acenaphthene	20.0	12.7	63	40-110	
Acenaphthylene	20.0	12.9	64	43-110	
Acetophenone	20.0	13.7	68	50-130	
Anthracene	20.0	13.2	66	54-114	
Atrazine	20.0	17.6	88	50-130	
Benzaldehyde	20.0	11.4	57	10-130	
Benzo[a]anthracene	20.0	12.6	63	55-115	
Benzo[b]fluoranthene	20.0	12.7	63	43-122	
Benzo[k]fluoranthene	20.0	12.6	63	43-124	
Benzo[g,h,i]perylene	20.0	13.4	67	45-120	
Benzo[a]pyrene	20.0	10.8	54	43-116	
Butyl benzyl phthalate	20.0	13.1	66	53-126	
1,1'-Biphenyl	20.0	13.3	67	50-130	
Bis(2-chloroethoxy)methane	20.0	11.5	57	39-110	
Bis(2-chloroethyl)ether	20.0	11.6	58	34-113	
Bis(2-ethylhexyl) phthalate	20.0	13.2	66	36-163	
4-Bromophenyl phenyl ether	20.0	11.1	55	51-114	
Caprolactam	20.0	14.7	73	50-130	
Carbazole	20.0	13.9	70	53-120	
4-Chloroaniline	20.0	11.4	57	10-110	
4-Chloro-3-methylphenol	20.0	12.6	63	39-110	
2-Chloronaphthalene	20.0	11.0	55	39-110	
2-Chlorophenol	20.0	12.9	64	27-110	
4-Chlorophenyl phenyl ether	20.0	11.1	56	50-115	
Chrysene	20.0	14.1	70	55-115	
2-Methylnaphthalene	20.0	12.5	62	35-110	
3 & 4 Methylphenol	40.0	25.8	65	32-110	
Dibenzo(a,h)anthracene	20.0	12.7	63	46-122	
Dibenzofuran	20.0	12.9	65	46-111	
3,3'-Dichlorobenzidine	20.0	7.56	38	19-110	
2,4-Dichlorophenol	20.0	12.6	63	33-110	
Diethyl phthalate	20.0	14.1	70	33-134	
2,4-Dimethylphenol	20.0	9.64	48	12-110	
Dimethyl phthalate	20.0	13.9	70	15-143	
4,6-Dinitro-2-methylphenol	20.0	4.94 J	25	28-112	*
2,4-Dinitrophenol	20.0	5.82	29	17-112	
2,4-Dinitrotoluene	20.0	11.9	60	52-123	
Di-n-butyl phthalate	20.0	14.8	74	55-122	
Di-n-octyl phthalate	20.0	12.5	63	44-128	
1,4-Dioxane	20.0	12.5	63	10-110	
Fluoranthene	20.0	13.6	68	54-122	
Fluorene	20.0	13.0	65	47-112	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM III
GC/MS SEMI VOA LAB CONTROL SAMPLE RECOVERY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Matrix: Water Level: Low Lab File ID: 0530025.D

Lab ID: LCS 240-45149/15-A Client ID:

COMPOUND	SPIKE ADDED (ug/L)	LCS CONCENTRATION (ug/L)	LCS % REC	QC LIMITS REC	#
Hexachlorobenzene	20.0	12.8	64	51-112	
Hexachlorobutadiene	20.0	9.92	50	13-110	
Hexachlorocyclopentadiene	20.0	4.36 J	22	10-110	
Hexachloroethane	20.0	10.5	52	12-110	
Indeno[1,2,3-cd]pyrene	20.0	12.6	63	46-121	
Isophorone	20.0	13.1	66	44-128	
2-Methylphenol	20.0	12.6	63	30-110	
Naphthalene	20.0	13.7	68	31-110	
2-Nitroaniline	20.0	12.8	64	43-130	
3-Nitroaniline	20.0	12.8	64	45-116	
4-Nitroaniline	20.0	12.7	63	45-120	
Nitrobenzene	20.0	11.6	58	37-115	
2-Nitrophenol	20.0	12.5	63	29-110	
4-Nitrophenol	20.0	9.08	45	12-130	
N-Nitrosodimethylamine	20.0	13.2	66	10-130	
N-Nitrosodiphenylamine	20.0	12.1	60	53-113	
N-Nitrosodi-n-propylamine	20.0	12.7	64	37-121	
2,2'-oxybis[1-chloropropane]	20.0	11.4	57	25-128	
Pentachlorophenol	20.0	11.3	57	26-110	
Phenanthrene	20.0	13.7	69	52-114	
Phenol	20.0	12.7	64	14-112	
Pyrene	20.0	13.0	65	55-120	
2,4,5-Trichlorophenol	20.0	12.8	64	39-110	
2,4,6-Trichlorophenol	20.0	12.3	62	35-110	
2,6-Dinitrotoluene	20.0	12.8	64	52-119	

Column to be used to flag recovery and RPD values

FORM III 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Sample No.: STD6 240-45635/5 Date Analyzed: 05/30/2012 10:45

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0530005.D Heated Purge: (Y/N) N

Calibration ID: 9047

		DCB		NPT		ANT	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		294405	3.51	1271693	4.40	649302	5.68
UPPER LIMIT		588810	4.01	2543386	4.90	1298604	6.18
LOWER LIMIT		147203	3.01	635847	3.90	324651	5.18
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-45635/11		217801	3.51	914982	4.40	464052	5.68
MB 240-45149/14-A		256425	3.51	1041421	4.40	582434	5.68
LCS 240-45149/15-A		202642	3.51	867421	4.40	469331	5.68
240-11568-2	MRC-MW08B-052212	322379	3.51	1393873	4.40	772780	5.68

DCB = 1,4-Dichlorobenzene-d4
NPT = Naphthalene-d8
ANT = Acenaphthene-d10

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

FORM VIII
GC/MS SEMI VOA INTERNAL STANDARD AREA AND RETENTION TIME SUMMARY

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Sample No.: STD6 240-45635/5 Date Analyzed: 05/30/2012 10:45

Instrument ID: A4AG2 GC Column: RXI-5SILMS ID: 0.45(mm)

Lab File ID (Standard): 0530005.D Heated Purge: (Y/N) N

Calibration ID: 9047

		PHN		CRY		PRY	
		AREA #	RT #	AREA #	RT #	AREA #	RT #
INITIAL CALIBRATION MID-POINT		960615	6.77	932772	8.74	689730	10.17
UPPER LIMIT		1921230	7.27	1865544	9.24	1379460	10.67
LOWER LIMIT		480308	6.27	466386	8.24	344865	9.67
LAB SAMPLE ID	CLIENT SAMPLE ID						
ICV 240-45635/11		657248	6.77	623765	8.74	481403	10.17
MB 240-45149/14-A		889587	6.77	783415	8.74	673274	10.18
LCS 240-45149/15-A		691934	6.77	670385	8.75	516805	10.18
240-11568-2	MRC-MW08B-052212	1218052	6.77	1141053	8.75	996785	10.19

PHN = Phenanthrene-d10
CRY = Chrysene-d12
PRY = Perylene-d12

Area Limit = 50%-200% of internal standard area
RT Limit = ± 0.5 minutes of internal standard RT

Column used to flag values outside QC limits

FORM VIII 8270D

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Instrument ID: I8 Method: 6020A

Start Date: 05/31/2012 06:12 End Date: 05/31/2012 08:56

Lab Sample ID	D / F	Type	Time	Analytes																			
				Ag	As	Ba	Be	Cd	Co	Cr	Cu	Mo	Ni	Pb	Sb	Se	Tl	V	Zn				
ICIS 240-45845/1			06:12	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
STD2 240-45845/2 IC	1		06:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
STD3 240-45845/3 IC	1		06:23	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
STD4 240-45845/4 IC	1		06:31	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICV 240-45845/5	1		06:36	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICB 240-45845/6	1		06:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CRI 240-45845/7			06:49																				
CRI 240-45845/8			06:56																				
CRI 240-45845/9	1		07:02	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICSA 240-45845/10	1		07:07	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
ICSAB 240-45845/11	1		07:13	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-45845/12			07:20																				
CCB 240-45845/13			07:27																				
CCV 240-45845/14	1		07:32	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-45845/15	1		07:40	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
MB 240-45614/1-A	1	R	07:45	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
LCS 240-45614/2-A	1	R	07:51	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-11568-2	1	R	07:58	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-11568-2 SD	5	R	08:04	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-11568-2 MS	1	R	08:10	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-11568-2 MSD	1	R	08:17	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
240-11568-2	1	D	08:24	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-45845/23	1		08:30	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-45845/24	1		08:37	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CRI 240-45845/25	1		08:43	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCV 240-45845/26	1		08:49	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				
CCB 240-45845/27	1		08:56	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X	X				

Prep Types

D = Dissolved

R = Total Recoverable

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 06/05/2012 09:02 End Date: 06/05/2012 18:47

Lab Sample ID	D/F	Type	Time	Analytes																				
				Hg																				
IC 240-46141/1-A			09:02	X																				
IC 240-46141/2-A			09:04	X																				
IC 240-46141/3-A			09:06	X																				
IC 240-46141/4-A			09:08	X																				
IC 240-46141/5-A			09:10	X																				
IC 240-46141/6-A			09:13	X																				
ICV 240-46141/7-A	1		09:15	X																				
ICB 240-46141/8-A	1		09:17	X																				
CRA 240-46141/9-A	1		09:19	X																				
CCVL 240-46141/10-A	1		09:20	X																				
CCB 240-46141/11-A			09:23																					
ZZZZZZ			09:25																					
ZZZZZZ			09:27																					
ZZZZZZ			09:29																					
ZZZZZZ			09:31																					
ZZZZZZ			09:33																					
ZZZZZZ			09:35																					
ZZZZZZ			09:37																					
ZZZZZZ			09:39																					
ZZZZZZ			09:41																					
ZZZZZZ			09:43																					
CCV 240-46141/12-A			09:46																					
CCB 240-46141/11-A			09:47																					
ZZZZZZ			09:50																					
ZZZZZZ			09:51																					
ZZZZZZ			09:53																					
ZZZZZZ			09:55																					
ZZZZZZ			09:57																					
ZZZZZZ			09:59																					
ZZZZZZ			10:01																					
ZZZZZZ			10:03																					
ZZZZZZ			10:05																					
ZZZZZZ			10:07																					
CCV 240-46141/12-A	1		10:09	X																				
CCB 240-46141/11-A	1		10:12	X																				
ZZZZZZ			10:13																					
ZZZZZZ			10:16																					
ZZZZZZ			10:18																					
ZZZZZZ			10:20																					
MB 240-45395/1-A	1	T	10:22	X																				
LCS 240-45395/2-A	1	T	10:24	X																				
ZZZZZZ			10:27																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 06/05/2012 09:02 End Date: 06/05/2012 18:47

Lab Sample ID	D / F	Type	Time	Analytes																				
				Hg																				
240-11595-E-1-B MS	1	T	10:29	X																				
240-11595-E-1-C MSD	1	T	10:31	X																				
ZZZZZZ			10:33																					
CCV 240-46141/12-A	1		10:36	X																				
CCB 240-46141/11-A	1		10:38	X																				
ZZZZZZ			10:40																					
ZZZZZZ			10:42																					
ZZZZZZ			10:44																					
ZZZZZZ			10:46																					
ZZZZZZ			10:48																					
240-11568-2	1	T	10:50	X																				
240-11568-2	1	D	10:52	X																				
ZZZZZZ			10:53																					
ZZZZZZ			10:55																					
ZZZZZZ			10:58																					
CCV 240-46141/12-A	1		11:00	X																				
CCB 240-46141/11-A	1		11:02	X																				
ZZZZZZ			11:04																					
ZZZZZZ			11:06																					
ZZZZZZ			11:08																					
ZZZZZZ			11:10																					
ZZZZZZ			11:12																					
ZZZZZZ			11:14																					
ZZZZZZ			11:16																					
ZZZZZZ			11:18																					
CCV 240-46141/12-A			11:20																					
CCB 240-46141/11-A			11:22																					
CCV 240-46141/12-A			16:54																					
CCV 240-46141/12-A			16:57																					
CCB 240-46141/11-A			16:59																					
ZZZZZZ			17:01																					
ZZZZZZ			17:04																					
ZZZZZZ			17:06																					
ZZZZZZ			17:08																					
ZZZZZZ			17:10																					
ZZZZZZ			17:12																					
CCV 240-46141/12-A			17:19																					
CCV 240-46141/12-A			17:21																					
CCB 240-46141/11-A			17:23																					
ZZZZZZ			17:25																					
ZZZZZZ			17:27																					
ZZZZZZ			17:29																					

13-IN
ANALYSIS RUN LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Instrument ID: H4 Method: 7470A

Start Date: 06/05/2012 09:02 End Date: 06/05/2012 18:47

Lab Sample ID	D / F	Type	Time	Analytes
				Hg
ZZZZZZ			17:31	
ZZZZZZ			17:33	
ZZZZZZ			17:35	
ZZZZZZ			17:37	
ZZZZZZ			17:39	
ZZZZZZ			17:42	
ZZZZZZ			17:44	
CCV 240-46141/12-A			17:45	
CCB 240-46141/11-A			17:47	
ZZZZZZ			17:49	
ZZZZZZ			17:52	
ZZZZZZ			17:53	
ZZZZZZ			17:55	
ZZZZZZ			17:57	
ZZZZZZ			17:59	
ZZZZZZ			18:01	
ZZZZZZ			18:03	
ZZZZZZ			18:05	
ZZZZZZ			18:07	
CCV 240-46141/12-A			18:09	
CCB 240-46141/11-A			18:11	
ZZZZZZ			18:14	
ZZZZZZ			18:15	
ZZZZZZ			18:18	
ZZZZZZ			18:20	
ZZZZZZ			18:22	
ZZZZZZ			18:24	
ZZZZZZ			18:26	
ZZZZZZ			18:28	
ZZZZZZ			18:30	
ZZZZZZ			18:32	
CCV 240-46141/12-A			18:34	
CCB 240-46141/11-A			18:37	
ZZZZZZ			18:39	
ZZZZZZ			18:40	
ZZZZZZ			18:42	
CCV 240-46141/12-A			18:45	
CCB 240-46141/11-A			18:47	

Prep Types

D = Dissolved

T = Total/NA

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	ICV 240-45845/5 05/31/2012 06:36				CCV 240-45845/14 05/31/2012 07:32				CCV 240-45845/23 05/31/2012 08:30			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	84.5		80.0	106	101		100	101	99.1		100	99
Arsenic	81.4		80.0	102	102		100	102	102		100	102
Barium	82.5		80.0	103	101		100	101	100		100	100
Beryllium	82.7		80.0	103	105		100	105	104		100	104
Cadmium	82.3		80.0	103	103		100	103	101		100	101
Chromium	81.4		80.0	102	101		100	101	102		100	102
Cobalt	81.8		80.0	102	102		100	102	102		100	102
Copper	83.2		80.0	104	103		100	103	104		100	104
Lead	82.9		80.0	104	103		100	103	103		100	103
Molybdenum	83.6		80.0	105	104		100	104	102		100	102
Nickel	84.2		80.0	105	104		100	104	103		100	103
Selenium	81.6		80.0	102	102		100	102	102		100	102
Silver	84.1		80.0	105	103		100	103	101		100	101
Thallium	83.4		80.0	104	105		100	105	106		100	106
Vanadium	80.1		80.0	100	99.8		100	100	101		100	101
Zinc	83.9		80.0	105	103		100	103	102		100	102

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

ICV Source: MTMSICVW_00014 Concentration Units: ug/L

CCV Source: MTMSCAL2CCVW_00041

Analyte	CCV 240-45845/26 05/31/2012 08:49											
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Antimony	98.0		100	98								
Arsenic	102		100	102								
Barium	99.4		100	99								
Beryllium	105		100	105								
Cadmium	99.5		100	100								
Chromium	101		100	101								
Cobalt	102		100	102								
Copper	104		100	104								
Lead	102		100	102								
Molybdenum	101		100	101								
Nickel	103		100	103								
Selenium	103		100	103								
Silver	99.5		100	100								
Thallium	106		100	106								
Vanadium	100		100	100								
Zinc	102		100	102								

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

ICV Source: MTHGICVW_00311 Concentration Units: ug/L

CCV Source: MTHGCALW_00202

Analyte	ICV 240-46141/7-A 06/05/2012 09:15				CCVL 240-46141/10-A 06/05/2012 09:20				CCV 240-46141/12-A 06/05/2012 10:09			
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	2.29		2.50	92	4.93		5.00	99	5.05		5.00	101

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2A-IN
CALIBRATION VERIFICATIONS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

ICV Source: MTHGICVW_00311 Concentration Units: ug/L

CCV Source: MTHGCALW_00202

Analyte	CCV 240-46141/12-A 06/05/2012 10:36				CCV 240-46141/12-A 06/05/2012 11:00							
	Found	C	True	%R	Found	C	True	%R	Found	C	True	%R
Mercury	5.06		5.00	101	4.94		5.00	99				

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.
Italicized analytes were not requested for this sequence.

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Method: 6020A Instrument ID: I8

Lab Sample ID: CRI 240-45845/9 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00002

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	5.00	4.88	J	98	70-130
Barium	5.00	4.78	J	96	70-130
Beryllium	1.00	0.996	J	100	70-130
Cadmium	1.00	0.977	J	98	70-130
Cobalt	1.00	0.992	J	99	70-130
Chromium	2.00	1.69	J	85	70-130
Copper	2.00	2.02		101	70-130
Molybdenum	10.0	10.1		101	70-130
Nickel	2.00	2.12		106	70-130
Lead	1.00	1.01		101	70-130
Antimony	2.00	2.07		104	70-130
Selenium	5.00	4.82	J	96	70-130
Vanadium	5.00	4.56	J	91	70-130
Zinc	20.0	22.1		110	70-130
Silver	1.00	1.01		101	70-130
Thallium	2.00	2.03		102	70-130

Lab Sample ID: CRI 240-45845/25 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00002

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Arsenic	5.00	4.83	J	97	70-130
Barium	5.00	4.80	J	96	70-130
Beryllium	1.00	1.09		109	70-130
Cadmium	1.00	1.04		104	70-130
Cobalt	1.00	1.05		105	70-130
Chromium	2.00	1.46	J	73	70-130
Copper	2.00	2.07		104	70-130
Molybdenum	10.0	10.0		100	70-130
Nickel	2.00	2.25		113	70-130
Lead	1.00	1.09		109	70-130
Antimony	2.00	2.02		101	70-130
Selenium	5.00	4.74	J	95	70-130
Vanadium	5.00	4.87	J	97	70-130
Zinc	20.0	22.3		112	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Method: 6020A Instrument ID: I8

Lab Sample ID: CRI 240-45845/25 Concentration Units: ug/L

CRQL Check Standard Source: MTMSCRI6020AW_00002

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Silver	1.00	1.01		101	70-130
Thallium	2.00	2.20		110	70-130

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

2B-IN
CRQL CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Method: 7470A Instrument ID: H4

Lab Sample ID: CRA 240-46141/9-A Concentration Units: ug/L

CRQL Check Standard Source: MTHGCALW_00202

Analyte	CRQL Check Standard				
	True	Found	Qualifiers	%R(1)	Limits
Mercury	0.200	0.121	J	61	50-150

Note! Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IIB-IN

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-45845/6 05/31/2012 06:43		CCB 240-45845/15 05/31/2012 07:40		CCB 240-45845/24 05/31/2012 08:37		CCB 240-45845/27 05/31/2012 08:56	
		Found	C	Found	C	Found	C	Found	C
Antimony	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Arsenic	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Barium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Beryllium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Cadmium	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Chromium	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Cobalt	1.0	1.0	U	1.0	U	1.0	U	0.0780	J
Copper	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Lead	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Molybdenum	10	0.370	J	0.748	J	0.354	J	0.355	J
Nickel	2.0	2.0	U	2.0	U	2.0	U	2.0	U
Selenium	5.0	5.0	U	5.0	U	5.0	U	5.0	U
Silver	1.0	1.0	U	1.0	U	1.0	U	1.0	U
Thallium	2.0	0.294	J	0.343	J	0.414	J	0.389	J
Vanadium	20	20	U	20	U	20	U	20	U
Zinc	20	20	U	20	U	20	U	20	U

Italicized analytes were not requested for this sequence.

3-IN
INSTRUMENT BLANKS
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Concentration Units: ug/L

Analyte	RL	ICB 240-46141/8-A 06/05/2012 09:17		CCB 240-46141/11-A 06/05/2012 10:12		CCB 240-46141/11-A 06/05/2012 10:38		CCB 240-46141/11-A 06/05/2012 11:02	
		Found	C	Found	C	Found	C	Found	C
Mercury	0.20	0.20	U	0.171	J	0.20	U	0.20	U

Italicized analytes were not requested for this sequence.

3-IN
METHOD BLANK
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-45614/1-A

Instrument Code: I8 Batch No.: 45845

CAS No.	Analyte	Concentration	C	Q	Method
7440-38-2	Arsenic	5.0	U		6020A
7440-39-3	Barium	0.728	J		6020A
7440-41-7	Beryllium	1.0	U		6020A
7440-43-9	Cadmium	1.0	U		6020A
7440-48-4	Cobalt	1.0	U		6020A
7440-47-3	Chromium	2.0	U		6020A
7440-50-8	Copper	0.421	J		6020A
7439-98-7	Molybdenum	0.343	J		6020A
7440-02-0	Nickel	2.0	U		6020A
7439-92-1	Lead	1.0	U		6020A
7440-36-0	Antimony	2.0	U		6020A
7782-49-2	Selenium	5.0	U		6020A
7440-62-2	Vanadium	20	U		6020A
7440-66-6	Zinc	11.3	J		6020A
7440-22-4	Silver	1.0	U		6020A
7440-28-0	Thallium	0.191	J		6020A

3-IN
METHOD BLANK
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Concentration Units: ug/L Lab Sample ID: MB 240-45395/1-A

Instrument Code: H4 Batch No.: 46407

CAS No.	Analyte	Concentration	C	Q	Method
7439-97-6	Mercury	0.147	J		7470A

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICSA 240-45845/10 Instrument ID: I8

Lab File ID: I8053112A.csv ICS Source: MTMSICSAW_00014

Concentration Units: ug/L

Analyte	True Solution A	Found Solution A	Percent Recovery
Antimony		**0.134**	
Arsenic		**1.08**	
Barium		**0.159**	
Beryllium		**0.0040**	
Cadmium		**0.222**	
Chromium		**0.212**	
Cobalt		**0.102**	
Copper		**0.546**	
Lead		**0.0040**	
Molybdenum	**1000**	**1011**	**101**
Nickel		**0.486**	
Selenium		**0.0110**	
Silver		**-0.0940**	
Thallium		**0.0750**	
Vanadium		**-0.162**	
Zinc		**-0.289**	
Aluminum	*50000*	*48680*	*97*
Boron		*-0.0360*	
Calcium	*50000*	*51850*	*104*
Iron	*50000*	*50450*	*101*
Magnesium	*50000*	*51380*	*103*
Manganese		*0.237*	
Potassium	*50000*	*51770*	*104*
Sodium	*50000*	*50890*	*102*
Strontium		*0.322*	
Tin		*-2.02*	
Titanium	*1000*	*1054*	*105*
Tungsten		*0.211*	

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

4A-IN
INTERFERENCE CHECK STANDARD
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Lab Sample ID: ICSAB 240-45845/11 Instrument ID: I8

Lab File ID: I8053112A.csv ICS Source: MTMSICSABW_00014

Concentration Units: ug/L

Analyte	True Solution AB	Found Solution AB	Percent Recovery
Antimony	**100**	**103**	**103**
Arsenic	**100**	**99.5**	**99**
Barium	**100**	**103**	**103**
Beryllium	**100**	**102**	**102**
Cadmium	**100**	**101**	**101**
Chromium	**100**	**107**	**107**
Cobalt	**100**	**100**	**100**
Copper	**100**	**102**	**102**
Lead	**100**	**108**	**108**
Molybdenum	**1100**	**1129**	**103**
Nickel	**100**	**106**	**106**
Selenium	**100**	**99.5**	**99**
Silver	**100**	**102**	**102**
Thallium	**100**	**107**	**107**
Vanadium	**100**	**100**	**100**
Zinc	**100**	**102**	**102**
Aluminum	*50000*	*49360*	*99*
Boron	*100*	*100*	*100*
Calcium	*50000*	*53160*	*106*
Iron	*50000*	*51800*	*104*
Magnesium	*50000*	*52680*	*105*
Manganese	*100*	*112*	*112*
Potassium	*50000*	*52950*	*106*
Sodium	*50000*	*52450*	*105*
Strontium	*100*	*97.3*	*97*
Tin	*100*	*101*	*101*
Titanium	*1100*	*1183*	*108*
Tungsten	*100*	*103*	*103*

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM IVA-IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW08B-052212 MS | Lab ID: 240-11568-2 MS

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Arsenic	930		0.85	J	1000	93	82-123		6020A
Barium	956		18		1000	94	45-144		6020A
Beryllium	991		0.56	J	1000	99	77-124		6020A
Cadmium	944		1.0	U	1000	94	78-117		6020A
Cobalt	961		16		1000	95	67-114		6020A
Chromium	955		1.2	J	1000	95	72-110		6020A
Copper	980		4.8		1000	98	60-123		6020A
Molybdenum	92.8		0.42	J	100	92	80-110		6020A
Nickel	1000		25		1000	98	72-111		6020A
Lead	915		0.22	J	1000	91	73-115		6020A
Antimony	94.3		0.18	J	100	94	44-153		6020A
Selenium	946		5.0	U	1000	95	72-148		6020A
Vanadium	935		2.8	J	1000	93	70-112		6020A
Zinc	1030		49		1000	98	49-156		6020A
Silver	97.8		1.0	U	100	98	10-139		6020A
Thallium	225		0.45	J	250	90	69-117		6020A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-11595-E-1-B MS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	SSR	C	Sample Result (SR)	C	Spike Added (SA)	%R	Control Limit %R	Q	Method
Mercury	0.973		0.20	U	1.00	97	69-134		7470A

SSR = Spiked Sample Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VA - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS - TOTAL RECOVERABLE

Client ID: MRC-MW08B-052212 MSD | Lab ID: 240-11568-2 MSD

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Matrix: Water | Concentration Units: ug/L

% Solids:

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Arsenic	919		1000	92	82-123	1	20		6020A
Barium	945		1000	93	45-144	1	20		6020A
Beryllium	970		1000	97	77-124	2	20		6020A
Cadmium	935		1000	94	78-117	1	20		6020A
Cobalt	950		1000	93	67-114	1	20		6020A
Chromium	946		1000	94	72-110	1	20		6020A
Copper	963		1000	96	60-123	2	20		6020A
Molybdenum	92.0		100	92	80-110	1	20		6020A
Nickel	986		1000	96	72-111	2	20		6020A
Lead	899		1000	90	73-115	2	20		6020A
Antimony	94.7		100	94	44-153	0	20		6020A
Selenium	936		1000	94	72-148	1	20		6020A
Vanadium	924		1000	92	70-112	1	20		6020A
Zinc	1010		1000	96	49-156	2	20		6020A
Silver	96.4		100	96	10-139	1	20		6020A
Thallium	222		250	89	69-117	1	20		6020A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

5A-IN
MATRIX SPIKE DUPLICATE SAMPLE RECOVERY
METALS

Client ID: _____ Lab ID: 240-11595-E-1-C MSD

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.: _____

Matrix: Water Concentration Units: ug/L

% Solids: _____

Analyte	(SDR) C		Spike Added (SA)	%R	Control Limit %R	RPD	RPD Limit	Q	Method
Mercury	0.814		1.00	81	69-134	18	20		7470A

SDR = Sample Duplicate Result

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VD - IN

7A-IN
LAB CONTROL SAMPLE
METALS - TOTAL RECOVERABLE

Lab ID: LCS 240-45614/2-A

Lab Name: TestAmerica Canton Job No.: 240-11568-1

Sample Matrix: Water LCS Source: MTICPMSA_00008

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Arsenic	1000	929		93	80	120		6020A
Barium	1000	920		92	80	120		6020A
Beryllium	1000	971		97	80	120		6020A
Cadmium	1000	936		94	80	120		6020A
Cobalt	1000	941		94	80	120		6020A
Chromium	1000	945		94	80	120		6020A
Copper	1000	972		97	80	120		6020A
Molybdenum	100	92.4		92	80	120		6020A
Nickel	1000	971		97	80	120		6020A
Lead	1000	903		90	80	120		6020A
Antimony	100	92.6		93	80	120		6020A
Selenium	1000	951		95	80	120		6020A
Vanadium	1000	919		92	80	120		6020A
Zinc	1000	986		99	80	120		6020A
Silver	100	96.8		97	80	120		6020A
Thallium	250	218		87	80	120		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

7A-IN
LAB CONTROL SAMPLE
METALS

Lab ID: LCS 240-45395/2-A

Lab Name: TestAmerica Canton Job No.: 240-11568-1

Sample Matrix: Water LCS Source: MTHGICVW_00307

Analyte	Water(ug/L)							
	True	Found	C	%R	Limits		Q	Method
Mercury	5.00	4.32		86	81	123		7470A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIIA - IN

8-IN
ICP-AES AND ICP-MS SERIAL DILUTIONS
METALS - TOTAL RECOVERABLE

Lab ID: 240-11568-2

SDG No:

Lab Name: TestAmerica Canton Job No: 240-11568-1

Matrix: Water Concentration Units: ug/L

Analyte	Initial Sample Result (I)	C	Serial Dilution Result (S)	C	% Difference	Q	Method
Arsenic	0.85	J	25	U	NC		6020A
Barium	18		17.6	J	NC		6020A
Beryllium	0.56	J	5.0	U	NC		6020A
Cadmium	1.0	U	5.0	U	NC		6020A
Cobalt	16		15.2		NC		6020A
Chromium	1.2	J	10	U	NC		6020A
Copper	4.8		4.75	J	NC		6020A
Molybdenum	0.42	J	0.830	J	NC		6020A
Nickel	25		25.3		NC		6020A
Lead	0.22	J	5.0	U	NC		6020A
Antimony	0.18	J	10	U	NC		6020A
Selenium	5.0	U	25	U	NC		6020A
Vanadium	2.8	J	4.58	J	NC		6020A
Zinc	49		47.0	J	NC		6020A
Silver	1.0	U	5.0	U	NC		6020A
Thallium	0.45	J	1.18	J	NC		6020A

Calculations are performed before rounding to avoid round-off errors in calculated results.

FORM VIII-IN

9-IN
DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020A MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - TOTAL RECOVERABLE

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020A XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020A MDL Date: 02/09/2010 15:53

Prep Method: 3005A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: I8

Method: 6020A XMDL Date: 02/09/2010 15:53

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Antimony	121.00	2	0.13
Arsenic	75.00	5	0.4
Barium	137.00	5	0.19
Beryllium	9.00	1	0.2
Cadmium	111.00	1	0.13
Chromium	52.00	2	0.71
Cobalt	59.00	1	0.058
Copper	65.00	2	0.29
Lead	208.00	1	0.18
Molybdenum	95.00	10	0.093
Nickel	60.00	2	0.2
Selenium	78.00	5	0.57
Silver	107.00	1	0.08
Thallium	205.00	2	0.14
Vanadium	51.00	20	0.44
Zinc	66.00	20	2.3

9-IN
DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A MDL Date: 02/08/2010 16:06

Prep Method: 7470A

Analyte	Wavelength/ Mass	RL (ug/L)	MDL (ug/L)
Mercury	253.7	0.2	0.12

9-IN
CALIBRATION BLANK DETECTION LIMITS
METALS - DISSOLVED

Lab Name: TestAmerica Canton Job Number: 240-11568-1

SDG Number:

Matrix: Water Instrument ID: H4

Method: 7470A XMDL Date: 02/08/2010 16:06

Analyte	Wavelength/ Mass	XRL (ug/L)	XMDL (ug/L)
Mercury	253.7	0.2	0.12

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-11568-1

SDG No.:

Instrument ID: I8 Date: 05/03/2012 17:05

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Arsenic		10000	6020A
Barium		10000	6020A
Beryllium		10000	6020A
Cadmium		10000	6020A
Cobalt		10000	6020A
Chromium		10000	6020A
Copper		10000	6020A
Molybdenum		1500	6020A
Nickel		10000	6020A
Lead		10000	6020A
Antimony		1000	6020A
Selenium		10000	6020A
Vanadium		5000	6020A
Zinc		10000	6020A
Silver		1000	6020A
Thallium		10000	6020A

11-IN
LINEAR RANGES
METALS

Lab Name: TestAmerica Canton Job No: 240-11568-1

SDG No.:

Instrument ID: H4 Date: 04/01/2011 10:50

Analyte	Integ. Time (Sec.)	Concentration (ppb)	Method
Mercury		10	7470A

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Prep Method: 3005A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-45614/1-A	05/30/2012 07:39	45614		50	50
LCS 240-45614/2-A	05/30/2012 07:39	45614		50	50
240-11568-2	05/30/2012 07:39	45614		50	50
240-11568-2 MS	05/30/2012 07:39	45614		50	50
240-11568-2 MSD	05/30/2012 07:39	45614		50	50
240-11568-2	05/30/2012 07:39	45614		50	50

12-IN
PREPARATION LOG
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

Prep Method: 7470A

Lab Sample ID	Preparation Date	Prep Batch	Initial Weight	Initial Volume (mL)	Final Volume (mL)
MB 240-45395/1-A	05/29/2012 13:50	45395		100	100
LCS 240-45395/2-A	05/29/2012 13:50	45395		100	100
240-11595-E-1-B MS	05/29/2012 13:50	45395		100	100
240-11595-E-1-C MSD	05/29/2012 13:50	45395		100	100
240-11568-2	05/29/2012 13:50	45395		100	100
240-11568-2	05/29/2012 13:50	45395		100	100

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/31/2012 End Date: 05/31/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Li	Q	Element Sc	Q	Element Sc	Q	Element Ge	Q	Element In	Q
STD2 240-45845/2 IC	06:17	96		97		100		98		98	
STD3 240-45845/3 IC	06:23	90		96		100		97		99	
STD4 240-45845/4 IC	06:31	100		103		105		106		107	
ICV 240-45845/5	06:36	99		103		106		104		104	
ICB 240-45845/6	06:43	103		104		104		105		107	
CRI 240-45845/9	07:02	103		104		105		104		105	
ICSA 240-45845/10	07:07	92		95		99		100		103	
ICSAB 240-45845/11	07:13	92		98		104		105		108	
CCV 240-45845/14	07:32	97		105		113		110		111	
CCB 240-45845/15	07:40	103		106		112		112		114	
MB 240-45614/1-A	07:45	103		106		111		112		114	
LCS 240-45614/2-A	07:51	98		105		109		109		113	
240-11568-2	07:58	114		116		122		123		121	
240-11568-2 SD	08:04	112		115		118		118		119	
240-11568-2 MS	08:10	103		107		113		113		114	
240-11568-2 MSD	08:17	104		106		111		111		112	
240-11568-2	08:24	118		118		123		122		122	
CCV 240-45845/23	08:30	98		103		106		103		107	
CCB 240-45845/24	08:37	103		104		105		105		108	
CRI 240-45845/25	08:43	104		105		106		106		109	
CCV 240-45845/26	08:49	99		103		107		104		108	
CCB 240-45845/27	08:56	104		104		107		107		109	

15-IN
ICP-MS INTERNAL STANDARDS RELATIVE INTENSITY SUMMARY
METALS

Lab Name: TestAmerica Canton Job No.: 240-11568-1

SDG No.:

ICP-MS Instrument ID: I8 Start Date: 05/31/2012 End Date: 05/31/2012

Lab Sample ID	Time	Internal Standards %RI For:									
		Element Tb	Q	Element Ho	Q	Element Bi	Q	Element	Q	Element	Q
STD2 240-45845/2 IC	06:17			99		94					
STD3 240-45845/3 IC	06:23			99		92					
STD4 240-45845/4 IC	06:31			106		107					
ICV 240-45845/5	06:36			105		100					
ICB 240-45845/6	06:43			105		107					
CRI 240-45845/9	07:02			102		104					
ICSA 240-45845/10	07:07			101		100					
ICSAB 240-45845/11	07:13			107		106					
CCV 240-45845/14	07:32			109		105					
CCB 240-45845/15	07:40			109		114					
MB 240-45614/1-A	07:45			107		115					
LCS 240-45614/2-A	07:51			109		113					
240-11568-2	07:58			116		118					
240-11568-2 SD	08:04			111		118					
240-11568-2 MS	08:10			109		113					
240-11568-2 MSD	08:17			109		110					
240-11568-2	08:24			112		118					
CCV 240-45845/23	08:30			104		103					
CCB 240-45845/24	08:37			104		109					
CRI 240-45845/25	08:43			103		110					
CCV 240-45845/26	08:49			101		103					
CCB 240-45845/27	08:56			103		110					

MTMSCCBDILH20-50

TestAmerica ICP/MS Data Review Checklist

Run Date: 5-31-12 Analyst: Kam Instrument: I8

Review Items

A. Tune/Daily performance	Yes	No	N/A	2nd Level
1. Resolution </= 0.9 AMU full width at 10% peak height, and within +/- 0.1 AMU of true mass?	✓			✓
2. Performance check within recommended specifications? (Be>8000cps) (In >300,000 cps) (Pb >100,000 cps) (Co>100000) (Mg>10000) (CeO/Ce<0.03) (Ba++/Ba<0.03) (Background < 30cps @ Mass 220) CCT Performance Check (In > 75000) (Se< 20 cps)	✓			✓
B. Calibration/Instrument Run QC				
1. Instrument calibrated per manufacturer's instructions and at SOP specified levels? Correlation coefficient > 0.995?	✓			✓
1. ICV/CCV analyzed at appropriate frequency and within control limits? (*ICV:* = 90 – 110%) (*CCV:* 90 – 110%, 200.8 = 85 -115%)	✓			✓
2. ICB/CCB analyzed at appropriate frequency and within +/- RL?	✓			✓
3. CRI run and recovered within QC limits (+/-50%) or project limits?	✓			✓
4. ICSA/ICSAB run at required frequency and within SOP control limits?	✓			✓
C. Sample Results				
1. Were samples with concentrations > the linear range for any parameter diluted and reanalyzed?	✓			✓
2. All reported results bracketed by in control QC?	✓			✓
3. Were the internal standards within acceptance criteria for all results reported?	✓			✓
4. Sample analyses done within holding time?	✓			✓
D. Preparation/Matrix QC				
1. LCS done per prep batch and within QC limits?	✓			✓
2. Method blank done per prep batch and < RL?	✓			✓
3. MS run at required frequency and within limits?	✓			✓
4. MSD or DU run at required frequency and RPD within SOP limits?	✓			✓
5. Serial dilution done per prep batch?	✓			✓
6. Post digest spike analyzed if required?	✓			✓
E. Other				
1. Are all nonconformance's documented appropriately?	✓			✓
2. Current IDL/LR data on file?	✓			✓
3. Calculations checked for error?	✓			✓
4. Transcriptions checked for error?	✓			✓
5. All client/project specific requirements met?	✓			✓
6. Date/time of analysis verified as correct?	✓			✓

Level I Analyst: Karen K Lewis Date: 5-31-12 Time: 6:12 - 8:56
Level I Analyst: Date: Time:
Level II Reviewer: Natalie J Munson 5-31-12 Time: 06:12 - 08:56
Level II Reviewer: Date: Time:

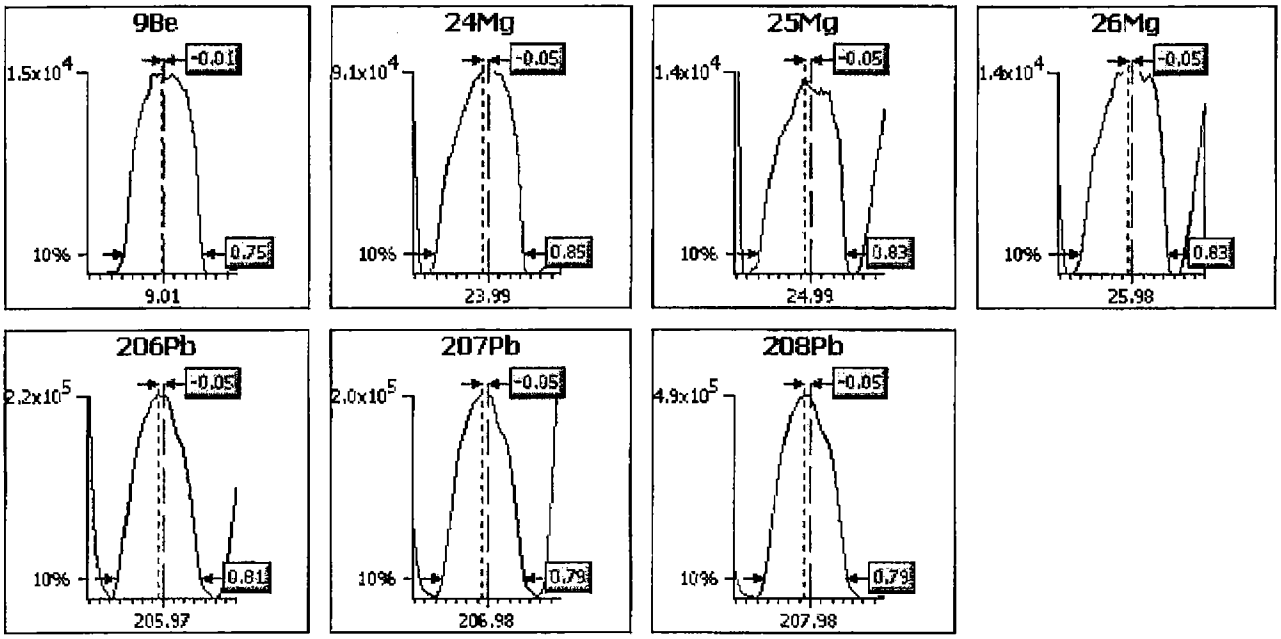
Comments: Ho only was used for Pb

Performance Report

Sample details
Acquired at : 5/31/2012 05:52:39
Report name : STD MODE PERF REPORT [8/11/2009 07:18:25]

Mass Calibration verification

Acquisition parameters
Sweeps : 10
Dwell : 5.0 mSecs
Point spacing : 0.02 amu
Peak width measured at 10% of the peak maximum



Analyte	Limits			Results	
	Max. width	Min. width	Max. error	Peak width	Peak error
9Be	0.85	0.65	0.10	0.75	-0.01
24Mg	0.85	0.65	0.10	0.85	-0.05
25Mg	0.85	0.65	0.10	0.83	-0.05
26Mg	0.85	0.65	0.10	0.83	-0.05
206Pb	0.85	0.65	0.10	0.81	-0.05
207Pb	0.85	0.65	0.10	0.79	-0.05
208Pb	0.85	0.65	0.10	0.79	-0.05

Sample details
Acquired at : 5/31/2012 05:52:39
Report name : STD MODE PERF REPORT [8/11/2009 07:18:25]

Tune conditions

Major	
Extraction	-70.6
Lens 1	-1153
Lens 2	-80.0
Focus	11.4
D1	-42.4
D2	-140
Pole Bias	-2.0
Hexapole Bias	-6.0
Nebuliser	0.79

Minor	
Lens 3	-195.3
Forward power	1349
Horizontal	60
Vertical	531
DA	-46.3
Cool	13.0
Auxiliary	0.90
Sampling Depth	130

Global	
Standard resolution	115
High resolution	115
Analogue Detector	2050
PC Detector	3325

Add. Gases	
He_H2	0.00
He-Not In Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	5Bkg	9Be	24Mg	25Mg	26Mg	59Co	137Ba++	101Bkg	115In
Dwell (mSecs)		100.0	10.0	10.0	10.0	10.0	10.0	30.0	100.0	10.0
Limits	%RSD	-	5.0%	-	5.0%	-	5.0%	-	-	5.0%
	Countrate	-	>8000	>10000	>10000	>10000	>100000	-	-	>300000
1	05:53:13	0.000	14522.991	89271.778	12801.581	15260.316	129554.92	713.349	0.333	418464.92
2	05:53:31	0.000	15073.480	90572.099	12831.604	15126.862	130653.44	706.682	0.333	422009.29
3	05:53:49	0.000	14229.405	88209.478	12107.730	15360.408	130371.25	704.459	0.000	417969.38
4	05:54:07	0.000	14586.380	89499.662	13025.088	14923.345	132010.74	665.569	0.333	417778.01
5	05:54:24	0.000	14162.682	88189.372	12654.802	14839.937	130226.79	658.902	0.333	425773.23
x̄		0.000	14514.988	89148.478	12684.161	15102.174	130563.43	689.792	0.267	420398.97
σ		0.00	361.51	995.85	348.17	219.69	904.18	25.48	0.15	3463.69
%RSD		0.000	2.491	1.117	2.745	1.455	0.693	3.693	55.902	0.824

Run	Time	137Ba	140Ce	156Ce O	206Pb	207Pb	208Pb	220Bkg
Dwell (mSecs)		10.0	10.0	30.0	10.0	10.0	10.0	100.0
Limits	%RSD	-	-	-	-	-	5.0%	-
	Countrate	-	-	-	>100000	>100000	>100000	<30
1	05:53:13	52074.559	421968.27	12361.249	218918.38	201436.66	478532.58	0.000
2	05:53:31	52017.715	415960.04	12138.863	220154.50	199901.67	478151.88	0.000
3	05:53:49	52890.456	420385.69	12601.429	219046.71	202442.06	480950.71	0.000
4	05:54:07	52168.185	415768.69	11739.689	218006.54	200529.14	477315.07	0.333
5	05:54:24	51900.685	422686.12	12294.533	218712.37	200886.75	478992.17	0.000
x̄		52210.320	419353.76	12227.153	218967.70	201039.26	478788.48	0.067
σ		392.35	3293.00	319.38	775.60	962.21	1356.32	0.15
%RSD		0.751	0.785	2.612	0.354	0.479	0.283	223.607

Ratio results

Run	Time	137Ba++/137Ba	156Ce O/140Ce
Ratio limits		<0.0300	<0.0300
1	05:53:13	0.014	0.029
2	05:53:31	0.014	0.029
3	05:53:49	0.013	0.030
4	05:54:07	0.013	0.028
5	05:54:24	0.013	0.029
x̄		0.0132	0.0292
σ		0.00	0.00
%RSD		3.5108	2.1303

Result : The performance report passed.

Performance Report

Sample details
Acquired at : 5/31/2012 06:02:19
Report name : CCT MODE PERF REPORT [5/20/2011 11:37:05]

Tune conditions

Major	
Extraction	-70.6
Lens 1	-1153
Lens 2	-80.0
Focus	-1.0
D1	-52.5
D2	-140
Pole Bias	-14.0
Hexapole Bias	-17.0
Nebuliser	0.79

Mirror	
Lens 3	-195.3
Forward power	1349
Horizontal	60
Vertical	531
DA	-46.3
Cool	13.0
Auxiliary	0.90
Sampling Depth	130

Global	
Standard resolution	115
High resolution	115
Analogue Detector	2050
PC Detector	3325

Add. Gases	
He_H2	2.59
He-Not In Use	0.00

Sensitivity and stability results

Acquisition parameters
Sweeps : 30

Run	Time	78Se	115In
	Dwell (mSecs)	100.0	10.0
Limits	%RSD	-	5.0%
	Countrate	<20	>75000
1	06:02:20	17.333	198002.54
2	06:02:25	16.667	198137.46
3	06:02:30	14.000	200097.33
4	06:02:35	17.000	198309.49
5	06:02:40	13.333	197459.49
X		15.667	198401.26
S		1.86	1000.07
%RSD		11.846	0.504

Result : The performance report passed.

TETRA TECH NUS, INC. **CALCULATION WORKSHEET** PAGE 1 OF 1

CLIENT	JOB NUMBER		
MRC- Groundwater	SDG 240-11568-1		
SUBJECT	Sample Calculation		
BASED ON	DRAWING NUMBER		
BY	CHECKED BY	APPROVED BY	DATE
Ann Cognetti			June 27, 2012

I. VOC; Sample MRC-MW08B-052212; dichloroethene

$$\frac{35849}{959689} * \frac{10\ ug/L}{0.3444} = 1.1\ ug/L$$

II. Metals - See attached

Sample Calculation

FORM I

GC/MS VOA ORGANICS ANALYSIS DATA SHEET

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG No.:

Client Sample ID: MRC-MW08B-052212 | Lab Sample ID: 240-11568-2

Matrix: Water | Lab File ID: UXC4192.D

Analysis Method: 8260B | Date Collected: 05/22/2012 10:15

Sample wt/vol: 5(mL) | Date Analyzed: 05/31/2012 18:32

Soil Aliquot Vol: | Dilution Factor: 1

Soil Extract Vol.: | GC Column: DB-624 ID: 0.18(mm)

% Moisture: | Level: (low/med) Low

Analysis Batch No.: 45839 | Units: ug/L

CAS NO.	COMPOUND NAME	RESULT	Q	RL	MDL
637-92-3	Ethyl-t-butyl ether (ETBE)	5.0	U	5.0	0.11
87-68-3	Hexachlorobutadiene	1.0	U	1.0	0.30
591-78-6	2-Hexanone	5.0	U	5.0	0.41
98-82-8	Isopropylbenzene	1.0	U	1.0	0.13
75-09-2	Methylene Chloride	1.0	U	1.0	0.33
108-10-1	4-Methyl-2-pentanone	5.0	U	5.0	0.32
1634-04-4	Methyl tert-butyl ether	5.0	U	5.0	0.17
179601-23-1	m-Xylene & p-Xylene	2.0	U	2.0	0.24
91-20-3	Naphthalene	1.0	U	1.0	0.24
104-51-8	n-Butylbenzene	1.0	U	1.0	0.12
103-65-1	n-Propylbenzene	1.0	U	1.0	0.14
95-47-6	o-Xylene	1.0	U	1.0	0.14
99-87-6	p-Isopropyltoluene	1.0	U	1.0	0.12
135-98-8	sec-Butylbenzene	1.0	U	1.0	0.13
100-42-5	Styrene	1.0	U	1.0	0.11
994-05-8	Tert-amyl-methyl ether (TAME)	5.0	U	5.0	0.067
75-65-0	tert-Butyl alcohol	20	U	20	3.9
98-06-6	tert-Butylbenzene	1.0	U	1.0	0.13
630-20-6	1,1,1,2-Tetrachloroethane	1.0	U	1.0	0.23
79-34-5	1,1,2,2-Tetrachloroethane	1.0	U	1.0	0.18
127-18-4	Tetrachloroethene	1.0	U	1.0	0.29
108-88-3	Toluene	1.0	U	1.0	0.13
156-60-5	trans-1,2-Dichloroethene	1.0	U	1.0	0.19
10061-02-6	trans-1,3-Dichloropropene	1.0	U	1.0	0.19
87-61-6	1,2,3-Trichlorobenzene	1.0	U	1.0	0.17
120-82-1	1,2,4-Trichlorobenzene	1.0	U	1.0	0.15
71-55-6	1,1,1-Trichloroethane	1.0	U	1.0	0.22
79-01-6	Trichloroethene	1.1		1.0	0.17
75-69-4	Trichlorofluoromethane	1.0	U	1.0	0.21
96-18-4	1,2,3-Trichloropropane	1.0	U	1.0	0.43
76-13-1	1,1,2-Trichloro-1,2,2-trichfluoroethane	1.0	U	1.0	0.28
526-73-8	1,2,3-Trimethylbenzene	5.0	U	5.0	0.0059
95-63-6	1,2,4-Trimethylbenzene	1.0	U	1.0	0.12
108-05-4	Vinyl acetate	2.0	U	2.0	0.19
75-01-4	Vinyl chloride	1.0	U	1.0	0.22

Sample Calculation

TestAmerica Laboratories
Target Compound Quantitation Report

Data File:	\\Ncchrom\ChromData\A3UX15\20120531-10396.b\UXC4192.D		
Lims ID:	240-11568-B-2	Client ID:	MRC-MW08B-052212
Inject. Date:	31-May-2012 18:32:30	Dil. Factor:	1.0000
Sample Type:	Client		
Sample ID:	240-0010396-023		
Misc. Info.:	C20531A,8260LLUX15,,43582		
Operator:	43582	Instrument ID:	A3UX15
Vol. Injected:	1.0000	ALS Bottle#:	23
Lims Batch ID:	45839	Lims Sample ID:	23
Detector:	MS SCAN		
Method:	\\Ncchrom\ChromData\A3UX15\20120531-10396.b\8260_15.m		
Last Update:	01-Jun-2012 08:39:07	Calib Date:	29-Apr-2012 15:33:30
Quant Method:	Internal Standard	Quant By:	Initial Calibration
Last ICal File:	\\Ncchrom\ChromData\A3UX15\20120429-9503.b\UXC3087.D		
Limit Group:	MSV 8260B ICAL		
Integrator:	RTE	ID Type:	RT Order ID
Process Host:	CORP-CTX-18		
First Level Reviewer: evansle		Date:	01-Jun-2012 08:13:02

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
* 1 Fluorobenzene	96	4.668	4.656	0.012	99	959689	10.0	
* 2 Chlorobenzene-d5	117	7.301	7.301	0.0	84	639224	10.0	
* 3 1,4-Dichlorobenzene-d4	152	9.506	9.506	0.0	94	319325	10.0	
$ 5 Dibromofluoromethane (Surr)	113	4.111	4.111	0.0	57	244663	8.19	
$ 6 1,2-Dichloroethane-d4 (Surr)	65	4.384	4.384	0.0	0	354487	9.84	
$ 7 Toluene-d8 (Surr)	98	6.008	6.008	0.0	94	892049	8.62	
$ 131 4-Bromofluorobenzene (Surr)	95	8.404	8.392	0.012	95	266716	8.20	
12 Dichlorodifluoromethane	85		1.158					
13 Chloromethane	50		1.277					
14 Vinyl chloride	62		1.360					
15 Bromomethane	94		1.597					
16 Chloroethane	64		1.668					
18 Trichlorofluoromethane	101		1.858					
21 1,1-Dichloroethene	96		2.261					
23 1,1,2-Trichloro-1,2,2-trifluoroe	151		2.284					
22 Acetone	43		2.308					
26 Carbon disulfide	76		2.439					
30 Methylene Chloride	84		2.664					
31 2-Methyl-2-propanol	59		2.771					
34 Methyl tert-butyl ether	73		2.889					
33 trans-1,2-Dichloroethene	96		2.889					
36 1,1-Dichloroethane	63		3.233					
37 Vinyl acetate	86		3.281					
38 Isopropyl ether	87		3.293					
40 Tert-butyl ethyl ether	59		3.589					
42 cis-1,2-Dichloroethene	96		3.707					
43 2,2-Dichloropropane	77		3.707					
41 2-Butanone (MEK)	43		3.731					
47 Chlorobromomethane	128		3.909					
49 Chloroform	83		3.980					
50 1,1,1-Trichloroethane	97		4.123					

Sample Calculation

Report Date: 01-Jun-2012 08:39:08 Chrom Revision: 2.0 08-Feb-2012 11:07:54
Data File: \\Ncchrom\ChromData\A3UX15\20120531-10396.b\UXC4192.D

Compound	Sig	RT	EXP RT	DLT RT	Q	Response	On-Col Amt ug/l	Flags
53 Carbon tetrachloride	117		4.253					
52 1,1-Dichloropropene	75		4.253					
55 Benzene	78		4.431					
56 1,2-Dichloroethane	62		4.443					
57 Tert-amyl methyl ether	73		4.526					
60 Trichloroethene	130	4.976	4.964	0.012	88	35849	1.08	
62 1,2-Dichloropropane	63		5.154					
65 Dibromomethane	93		5.261					
67 Dichlorobromomethane	83		5.391					
69 2-Chloroethyl vinyl ether	63		5.664					
70 cis-1,3-Dichloropropene	75		5.783					
71 4-Methyl-2-pentanone (MIBK)	43		5.925					
72 Toluene	91		6.067					
73 trans-1,3-Dichloropropene	75		6.269					
77 Tetrachloroethene	164		6.554					
76 1,3-Dichloropropane	76		6.577					
78 2-Hexanone	43		6.660					
79 Chlorodibromomethane	129		6.779					
123 Ethylene Dibromide	107		6.874					
82 Chlorobenzene	112		7.324					
83 1,1,1,2-Tetrachloroethane	131		7.407					
84 Ethylbenzene	106		7.431					
10 m-Xylene & p-Xylene	91		7.538					
85 o-Xylene	106		7.905					
86 Styrene	104		7.917					
87 Bromoform	173		8.095					
88 Isopropylbenzene	105		8.261					
91 Bromobenzene	156		8.534					
90 1,1,2,2-Tetrachloroethane	83		8.546					
92 1,2,3-Trichloropropane	110		8.581					
94 N-Propylbenzene	120		8.652					
95 2-Chlorotoluene	126		8.724					
104 4-Chlorotoluene	91		8.830					
97 tert-Butylbenzene	119		9.127					
98 1,2,4-Trimethylbenzene	105		9.174					
99 sec-Butylbenzene	105		9.340					
100 1,3-Dichlorobenzene	146		9.435					
101 4-Isopropyltoluene	119		9.483					
102 1,4-Dichlorobenzene	146		9.530					
103 1,2,3-Trimethylbenzene	105		9.578					
105 n-Butylbenzene	91		9.886					
106 1,2-Dichlorobenzene	146		9.886					
107 1,2-Dibromo-3-Chloropropane	157		10.657					
109 1,2,4-Trichlorobenzene	180		11.463					
110 Hexachlorobutadiene	225		11.641					
111 Naphthalene	128		11.700					
112 1,2,3-Trichlorobenzene	180		11.937					
S 114 Xylenes, Total	106		16.530					

Sample Calculation

FORM VI
GC/MS VOA INITIAL CALIBRATION DATA
INTERNAL STANDARD CURVE EVALUATION

Lab Name: TestAmerica Canton Job No.: 240-11568-1 Analy Batch No.: 42081

SDG No.:

Instrument ID: A3UX15 GC Column: DB-624 ID: 0.18(mm) Heated Purge: (Y/N) N

Calibration Start Date: 04/29/2012 11:24 Calibration End Date: 04/29/2012 13:17 Calibration ID: 8421

ANALYTE	RRF					CURVE TYPE	COEFFICIENT			#	MIN RRF	%RSD	#	MAX %RSD	R^2 OR COD	#	MIN R^2 OR COD
	LVL 1 LVL 6	LVL 2	LVL 3	LVL 4	LVL 5		B	M1	M2								
tert-Butyl alcohol	0.0136 0.0125	0.0147	0.0150	0.0147	0.0151	Ave		0.0143				7.0		15.0			
Acrylonitrile	0.0980 0.0984	0.1003	0.1029	0.1021	0.1010	Ave		0.1004				2.0		15.0			
Methyl tert-butyl ether	0.7516 0.7618	0.7815	0.8147	0.7487	0.7720	Ave		0.7717				3.2		15.0			
trans-1,2-Dichloroethene	0.3444 0.3299	0.3478	0.3590	0.3273	0.3332	Ave		0.3403				3.6		15.0			
Hexane	0.0375 0.0695	0.0610	0.0564	0.0691	0.0606	Lin1	-0.028	0.0679							0.9950		0.9900
1,1-Dichloroethane	0.5836 0.5697	0.6058	0.6199	0.5644	0.5890	Ave		0.5887			0.1000	3.6		15.0			
Vinyl acetate	0.0286 0.0466	0.0365	0.0439	0.0417	0.0473	Lin1	-0.020	0.0470							0.9990		0.9900
2,2-Dichloropropane	0.2762 0.3365	0.2942	0.3279	0.3174	0.3214	Ave		0.3123				7.3		15.0			
cis-1,2-Dichloroethene	0.3692 0.3507	0.3749	0.3943	0.3537	0.3664	Ave		0.3682				4.3		15.0			
2-Butanone	0.1098 0.1065	0.1098	0.1208	0.1033	0.1116	Ave		0.1103				5.4		15.0			
Bromochloromethane	0.1670 0.1706	0.1824	0.1854	0.1735	0.1762	Ave		0.1758				4.0		15.0			
Tetrahydrofuran	0.0715 0.0661	0.0679	0.0721	0.0692	0.0709	Ave		0.0696				3.3		15.0			
Chloroform	0.6200 0.5908	0.6401	0.6524	0.5886	0.6127	Ave		0.6174				4.2		15.0			
1,1,1-Trichloroethane	0.3865 0.4831	0.4443	0.4647	0.4592	0.4699	Ave		0.4513				7.6		15.0			
Cyclohexane	0.3227 0.5677	0.4828	0.5322	0.5647	0.5104	Lin1	-0.205	0.5608							0.9970		0.9900
1,1-Dichloropropene	0.3773 0.4533	0.4544	0.4504	0.4509	0.4526	Ave		0.4398				7.0		15.0			
Carbon tetrachloride	0.2383 0.4269	0.3514	0.3714	0.3843	0.3934	Lin1	-0.187	0.4193							0.9980		0.9900
Benzene	1.3052 1.2705	1.3308	1.3607	1.2305	1.2934	Ave		1.2985				3.5		15.0			
1,2-Dichloroethane	0.4296 0.4396	0.4756	0.4725	0.4328	0.4641	Ave		0.4524				4.6		15.0			
Trichloroethene	0.3385 0.3447	0.3510	0.3477	0.3335	0.3508	Ave		0.3444				2.1		15.0			

Note: The m1 coefficient is the same as Ave RRF for an Ave curve type.

Sample Calculation

1A-IN
INORGANIC ANALYSIS DATA SHEET
METALS - TOTAL RECOVERABLE

Client Sample ID: MRC-MW08B-052212 | Lab Sample ID: 240-11568-2

Lab Name: TestAmerica Canton | Job No.: 240-11568-1

SDG ID.:

Matrix: Water | Date Sampled: 05/22/2012 10:15

Reporting Basis: WET | Date Received: 05/23/2012 09:15

CAS No.	Analyte	Result	RL	MDL	Units	C	Q	DIL	Method
7440-36-0	Antimony	0.18	2.0	0.13	ug/L	J		1	6020A
7440-38-2	Arsenic	0.85	5.0	0.40	ug/L	J		1	6020A
7440-39-3	Barium	18	5.0	0.19	ug/L		B	1	6020A
7440-41-7	Beryllium	0.56	1.0	0.20	ug/L	J		1	6020A
7440-43-9	Cadmium	1.0	1.0	0.13	ug/L	U		1	6020A
7440-48-4	Cobalt	16	1.0	0.058	ug/L			1	6020A
7440-47-3	Chromium	1.2	2.0	0.71	ug/L	J		1	6020A
7440-50-8	Copper	4.8	2.0	0.29	ug/L		B	1	6020A
7439-98-7	Molybdenum	0.42	10	0.093	ug/L	J	B	1	6020A
7440-02-0	Nickel	25	2.0	0.20	ug/L			1	6020A
7439-92-1	Lead	0.22	1.0	0.18	ug/L	J		1	6020A
7782-49-2	Selenium	5.0	5.0	0.57	ug/L	U		1	6020A
7440-28-0	Thallium	0.45	2.0	0.14	ug/L	J	B	1	6020A
7440-62-2	Vanadium	2.8	20	0.44	ug/L	J		1	6020A
7440-66-6	Zinc	49	20	2.3	ug/L		B	1	6020A
7440-22-4	Silver	1.0	1.0	0.080	ug/L	U		1	6020A

MRC-MW08B-052212

240-11568-e-2-b, 5/31/2012 07:58:57 QC Status: FAIL (Initial: FAIL)

User Pre-dilution: 1.000

Run	Time	6Li	9Be	10B
		ppb	ppb	ppb
x		113.935%	0.564	24.790
%RSD		6.133	7.733	2.135
Run	Time	23Na	25Mg	27Al
		ppb	ppb	ppb
x		6149.000	1235.000	497.600
%RSD		1.333	0.313	4.777
Run	Time	35Cl	39K	43Ca
		ppb	ppb	ppb
x		T 0.000	T 789.200	2264.000
%RSD		T 0.000	T 1.255	0.302
Run	Time	45Sc	45Sc	47Ti
		ppb	ppb	ppb
x		T 116.340%	122.072%	13.070
%RSD		T 1.991	1.023	9.666
Run	Time	51V	52Cr	52Cr O
		ppb	ppb	ppb
x		2.806	1.151	75.570
%RSD		31.690	2.402	7.161
Run	Time	55Mn	56Fe	59Co
		ppb	ppb	ppb
x		81.840	439.400	15.880
%RSD		0.973	0.124	1.526
Run	Time	60Ni	65Cu	66Zn
		ppb	ppb	ppb
x		24.860	4.827	49.300
%RSD		0.770	4.648	1.794
Run	Time	72Ge	75As	75As O
		ppb	ppb	ppb
x		122.791%	0.851	0.498
%RSD		0.714	8.427	8.973
Run	Time	78Se	88Sr	95Mo
		ppb	ppb	ppb
x		0.138	7.942	0.416
%RSD		42.080	1.939	15.230
Run	Time	105Pd	107Ag	109Ag O
		ppb	ppb	ppb
x		0.000	-0.134	-2.009
%RSD		0.000	9.201	109.800
Run	Time	111Cd	115In	118Sn
		ppb	ppb	ppb
x		0.101	121.079%	-1.967
%RSD		6.357	0.395	0.139
Run	Time	121Sb	137Ba	159Tb
		ppb	ppb	ppb
x		0.182	17.700	0.000
%RSD		4.449	0.704	0.000
Run	Time	165Ho	182W	205Tl
		ppb	ppb	ppb
x		115.630%	0.541	0.451
%RSD		0.294	12.190	5.206
Run	Time	208Pb	209Bi	
		ppb	ppb	
x		0.219	118.283%	
%RSD		7.909	0.967	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**MAY 11, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – SURFACE WATER
SAMPLE DELIVERY GROUP (SDG) – R1202455

SAMPLES: 4/Aqueous/

MSA-MW15D-041812	MSA-MW15I-041812
MSA-MW15S-041812	MSA-MW38S-041812

Overview

The sample set for Martin State Airport – Surface Water, SDG R1202455, consists of four (4) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on April 18, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, matrix spike recoveries, laboratory duplicate results, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems – None.

Minor Problems

- Positive results reported below the reporting limit (RL) but above the method detection limit (MDL) were qualified as estimated, "J".

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: Positive results reported below the RL but above the MDL were qualified as estimated.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW15D-041812			MSA-MW15I-041812			MSA-MW15S-041812			MSA-MW38S-041812		
SDG: R1202455	LAB_ID	R1202455-004			R1202455-003			R1202455-001			R1202455-002		
FRACTION: MISC	SAMP_DATE	4/18/2012			4/18/2012			4/18/2012			4/18/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.016	J	P	0.02	U		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021 - 02
Sample Matrix: Water

Sample Name: MSA-MW15D-041812
Lab Code: R1202455-004

Service Request: R1202455
Date Collected: 4/18/12 1535
Date Received: 4/19/12

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.016	J	µg/L	0.020	0.004	1	NA	4/19/12 12:19	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202455
Project:	MSA Groundwater/112IC04021 - 02	**Date Collected:**	4/18/12 1416
Sample Matrix:	Water	**Date Received:**	4/19/12
Sample Name:	MSA-MW15I-041812		
Lab Code:	R1202455-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/19/12 12:10	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021 - 02
Sample Matrix: Water

Service Request: R1202455
Date Collected: 4/18/12 1230
Date Received: 4/19/12

Sample Name: MSA-MW15S-041812
Lab Code: R1202455-001

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/19/12 11:54	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021 - 02
Sample Matrix: Water

Sample Name: MSA-MW38S-041812
Lab Code: R1202455-002

Service Request: R1202455
Date Collected: 4/18/12 1330
Date Received: 4/19/12

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/19/12 12:02	

APPENDIX C
SUPPORT DOCUMENTATION

April 23, 2012

Service Request No: R1202455

Ms. Samantha Brenner
Tetra Tech NUS,Inc.
20251 Century Blvd. Ste. 200
Germantown, MD 20874-7114

Laboratory Results for: MSA Groundwater/112IC04021 - 02

Dear Ms. Brenner:

Enclosed are the results of the sample(s) submitted to our laboratory on April 19, 2012. For your reference, these analyses have been assigned our service request number **R1202455**.

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc. dba ALS Environmental

Michael Perry
Laboratory Manager

CC: Amy Thomson

Columbia Analytical Services

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623
PHONE 585-288-5380 | FAX 585-288-8475
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com • www.alsglobal.com

HIGH SOLUTIONS

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202455
Project:	MSA Groundwater	**Project Number:**	112IC04036 Task 2
Sample Matrix:	Water	**Date Received:**	4/19/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 4/18/12 and received at CAS in good condition at a cooler temperature of 2.7 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Four water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services™ CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA Groundwater Sampling	Project Number: 112IC04021-02
Project Manager: Bill Tony Apanavage	Report CC:
Company/Address: Tetra Tech INC. 20251 Century Blvd STE 200 Germantown MD 20874	
Phone #: 301 328-3021	E-mail:
Sampler's Signature:	Sampler's Printed Name: Walt Payon

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hex Chrom	REMARKS/ ALTERNATE DESCRIPTION
MSA-MW 15S-041812		4-18-12	1230	Water	1								X	
MSA-MW 38S-041812			1330		1								X	
MSA-MW 15I-041812			1416		1								X	
MSA-MW 15D-041812			1535		1								X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals 24 TAT

See QAPP ☐

TURNAROUND REQUIREMENTS
- X RUSH (SURCHARGES APPLY)
- X 1 day ___ 2 day ___ 3 day
- ___ 4 day ___ 5 day
- ___ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
- ___ I. Results Only
- ___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
- ___ III. Results + QC and Calibration Summaries
- ___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION
PO #:
BILL TO:

R1202455 5 N
Tetra Tech NUS,Inc.
MSA Groundwater

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	Signature:	Signature	Signature	Signature	Signature
Printed Name: Walt Payon	Printed Name:	Printed Name	Printed Name	Printed Name	Printed Name
Firm: TT INC.	Firm:	Firm	Firm	Firm	Firm
Date/Time: 4-18-12 / 1805	Date/Time: 4/19/12 0940	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return to Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1202455

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW38S-041812	R1202455-002	NM	4/18/2012	4/19/2012	4/19/2012	1	0	1
CR6	UG/L	MSA-MW15S-041812	R1202455-001	NM	4/18/2012	4/19/2012	4/19/2012	1	0	1
CR6	UG/L	MSA-MW15I-041812	R1202455-003	NM	4/18/2012	4/19/2012	4/19/2012	1	0	1
CR6	UG/L	MSA-MW15D-041812	R1202455-004	NM	4/18/2012	4/19/2012	4/19/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/13/12 0805	R1202343-001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/12/12 1210	(Yes) No Field	Millex HV R1SA54620K	—	6.71	9.35	CMW 4/13/12 1025	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202343-003	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/12/12 1325	(Yes) No Field		—	7.47	9.41	CMW 4/13/12 1026	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202343-004	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/12/12 1415	(Yes) No Field		—	7.22	9.36	CMW 4/13/12 1027	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202343-007	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/12/12 1430	(Yes) No Field		—	6.20	9.49	CMW 4/13/12 1029	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202343-005	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/12/12 1505	(Yes) No Field		—	5.87	9.36	CMW 4/13/12 1031	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202343-006	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/12/12 1510	(Yes) No Field		—	7.84	9.55	CMW 4/13/12 1032	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 4/13/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	(Yes) No Field		—	5.63	9.68	CMW 4/13/12 1041	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 4/19/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	Yes No Field	Millex HV R1SA54620K	—	5.49	9.59	CMW 4/19/12 1133	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/19/12 0940	R1202455 -001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1230	(Yes) No Field	Miller HV RJSA54620K	—	4.46	9.39	CMW 4/19/12 1136	Buffer	WC1032781
	R1202455 -002	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1330	(Yes) No Field		—	6.70	9.48	CMW 4/19/12 1137	Buffer	WC1032781
	R1202455 -003	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1416	(Yes) No Field		—	5.63	9.49	CMW 4/19/12 1139	Buffer	WC1032781
	R1202455 -004	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1535	(Yes) No Field		—	7.25	9.33	CMW 4/19/12 1141	Buffer	WC1032781
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	

10%H2SO4
10%NH4OH
NH4OH(conc)

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Client: Tetra Tech NUS, Inc. **Service Request:** R1202455
Project: MSA Groundwater/112IC04021 - 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	288112	RQ1203877-04	4/19/12 11:21	0.500	0.491	98	95 - 105
CCV2	288112	RQ1203877-03	4/19/12 12:52	0.500	0.505	101	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202455
Project: MSA Groundwater/112IC04021 - 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	288112	RQ1203877-06	4/19/12 11:32	0.004	0.020	0.020	U
CCB2	288112	RQ1203877-05	4/19/12 13:01	0.004	0.020	0.020	U

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021 - 02
Sample Matrix: Water

Sample Name: Method Blank
Lab Code: R1202455-MB

Service Request: R1202455
Date Collected: NA
Date Received: NA

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/19/12 11:32	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021 - 02
Sample Matrix: Water

Service Request: R1202455
Date Analyzed: 4/19/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202455-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.183	0.200	91	90 - 110

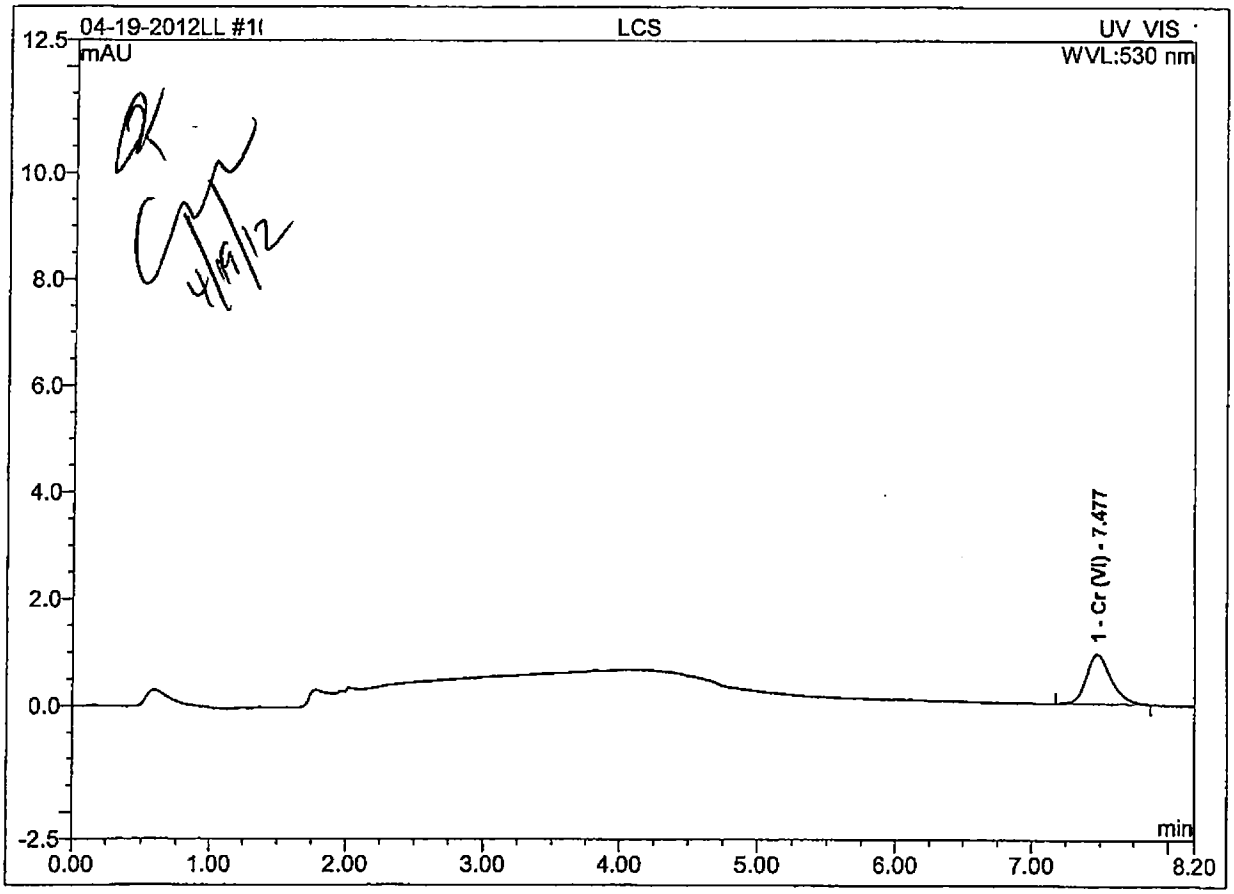
Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

LCS Chrom Hex rep result 0.183 ug/L

10 LCS

218.6 LL

Sample Name:	**LCS**	*Injection Volume:*	**2000.0**
Vial Number:	**31**	*Channel:*	**UV_VIS_1**
Sample Type:	**unknown**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-041012CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/19/2012 11:40**		



No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.477	Cr (VI)	0.935	0.198	100.00	0.18272	BMB
Total:			0.935	0.198	100.00	~~0.183~~	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE:** **MAY 11, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – SURFACE WATER
SAMPLE DELIVERY GROUP (SDG) – R1202486

SAMPLES: 5/Aqueous/

MSA-MW19D-041912
MSA-MW19I-041912
MSA-MW34I-041912
MSA-MW34S-041912
MSA-MW39S-041912

Overview

The sample set for Martin State Airport – Surface Water, SDG R1202486, consists of five (5) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on April 19, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, matrix spike recoveries, laboratory duplicate results, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems – None.

Minor Problems – None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW19D-041912			MSA-MW19I-041912			MSA-MW34I-041912			MSA-MW34S-041912		
SDG: R1202486	LAB_ID	R1202486-005			R1202486-004			R1202486-001			R1202486-002		
FRACTION: MISC	SAMP_DATE	4/19/2012			4/19/2012			4/19/2012			4/19/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U		0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW39S-041912		
SDG: R1202486	LAB_ID	R1202486-003		
FRACTION: MISC	SAMP_DATE	4/19/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 03
Sample Matrix: Water

Service Request: R1202486
Date Collected: 4/19/12 1245
Date Received: 4/20/12

Sample Name: MSA-MW19D-041912
Lab Code: R1202486-005

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/20/12 10:18	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202486
Project:	MSA Groundwater/112IC04021- 03	**Date Collected:**	4/19/12 1240
Sample Matrix:	Water	**Date Received:**	4/20/12
Sample Name:	MSA-MW19I-041912		
Lab Code:	R1202486-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/20/12 10:10	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202486
Project:	MSA Groundwater/112IC04021- 03	**Date Collected:**	4/19/12 1200
Sample Matrix:	Water	**Date Received:**	4/20/12
Sample Name:	MSA-MW34I-041912		
Lab Code:	R1202486-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/20/12 09:44	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202486
Project:	MSA Groundwater/112IC04021- 03	**Date Collected:**	4/19/12 1205
Sample Matrix:	Water	**Date Received:**	4/20/12
Sample Name:	MSA-MW34S-041912		
Lab Code:	R1202486-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/20/12 09:53	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202486
Project:	MSA Groundwater/112IC04021- 03	**Date Collected:**	4/19/12 1340
Sample Matrix:	Water	**Date Received:**	4/20/12
Sample Name:	MSA-MW39S-041912		
Lab Code:	R1202486-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/20/12 10:01	

APPENDIX C
SUPPORT DOCUMENTATION

April 24, 2012

Service Request No: R1202486

Ms. Samantha Brenner
Tetra Tech NUS,Inc.
20251 Century Blvd. Ste. 200
Germantown, MD 20874-7114

Laboratory Results for: MSA Groundwater/112IC04021- 03

Dear Ms. Brenner:

Enclosed are the results of the sample(s) submitted to our laboratory on April 20, 2012. For your reference, these analyses have been assigned our service request number **R1202486.**

All analyses were performed according to our laboratory's quality assurance program. The test results meet requirements of the NELAP standards except as noted in the case narrative report. All results are intended to be considered in their entirety, and Columbia Analytical Services, Inc. (CAS) is not responsible for use of less than the complete report. Results apply only to the items submitted to the laboratory for analysis and individual items (samples) analyzed, as listed in the report. The measurement uncertainty of the results included in this report is within that expected when using the prescribed method(s) for analysis of these samples, and represented by Laboratory Control Sample control limits. Any events, such as QC failures, which may add to the uncertainty are explained in the report narrative.

Please contact me if you have any questions. My extension is 7469. You may also contact me via email at MPerry@caslab.com.

Respectfully submitted,

Columbia Analytical Services, Inc. dba ALS Environmental

Michael Perry
Laboratory Manager

CC: Amy Thomson

Columbia Analytical Services

ADDRESS 1565 Jefferson Rd, Building 300, Suite 360, Rochester, NY 14623
PHONE 585-288-5380 | FAX 585-288-8475
Columbia Analytical Services, Inc.
Part of the ALS Group A Campbell Brothers Limited Company
www.caslab.com • www.alsglobal.com

00001

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202486
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 03
Sample Matrix:	Water	**Date Received:**	4/20/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 4/19/12 and received at CAS in good condition at a cooler temperature of 3.0 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Five water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

A matrix Spike and Duplicate analysis was done on sample MSA-MW19D-041912. The RPD and Recovery were within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

ALS

Chain of Custody Record

~~TestAmerica~~ Laboratory location: 1565 Jefferson RD, Rochester NY

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

ALS Environment / TestAmerica — THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact	Client Project Manager:	Site Contact:	Lab Contact:	COC No:
Company Name: Tetra Tech	Tony Apgarvese	Stu Cameron		010138
Address: 20251 Century Blvd Ste 240	Telephone: (301) 528-5552	Telephone: (703) 342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apgarvese@tetratech.com	Analysis Turnaround Time (in BUS days)		
Phone: (301) 528-5552		TAT if different from below: ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day	Analyses	
Project Name: MSA GW Sampling	Method of Shipment/Carrier:			
Project Number: 112I.C04021-03	Shipping/Tracking No:			
PO#				

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite=C/Grab=G	Hexavalent Chromium	Sample Specific Notes / Special Instructions:
MSA-MW34I-041912	4/19/12	1200		X									1		N	G	X	
MSA-MW34S-041912		1205		X									1		N	G	X	
MSA-MW39S-041912		1340		X									1		N	G	X	
MSA-MW19I-041912		1240		X									1		N	G	X	
MSA-MW19D-041912		1245		X									1		N	G	X	

Possible Hazard Identification: ☐ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☐ Disposal By Lab ☐ Archive For _____ Months

Special Instructions/QC Requirements & Comments:

Samples Must be analyzed within 24 hours of sample time.

R1202486 5

Tetra Tech NUS,Inc.
MSA Groundwater

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
	Tetra Tech	4/19/12 - 1500			
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company: ALS	Date/Time: 4/20/12 0755

S0000

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HOLDTIME

SDG R1202486

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW39S-041912	R1202486-003	NM	4/19/2012	4/20/2012	4/20/2012	1	0	1
CR6	UG/L	MSA-MW34S-041912	R1202486-002	NM	4/19/2012	4/20/2012	4/20/2012	1	0	1
CR6	UG/L	MSA-MW34I-041912	R1202486-001	NM	4/19/2012	4/20/2012	4/20/2012	1	0	1
CR6	UG/L	MSA-MW19I-041912	R1202486-004	NM	4/19/2012	4/20/2012	4/20/2012	1	0	1
CR6	UG/L	MSA-MW19D-041912	R1202486-005	NM	4/19/2012	4/20/2012	4/20/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/19/12 0940	R1202455 -001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1230	(Yes) No Field	Millex HV R1SA15462OK	—	4.46	9.39	CMW 4/19/12 1136	Buffer	WC1032781
	R1202455 -002	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1330	(Yes) No Field		—	6.70	9.48	CMW 4/19/12 1137	Buffer	WC1032781
	R1202455 -003	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1416	(Yes) No Field		—	5.63	9.49	CMW 4/19/12 1139	Buffer	WC1032781
	R1202455 -004	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/18/12 1535	(Yes) No Field		—	7.25	9.33	CMW 4/19/12 1141	Buffer	WC1032781
4/19/12 0905	R1202446-001	7199 (218.6 RL) 218.6 LL 218.7	(Water) Drinking Water	4/17/12 0840	Yes No (Field)	—	—	9.63	—	CMW 4/19/12 1209	Buffer	—
4/20/12 0755	R1202486-001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/19/12 1200	(Yes) No Field	Millex HV R1SA5546 20K	—	5.34	9.33	CMW 4/20/12 0929	Buffer	WC1032781
	R1202486-002 *	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/19/12 1205	(Yes) No Field		—	5.56	9.31	CMW 4/20/12 0930	Buffer	WC1032781
	R1202486-003	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	4/19/12 1340	(Yes) No Field		—	6.29	9.37	CMW 4/20/12 0931	Buffer	WC1032781

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

* Green PPT formed during pH adjust *

H2000

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/20/12 0755	R1202486-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/19/12 1240	Yes No Field	Millex HV R1SA5460K	—	5.94	9.36	CW 4/20/12 0932	Buffer	WC032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202486-005	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/19/12 1245	Yes No Field		—	5.22	9.39	CW 4/20/12 0934	Buffer	WC032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 4/20/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field		—	5.69	9.53	CW 4/20/12 0935	Buffer	WC032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Client: Tetra Tech NUS, Inc. **Service Request:** R1202486
Project: MSA Groundwater/112IC04021-03

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	288329	RQ1203941-04	4/20/12 09:00	0.500	0.483	97	95 - 105
CCV2	288329	RQ1203941-03	4/20/12 11:00	0.500	0.507	101	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202486
Project: MSA Groundwater/112IC04021- 03

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	288329	RQ1203941-06	4/20/12 09:13	0.004	0.020	0.020	U
CCB2	288329	RQ1203941-05	4/20/12 11:08	0.004	0.020	0.020	U

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202486
Project:	MSA Groundwater/112IC04021- 03	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202486-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/20/12 09:13	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 03
Sample Matrix: Water

Service Request: R1202486
Date Collected: 4/19/12
Date Received: 4/20/12
Date Analyzed: 4/20/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MSA-MW19D-041912
Lab Code: R1202486-005

Units: µg/L
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	MSA-MW19D-04191 2DUP Duplicate Sample R1202486-005DUP Result	Average	RPD	RPD Limit
Chromium, Hexavalent, Dissolved	218.6	0.020	0.004	0.020 U	0.020 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
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QA/QC Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202486
Project:	MSA Groundwater/112IC04021- 03	**Date Collected:**	4/19/12
Sample Matrix:	Water	**Date Received:**	4/20/12
		Date Analyzed:	4/20/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name:	MSA-MW19D-041912	**Units:**	µg/L
Lab Code:	R1202486-005	**Basis:**	NA

Analytical Method: 218.6

MSA-MW19D-041912MS
Matrix Spike
R1202486-005MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	ND	0.182	0.200	91	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021-03
Sample Matrix: Water

Service Request: R1202486
Date Analyzed: 4/20/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202486-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.185	0.200	93	90 - 110

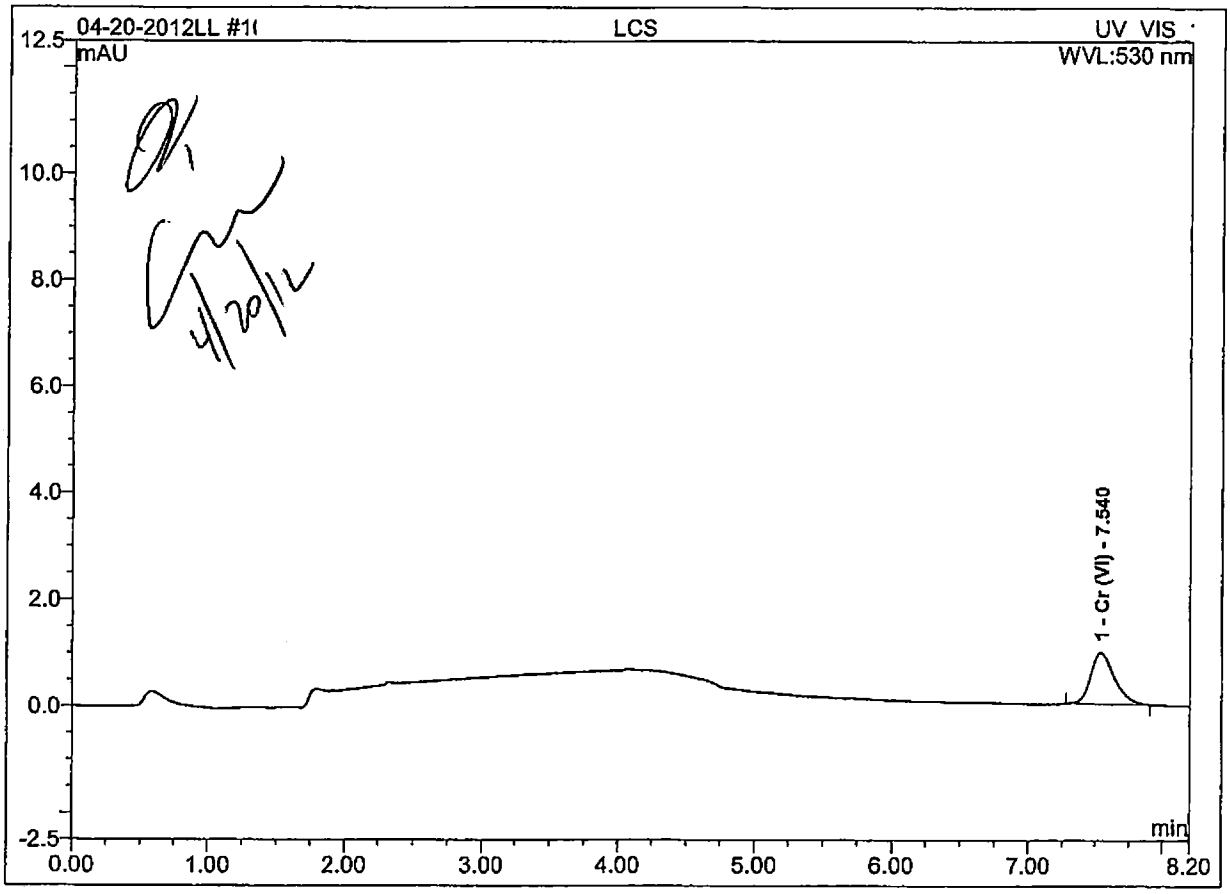
Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

LCS result Cr. rep Hex 0.185 ug/L

10 LCS

218.6 LL

Sample Name:	**LCS**	*Injection Volume:*	**2000.0**
Vial Number:	**31**	*Channel:*	**UV_VIS_1**
Sample Type:	**unknown**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-041012CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/20/2012 9:22**		



No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.540	Cr (VI)	0.966	0.201	100.00	0.18518	BMB
Total:			0.966	0.201	100.00	0.185	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**MAY 21, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202557

SAMPLES: 6/Aqueous/

MSA-MW17I-042312	MSA-MW17S-042312
MSA-MW20D-042312	MSA-MW20I-042312
MSA-MW20S-042312	MSA-MW35S-042312

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202557, consists of six (6) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on April 23, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems

- It was noted in the case narrative that samples MSA-MW20D-042312 and MSA-MW17I-042312 were reanalyzed outside the 24 hour hold time due to false positives above the baseline of the instrument. The reanalysis were chosen for data validation and qualified as rejected, "UR", as a result of sample reanalyses performed 3 days after sampling date.

Minor Problems- None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Positive results for hexavalent chromium were present in the continuing calibrations blanks (0.026 ug/L, 0.020 ug/L) affecting the reanalyses. However, no validation actions were warranted as the sample results were nondetects.

Executive Summary

Laboratory Performance: The twenty-four hour hold time was exceeded for the reanalyses of samples MSA-MW20D-042312 and MSA-MW17I-042312.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW17I-042312RE			MSA-MW17S-042312			MSA-MW20D-042312RE			MSA-MW20I-042312		
SDG: R1202557	LAB_ID	R1202557-005			R1202557-004			R1202557-003			R1202557-002		
FRACTION: MISC	SAMP_DATE	4/23/2012			4/23/2012			4/23/2012			4/23/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	UR	H	0.02	U		0.02	UR	H	0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW20S-042312			MSA-MW35S-042312		
SDG: R1202557	LAB_ID	R1202557-001			R1202557-006		
FRACTION: MISC	SAMP_DATE	4/23/2012			4/23/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/23/12 1515
Sample Matrix:	Water	**Date Received:**	4/24/12
Sample Name:	MSA-MW17I-042312		
Lab Code:	R1202557-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.039**		µg/L	0.020	0.004	1	NA	4/24/12 14:38	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021-02	**Date Collected:**	4/23/12 1515
Sample Matrix:	Water	**Date Received:**	4/24/12
Sample Name:	MSA-MW17I-042312		
Lab Code:	R1202557-005	**Basis:**	NA
Run Type:	Reanalysis		

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 13:41	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202557
Date Collected: 4/23/12 1510
Date Received: 4/24/12

Sample Name: MSA-MW17S-042312
Lab Code: R1202557-004

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/24/12 14:24	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/23/12 1540
Sample Matrix:	Water	**Date Received:**	4/24/12
Sample Name:	MSA-MW20D-042312		
Lab Code:	R1202557-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.022**		µg/L	0.020	0.004	1	NA	4/24/12 14:10	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/23/12 1540
Sample Matrix:	Water	**Date Received:**	4/24/12
Sample Name:	MSA-MW20D-042312		
Lab Code:	R1202557-003	**Basis:**	NA
Run Type:	Reanalysis		

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 13:32	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/23/12 1535
Sample Matrix:	Water	**Date Received:**	4/24/12
Sample Name:	MSA-MW20I-042312		
Lab Code:	R1202557-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/24/12 13:56	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/23/12 1530
Sample Matrix:	Water	**Date Received:**	4/24/12
Sample Name:	MSA-MW20S-042312		
Lab Code:	R1202557-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/24/12 13:42	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/23/12 1555
Sample Matrix:	Water	**Date Received:**	4/24/12
Sample Name:	MSA-MW35S-042312		
Lab Code:	R1202557-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/24/12 14:52	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
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Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202557
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	4/24/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 4/23/12 and received at CAS in good condition at a cooler temperature of 1.9 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Six water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

Note: samples MSA-MW20D-042312 and MSA-MW17I-04231 were both re-analyzed outside the 24 hour holding time due to false positives from a high baseline bias due to instrument issues during the original analyses. Both sample results were reported.

All samples were analyzed within 24 hours of sampling except as mentioned above.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services – CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA Ground Water Sampling	Project Number: 112IC04021-02
Project Manager: Tony Apanavage	Report CC:
Company/Address: Tetra Tech INC. 20251 Century Blvd STE 200 Germantown MD 20874	
Phone #: 301 528-3021	E-mail:
Sampler's Signature:	Sampler's Printed Name:

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hex Chrom	REMARKS/ ALTERNATE DESCRIPTION
MSA-MW 20S-042312		4-23-12	1530	Water	1								X	
MSA-MW 20I-042312			1535		1								X	
MSA-MW 20D-042312			1540		1								X	
MSA-MW 17S-042312			1510		1								X	
MSA-MW 17I-042312			1515		1								X	
MSA-MW 35S-042312			1555		1								X	

Preservative Key: 0. NONE; 1. HCL; 2. HNO_3; 3. H_2SO_4; 4. NaOH; 5. Zn. Acetate; 6. MeOH; 7. $NaHSO_4$; 8. Other

SPECIAL INSTRUCTIONS/COMMENTS
Metals 24 TAT

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
- X RUSH (SURCHARGES APPLY)
- X 1 day ___ 2 day ___ 3 day
- ___ 4 day ___ 5 day
- ___ Standard

REQUESTED REPORT DATE: ___

REPORT REQUIREMENTS
- ___ I. Results Only
- ___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
- ___ III. Results + QC and Calibration Summaries
- ___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION
PO #:
BILL TO:

R1202557 5
Tetra Tech NUS,Inc.
MSA Groundwater

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	Signature:	Signature	Signature	Signature	Signature
Printed Name:	Printed Name: Gregorio D. Esmerian	Printed Name	Printed Name	Printed Name	Printed Name
Firm: TT INC.	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 4-23-12	Date/Time: 4-24-12 9:50	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1202557

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MT-MW06S-042412	R1202581-002	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW05S-042512	R1202604-003	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW04S-042412	R1202581-001	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW03S-042512	R1202604-002	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW01S-042512	R1202604-001	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MSA-MW35S-042312	R1202557-006	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20S-042312	R1202557-001	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20I-042312	R1202557-002	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20D-042312	R1202557-003	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17S-042312	R1202557-004	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17I-042312	R1202557-005	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	GSP-MW3-042612	R1202652-003	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW2-042612	R1202652-001	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW1-042612	R1202652-002	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/20/12 0755	R1202486-004	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/19/12 1240	Yes No Field	Millex HV R1SA546004	—	5.94	9.36	CMW 4/20/12 0932	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202486-005	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/19/12 1245	Yes No Field		—	5.22	9.39	CMW 4/20/12 0934	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 4/20/12	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	—	Yes No Field		—	5.69	9.53	CMW 4/20/12 0935	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
4/24/12 0950	R1202557-001	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1530	Yes No Field	Millex HV R1SA546204	—	5.84	9.36 *	CMW 4/24/12 1255	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-002	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1535	Yes No Field		—	6.20	9.31 *	CMW 4/24/12 1257	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-003	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1540	Yes No Field		—	5.22	9.43	CMW 4/12/24 1300	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-004	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1510	Yes No Field		—	7.16	9.32	CMW 4/24/12 1301	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-005	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1515	Yes No Field		—	5.35	9.46	CMW 4/24/12 1303	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

*Green PPT formed

H:\SMODOCS\Forms\cr+6SMO log

999628

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/24/12	R1202557-006	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/23/12 1555	Yes No Field	Millex HV R1SA5462OK	—	4.66	9.37	CMW 4/24/12 1304	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	Filter Blank for 4/24/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	↓	—	5.73	9.59	CMW 4/24/12 1305	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/25/12 0955	R1202581-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/24/12 1215	Yes No Field	Millex HV R1SA5462OK	—	5.16	9.39	CMW 4/25/12 1054	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	R1202581-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/24/12 1457	Yes No Field	↓	—	4.73	9.52	CMW 4/25/12 1055	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	Filter Blank for 4/25/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	↓	—	5.69	9.39	CMW 4/25/12 1057	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 288845 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204131-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.523 µg/L	1					4/24/12 12:53:00	N	IV
RQ1204131-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/24/12 13:08:00	N	IV
RQ1204131-07	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/24/12 13:08:00	N	IV
RQ1204131-08	Chromium, Hexavalent, Dissolved	LCS		Water	0.21 µg/L	10 mL	0.205 µg/L	1	0.004	0.020	103		4/24/12 13:23:00	N	IV
R1202557-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/24/12 13:42:00	N	IV
R1202557-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/24/12 13:56:00	N	IV
R1202557-003.R01	Chromium, Hexavalent, Dissolved	N/A		Water	0.02 µg/L	10 mL	0.022 µg/L	1	0.004	0.020			4/24/12 14:10:00	N	IV
R1202557-004	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/24/12 14:24:00	N	IV
R1202557-005.R01	Chromium, Hexavalent, Dissolved	N/A		Water	0.04 µg/L	10 mL	0.039 µg/L	1	0.004	0.020			4/24/12 14:38:00	N	IV
R1202557-006	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/24/12 14:52:00	N	IV
RQ1204131-01	Chromium, Hexavalent, Dissolved	DUP	R1202557-006	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	4/24/12 15:07:00	N	IV
RQ1204131-02	Chromium, Hexavalent, Dissolved	MS	R1202557-006	Water	0.21 µg/L	10 mL	0.211 µg/L	1	0.004	0.020	105		4/24/12 15:21:00	N	IV
RQ1204131-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.517 µg/L	1					4/24/12 15:49:00	N	IV
RQ1204131-05	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/24/12 16:03:00	N	IV

6929

/ indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-05 **Analyst:** CWOODS **Analysis Lot:** 289198 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204265-05	Chromium, Hexavalent, Dissolved	CCV		Water	0.50 µg/L	10 mL	0.499 µg/L	1					4/26/12 12:08:00	N	IV
RQ1204265-08	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:17:00	N	IV
RQ1204265-09	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:17:00	N	IV
RQ1204265-10	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.197 µg/L	1	0.004	0.020	99		4/26/12 12:25:00	N	IV
R1202604-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:42:00	N	IV
R1202604-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:50:00	N	IV
R1202604-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:59:00	N	IV
RQ1204265-01	Chromium, Hexavalent, Dissolved	DUP	R1202604-003	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	4/26/12 13:07:00	N	IV
RQ1204265-02	Chromium, Hexavalent, Dissolved	MS	R1202604-003	Water	0.20 µg/L	10 mL	0.201 µg/L	1	0.004	0.020	100		4/26/12 13:16:00	N	IV
R1202557-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 13:32:00	N	IV
R1202557-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 13:41:00	N	IV
RQ1204265-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.515 µg/L	1					4/26/12 13:49:00	N	IV
RQ1204265-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.03 µg/L	10 mL	0.026 µg/L	1	0.004	0.020			4/26/12 13:57:00	N	IV
R1202581-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 14:14:00	N	IV
R1202581-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 14:23:00	N	IV
RQ1204265-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.520 µg/L	1					4/26/12 14:52:00	N	IV
RQ1204265-07	Chromium, Hexavalent, Dissolved	CCB		Water	0.02 µg/L	10 mL	0.020 µg/L J	1	0.004	0.020			4/26/12 15:01:00	N	IV

289676

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202557-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/24/12 13:08	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202557
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202557-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 12:17	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202557
Date Analyzed: 4/24/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202557-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.205	0.200	103	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202557
Date Analyzed: 4/26/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202557-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.197	0.200	99	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202557
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	288845	RQ1204131-04	4/24/12 12:53	0.500	0.523	105	95 - 105
CCV2	288845	RQ1204131-03	4/24/12 15:49	0.500	0.517	103	95 - 105
CCV3	289198	RQ1204265-05	4/26/12 12:08	0.500	0.499	100	95 - 105
CCV4	289198	RQ1204265-04	4/26/12 13:49	0.500	0.515	103	95 - 105
CCV5	289198	RQ1204265-03	4/26/12 14:52	0.500	0.520	104	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202557
Project: MSA Groundwater/112IC04021-02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

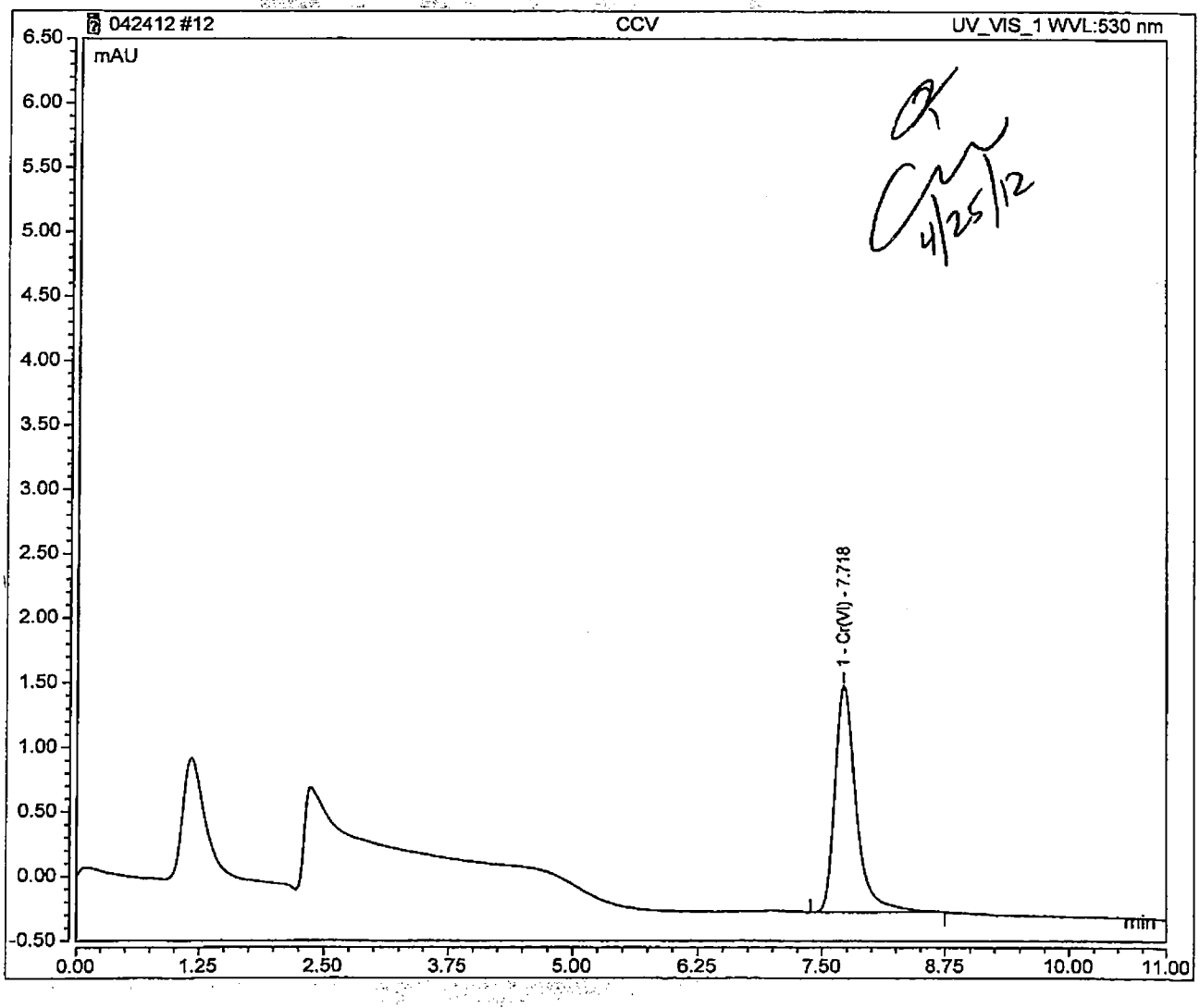
Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	288845	RQ1204131-06	4/24/12 13:08	0.004	0.020	0.020	U
CCB2	288845	RQ1204131-05	4/24/12 16:03	0.004	0.020	0.020	U
CCB3	289198	RQ1204265-08	4/26/12 12:17	0.004	0.020	0.020	U
CCB4	289198	RQ1204265-06	4/26/12 13:57	0.004	0.020	0.026	
CCB5	289198	RQ1204265-07	4/26/12 15:01	0.004	0.020	0.020	J

Peak Integration Report

Sample Name:	CCV	*Inj. Vol:*	1000.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Processing Method:	8-042312	*Program:*	Cr(VI) LL
Inj. Date / Time:	24-Apr-2012 / 12:53	*Run Time:*	11.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.72	Cr(VI)	M	0.441	1.750	0.5228
TOTAL:				0.44	1.75	0.52



4/25/12

Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

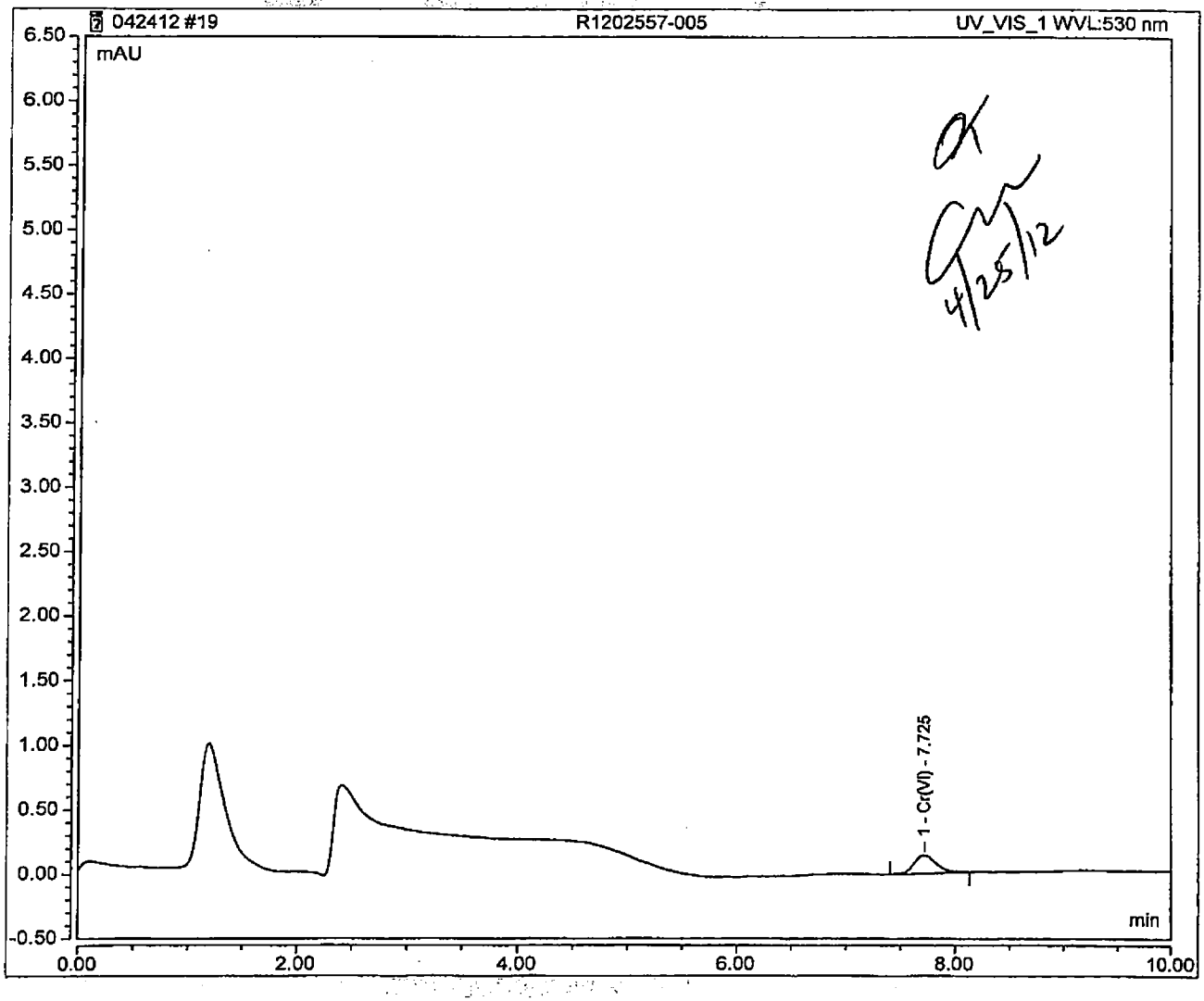
00030

Orginal analysis

Peak Integration Report

Sample Name:	R1202557-005	*Inj. Vol.:*	1000.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Processing Method:	8-042312	*Program:*	Cr(VI) LL
Inj. Date / Time:	24-Apr-2012 / 14:38	*Run Time:*	10.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.72	Cr(VI)	M	0.034	0.142	0.0391
TOTAL:				0.03	0.14	0.04



OK
4/25/12

Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

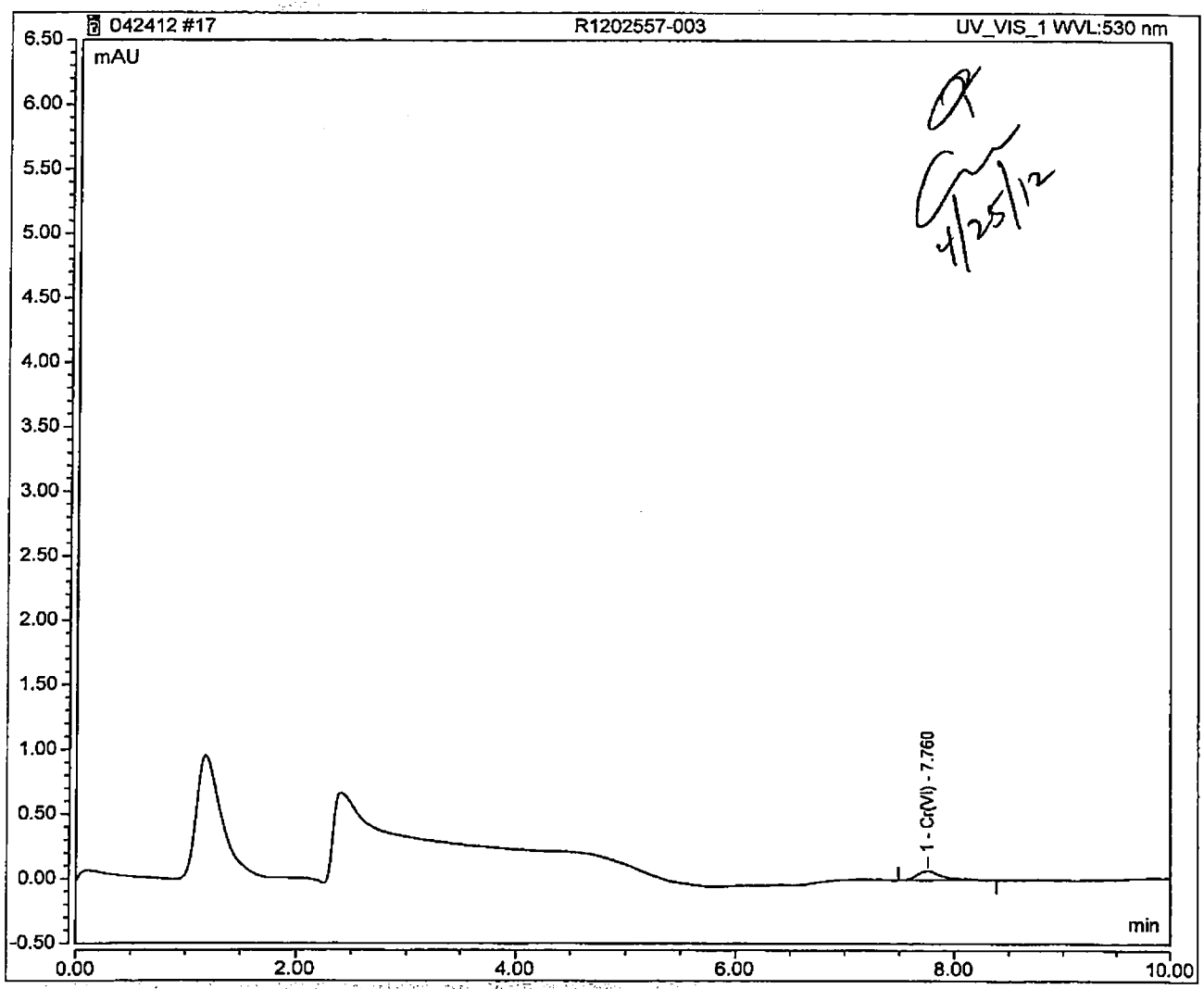
00037

orginal analysis

Peak Integration Report

Sample Name:	R1202557-003	Inj. Vol:	1000.00
Injection Type:	Unknown	Dilution Factor:	1.0000
Processing Method:	8-042312	Program:	Cr(VI) LL
Inj. Date / Time:	24-Apr-2012 / 14:10	Run Time:	10.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.76	Cr(VI)	M	0.020	0.072	0.0223
TOTAL:				0.02	0.07	0.02



4/25/12

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**MAY 21, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202581

SAMPLES: 2/Aqueous/

MT-MW04S-042412 MT-MW06S-042412

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202581, consists of two (2) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on April 24, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems

- The 24 hour hold time for hexavalent chromium was exceeded by 1 day for samples MT-MW04S-042412 and MT-MW06S-042412 due to high baseline bias. The nondetected results reported for the affected samples were qualified as estimated, "UJ".

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Positive results for hexavalent chromium were present in the continuing calibrations blanks (0.026 ug/L, 0.020 ug/L) affecting the samples. However, no validation actions were warranted as the sample results were nondetects.

Executive Summary

Laboratory Performance: The 24 hour hold time was exceeded by 1 day for samples MT-MW04S-042412 and MT-MW06S-042412.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MT-MW04S-042412			MT-MW06S-042412		
SDG: R1202581	LAB_ID	R1202581-001			R1202581-002		
FRACTION: MISC	SAMP_DATE	4/24/2012			4/24/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	UJ	H	0.02	UJ	H

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202581
Project:	MSA Groundwater/112IC04021-02	**Date Collected:**	4/24/12 1215
Sample Matrix:	Water	**Date Received:**	4/25/12
Sample Name:	MT-MW04S-042412		
Lab Code:	R1202581-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 14:14	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202581
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/24/12 1457
Sample Matrix:	Water	**Date Received:**	4/25/12
Sample Name:	MT-MW06S-042412		
Lab Code:	R1202581-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 14:23	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202581
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	4/25/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 4/24/12 and received at CAS in good condition at a cooler temperature of 1.4 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Two samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

Note: samples MT-MW04S-042412 and MT-MW-06S-042412 were done outside the 24 hour holding time due to a high baseline bias caused by instrument issues. The samples were analyzed as soon as possible after the problem was corrected.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services™ CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA Ground Water Sampling	Project Number: 112IC04021-02
Project Manager: Tony Apanavage	Report CC:
Company/Address: Tetra Tech INC. 20251 Century Blvd STE 200 Germantown MD 20874	
Phone #: 301 528-3021	E-mail:
Sampler's Signature:	Sampler's Printed Name: Pete Payan

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hex Chrom							REMARKS/ ALTERNATE DESCRIPTION
MT-MW04S-042412		4.24.12	1215	Water	1								X							
MT-MW06S-042412		↓	1457	↓	1								X							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals 24 TAT

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
X RUSH (SURCHARGES APPLY)
X 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
___ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION
PO #:
BILL TO:

R1202581 5
Tetra Tech NUS,Inc.
MSA Groundwater

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	Signature: Amy Henschke	Signature:	Signature:	Signature:	Signature:
Printed Name: Pete Payan	Printed Name: Amy Henschke	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: TT INC.	Firm: AS	Firm:	Firm:	Firm:	Firm:
Date/Time: 4.24.12 / 1800	Date/Time: 4/25/12 0955	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1202557

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MT-MW06S-042412	R1202581-002	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW05S-042512	R1202604-003	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW04S-042412	R1202581-001	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW03S-042512	R1202604-002	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW01S-042512	R1202604-001	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MSA-MW35S-042312	R1202557-006	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20S-042312	R1202557-001	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20I-042312	R1202557-002	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20D-042312	R1202557-003	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17S-042312	R1202557-004	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17I-042312	R1202557-005	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	GSP-MW3-042612	R1202652-003	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW2-042612	R1202652-001	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW1-042612	R1202652-002	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/20/12 0755	R1202486-004	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/19/12 1240	Yes No Field	Millex HV R1SA546004	—	5.94	9.36	AMW 4/20/12 0932	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202486-005	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/19/12 1245	Yes No Field		—	5.22	9.39	AMW 4/20/12 0934	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 4/20/12	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	—	Yes No Field		—	5.69	9.53	AMW 4/20/12 0935	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
4/24/12 0950	R1202557-001	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1530	Yes No Field	Millex HV R1SA546004	—	5.84	9.36 *	AMW 4/24/12 1255	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-002	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1535	Yes No Field		—	6.20	9.31 *	AMW 4/24/12 1257	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-003	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1540	Yes No Field		—	5.22	9.43	AMW 4/12/24 1300	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-004	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1510	Yes No Field		—	7.16	9.32	AMW 4/24/12 1301	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-005	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1515	Yes No Field		—	5.35	9.46	AMW 4/24/12 1303	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

*Green PPT formed

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/24/12	R1202557-006	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/23/12 1555	Yes No Field	Millex HV R1SA546201K	—	4.66	9.37	CMW 4/24/12 1304	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032783
↓	Filter Blank for 4/24/12	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	—	Yes No Field	↓	—	5.73	9.59	CMW 4/24/12 1305	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/25/12 0955	R1202581-001	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/24/12 1215	Yes No Field	Millex HV R1SA546201K	—	5.16	9.39	CMW 4/25/12 1054	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	R1202581-002	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/24/12 1457	Yes No Field	↓	—	4.73	9.52	CMW 4/25/12 1055	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	Filter Blank for 4/25/12	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	—	Yes No Field	↓	—	5.69	9.39	CMW 4/25/12 1057	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/25/12 1010	R1202582 -003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/24/12 1530	Yes No Field	—	—	8.22	9.45	CMW 4/25/12 1217	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/26/12 1000	R1202604 -001	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/25/12 1335	Yes No Field	Millex HV R1SA546201K	—	6.56	9.34	CMW 4/26/12 1129	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032787
↓	R1202604 -002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 1450	Yes No Field	↓	—	7.09	9.42	CMW 4/26/12 1131	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032787

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/26/12 1000	R1202604 -003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 1530	Yes No Field	R1SA54620K Millex HV	—	4.51	9.36	CMW 4/26/12 1133	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC103278I
—	Filter Blank for 4/26/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 —	Yes No Field		—	8.40	9.39	CMW 4/26/12 1135	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC103278I
4/26/12 1000	R1202582 -010	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 1600	Yes No Field	—	—	5.51	9.46	CMW 4/26/12 1455	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC103278I
	R1202582 -012	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 1605	Yes No Field	—	—	5.63	9.39	CMW 4/26/12 1458	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC103278I
4/27/12 0925	Filter Blank For 4/27/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	Millex HV R1SA54620K	—	7.65	9.33	CMW 4/27/12 1004	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	MW1 R1202652-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/26/12 1325	Yes No Field		—	6.60	9.38	CMW 4/27/12 1005	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	MW2 R1202652 -001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/26/12 1320	Yes No Field		—	5.31	9.63	CMW 4/27/12 1007	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	MW3 R1202652 -003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/26/12 1440	Yes No Field		—	6.01	9.67	CMW 4/27/12 1008	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

H:\SMODOCS\Forms\cr+6SMO log

Instrument Name: R-IC-05 **Analyst:** CWOODS **Analysis Lot:** 289198 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204265-05	Chromium, Hexavalent, Dissolved	CCV		Water	0.50 µg/L	10 mL	0.499 µg/L	1					4/26/12 12:08:00	N	IV
RQ1204265-08	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:17:00	N	IV
RQ1204265-09	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:17:00	N	IV
RQ1204265-10	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.197 µg/L	1	0.004	0.020	99		4/26/12 12:25:00	N	IV
R1202604-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:42:00	N	IV
R1202604-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:50:00	N	IV
R1202604-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:59:00	N	IV
RQ1204265-01	Chromium, Hexavalent, Dissolved	DUP	R1202604-003	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	4/26/12 13:07:00	N	IV
RQ1204265-02	Chromium, Hexavalent, Dissolved	MS	R1202604-003	Water	0.20 µg/L	10 mL	0.201 µg/L	1	0.004	0.020	100		4/26/12 13:16:00	N	IV
R1202557-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 13:32:00	N	IV
R1202557-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 13:41:00	N	IV
RQ1204265-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.515 µg/L	1					4/26/12 13:49:00	N	IV
RQ1204265-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.03 µg/L	10 mL	0.026 µg/L	1	0.004	0.020			4/26/12 13:57:00	N	IV
R1202581-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 14:14:00	N	IV
R1202581-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 14:23:00	N	IV
RQ1204265-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.520 µg/L	1					4/26/12 14:52:00	N	IV
RQ1204265-07	Chromium, Hexavalent, Dissolved	CCB		Water	0.02 µg/L	10 mL	0.020 µg/L J	1	0.004	0.020			4/26/12 15:01:00	N	IV

00017

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202581
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202581-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 12:17	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202581
Date Analyzed: 4/26/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202581-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.197	0.200	99	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202581
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	289198	RQ1204265-05	4/26/12 12:08	0.500	0.499	100	95 - 105
CCV2	289198	RQ1204265-04	4/26/12 13:49	0.500	0.515	103	95 - 105
CCV3	289198	RQ1204265-03	4/26/12 14:52	0.500	0.520	104	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202581
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

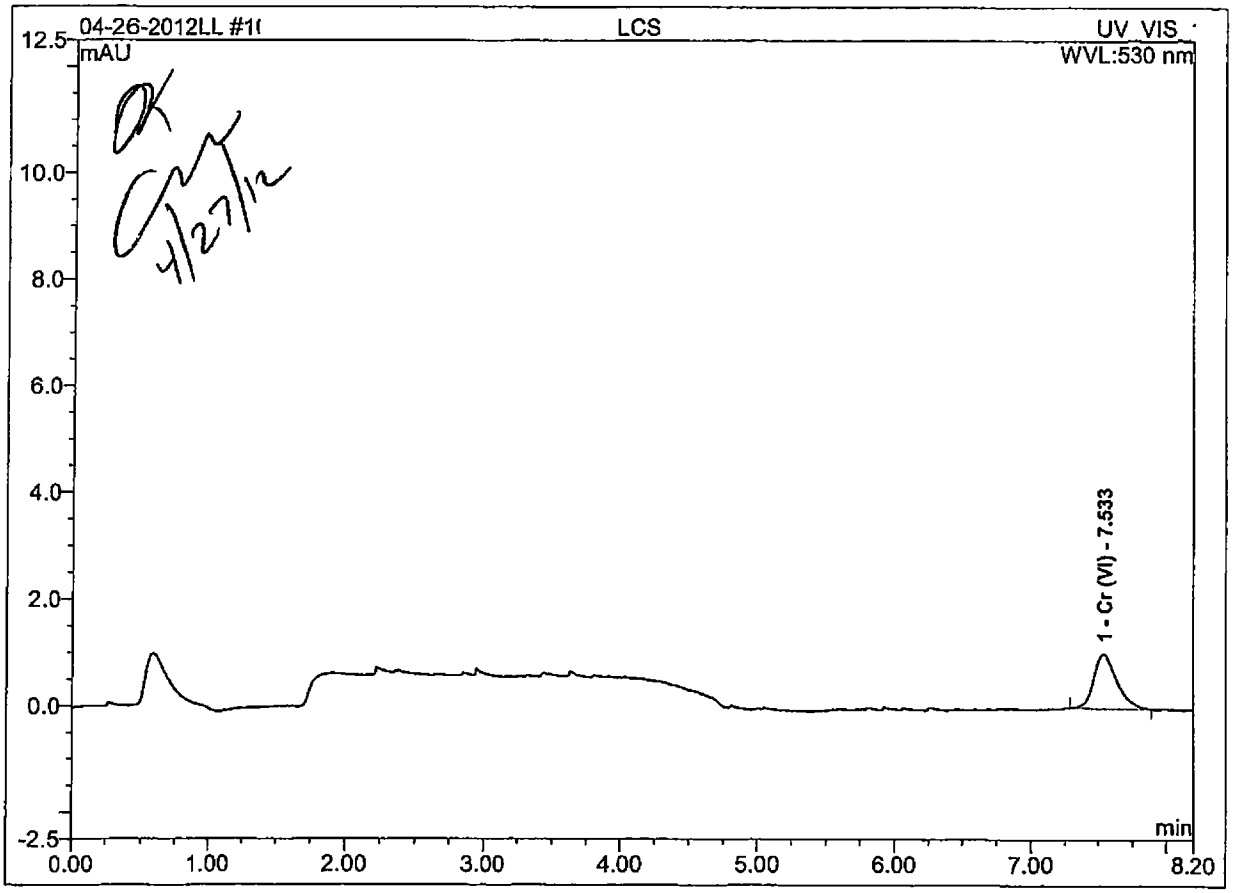
	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	289198	RQ1204265-08	4/26/12 12:17	0.004	0.020	0.020	U
CCB2	289198	RQ1204265-06	4/26/12 13:57	0.004	0.020	**0.026**	
CCB3	289198	RQ1204265-07	4/26/12 15:01	0.004	0.020	**0.020**	J

LCS rep result 0.197 ug/L

10 LCS

218.6 LL

Sample Name:	**LCS**	*Injection Volume:*	**2000.0**
Vial Number:	**34**	*Channel:*	**UV_VIS_1**
Sample Type:	**unknown**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 12:25**		



4/27/12

No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.533	Cr (VI)	1.023	0.201	100.00	0.19736	BMB
Total:			1.023	0.201	100.00	0.197	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**MAY 21, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202604

SAMPLES: 3/Aqueous/

MT-MW01S-042512 MT-MW03S-042512
MT-MW05S-042512

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202604, consists of three (3) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on April 25, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems- None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Positive results for hexavalent chromium were present in the continuing calibrations blanks (0.026 ug/L, 0.020 ug/L) affecting the samples. However, no validation actions were warranted as the sample results were nondetects.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MT-MW01S-042512			MT-MW03S-042512			MT-MW05S-042512		
SDG: R1202604	LAB_ID	R1202604-001			R1202604-002			R1202604-003		
FRACTION: MISC	SAMP_DATE	4/25/2012			4/25/2012			4/25/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202604
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/25/12 1335
Sample Matrix:	Water	**Date Received:**	4/26/12
Sample Name:	MT-MW01S-042512		
Lab Code:	R1202604-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 12:42	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202604
Date Collected: 4/25/12 1450
Date Received: 4/26/12

Sample Name: MT-MW03S-042512
Lab Code: R1202604-002

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 12:50	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202604
Date Collected: 4/25/12 1530
Date Received: 4/26/12

Sample Name: MT-MW05S-042512
Lab Code: R1202604-003

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 12:59	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202604
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	4/26/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 4/25/12 and received at CAS in good condition at a cooler temperature of 1.6 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Three water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services – CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA Ground Water Sampling	Project Number: 112IC04021-02
Project Manager: Tony Apanavage	Report CC:
Company/Address: Tetra Tech INC. 20251 Century Blvd STE 200 Germantown MD 20874	
Phone #: 301 528-3021	E-mail:
Sampler's Signature:	Sampler's Printed Name: Walt Payon

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: D

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hex Chrom							REMARKS/ ALTERNATE DESCRIPTION
MT-MW01S-042512		4-25-12	1335	Water	1								X							
MT-MW03S-042512		↓	1450	↓	1								X							
MT-MW05S-042512		↓	1530	↓	1								X							

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals 24 TAT

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
X RUSH (SURCHARGES APPLY)
X 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
___ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ N

INVOICE INFORMATION
PO #:
BILL TO:

R1202604 5
Tetra Tech NUS,Inc.
MSA Groundwater

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: Walt Payon	Signature:	Signature	Signature	Signature	Signature
Printed Name: Walt Payon	Printed Name: Gregory O. Esmerian	Printed Name	Printed Name	Printed Name	Printed Name
Firm: TT INC.	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 4-25-12 / 1900	Date/Time: 4-26-12 10:00	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1202557

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MT-MW06S-042412	R1202581-002	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW05S-042512	R1202604-003	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW04S-042412	R1202581-001	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW03S-042512	R1202604-002	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW01S-042512	R1202604-001	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MSA-MW35S-042312	R1202557-006	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20S-042312	R1202557-001	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20I-042312	R1202557-002	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20D-042312	R1202557-003	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17S-042312	R1202557-004	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17I-042312	R1202557-005	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	GSP-MW3-042612	R1202652-003	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW2-042612	R1202652-001	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW1-042612	R1202652-002	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/20/12 0755	R1202486-004	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/19/12 1240	Yes No Field	Millex HV R1SA546204	—	5.94	9.36	CMW 4/20/12 0932	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202486-005	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/19/12 1245	Yes No Field		—	5.22	9.39	CMW 4/20/12 0934	Buffer	WC1032783
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 4/20/12	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	—	Yes No Field		—	5.69	9.53	CMW 4/20/12 0935	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
4/24/12 0950	R1202557-001	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1530	Yes No Field	Millex HV R1SA546204	—	5.84	9.36 *	CMW 4/24/12 1255	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-002	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1535	Yes No Field		—	6.20	9.31 *	CMW 4/24/12 1257	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-003	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1540	Yes No Field		—	5.22	9.43	CMW 4/12/24 1300	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-004	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1510	Yes No Field		—	7.16	9.32	CMW 4/24/12 1301	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202557-005	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	4/23/12 1515	Yes No Field		—	5.35	9.46	CMW 4/24/12 1303	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

*Green PPT formed

0025

H:\SMODOCS\Forms\cr+6SMO log

0028

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/24/12	R1202557-006	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/23/12 1555	Yes No Field	Millex HV R1SA5462QK	—	4.66	9.37	CMW 4/24/12 1304	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032783
↓	Filter Blank for 4/24/12	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	—	Yes No Field	↓	—	5.73	9.59	CMW 4/24/12 1305	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/25/12 0955	R1202581-001	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/24/12 1215	Yes No Field	Millex HV R1SA5462QK	—	5.16	9.39	CMW 4/25/12 1054	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	R1202581-002	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/24/12 1457	Yes No Field	↓	—	4.73	9.52	CMW 4/25/12 1055	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	Filter Blank for 4/25/12	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	—	Yes No Field	↓	—	5.69	9.39	CMW 4/25/12 1057	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/25/12 1010	R1202582 -003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/24/12 1530	Yes No Field	—	—	8.22	9.45	CMW 4/25/12 1217	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/26/12 1000	R1202604 -001	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/25/12 1335	Yes No Field	Millex HV R1SA5462QK	—	6.56	9.34	CMW 4/26/12 1129	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032782
↓	R1202604 -002	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	4/25/12 1450	Yes No Field	↓	—	7.09	9.42	CMW 4/26/12 1131	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032787

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/26/12 1000	R1202604 -003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 1530	Yes No Field	R1SA546201 Millex HV	—	4.51	9.36	CMW 4/26/12 1133	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
—	Filter Blank for 4/26/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 —	Yes No Field	↓	—	8.40	9.39	CMW 4/26/12 1135	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/26/12 1000	R1202582 -010	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 1600	Yes No Field	—	—	5.51	9.46	CMW 4/26/12 1455	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
↓	R1202582 -012	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/25/12 1605	Yes No Field	—	—	5.63	9.39	CMW 4/26/12 1458	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1032781
4/27/12 0925	Filter Blank For 4/27/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	Millex HV R1SA546201	—	7.65	9.33	CMW 4/27/12 1004	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120226
↓	MW1 R1202652-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/26/12 1325	Yes No Field	↓	—	6.60	9.38	CMW 4/27/12 1005	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120226
↓	MW2 R1202652 -001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/26/12 1320	Yes No Field	↓	—	5.31	9.63	CMW 4/27/12 1007	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120226
↓	MW3 R1202652 -003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	4/26/12 1440	Yes No Field	↓	—	6.01	9.67	CMW 4/27/12 1008	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120226

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

00022

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202604
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202604-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/26/12 12:17	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202604
Date Analyzed: 4/26/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202604-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.197	0.200	99	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02

Service Request: R1202604

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6

Units: µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	289198	RQ1204265-05	4/26/12 12:08	0.500	0.499	100	95 - 105
CCV2	289198	RQ1204265-04	4/26/12 13:49	0.500	0.515	103	95 - 105
CCV3	289198	RQ1204265-03	4/26/12 14:52	0.500	0.520	104	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202604
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	289198	RQ1204265-08	4/26/12 12:17	0.004	0.020	0.020	U
CCB2	289198	RQ1204265-06	4/26/12 13:57	0.004	0.020	0.026	
CCB3	289198	RQ1204265-07	4/26/12 15:01	0.004	0.020	0.020	

Analytical Results Summary

Instrument Name: R-IC-05 **Analyst:** CWOODS **Analysis Lot:** 289198 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204265-05	Chromium, Hexavalent, Dissolved	CCV		Water	0.50 µg/L	10 mL	0.499 µg/L	1					4/26/12 12:08:00	N	IV
RQ1204265-08	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:17:00	N	IV
RQ1204265-09	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:17:00	N	IV
RQ1204265-10	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.197 µg/L	1	0.004	0.020	99		4/26/12 12:25:00	N	IV
R1202604-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:42:00	N	IV
R1202604-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:50:00	N	IV
R1202604-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 12:59:00	N	IV
RQ1204265-01	Chromium, Hexavalent, Dissolved	DUP	R1202604-003	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	4/26/12 13:07:00	N	IV
RQ1204265-02	Chromium, Hexavalent, Dissolved	MS	R1202604-003	Water	0.20 µg/L	10 mL	0.201 µg/L	1	0.004	0.020	100		4/26/12 13:16:00	N	IV
R1202557-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 13:32:00	N	IV
R1202557-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 13:41:00	N	IV
RQ1204265-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.515 µg/L	1					4/26/12 13:49:00	N	IV
RQ1204265-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.03 µg/L	10 mL	0.026 µg/L	1	0.004	0.020			4/26/12 13:57:00	N	IV
R1202581-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 14:14:00	N	IV
R1202581-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/26/12 14:23:00	N	IV
RQ1204265-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.520 µg/L	1					4/26/12 14:52:00	N	IV
RQ1204265-07	Chromium, Hexavalent, Dissolved	CCB		Water	0.02 µg/L	10 mL	0.020 µg/L J	1	0.004	0.020			4/26/12 15:01:00	N	IV

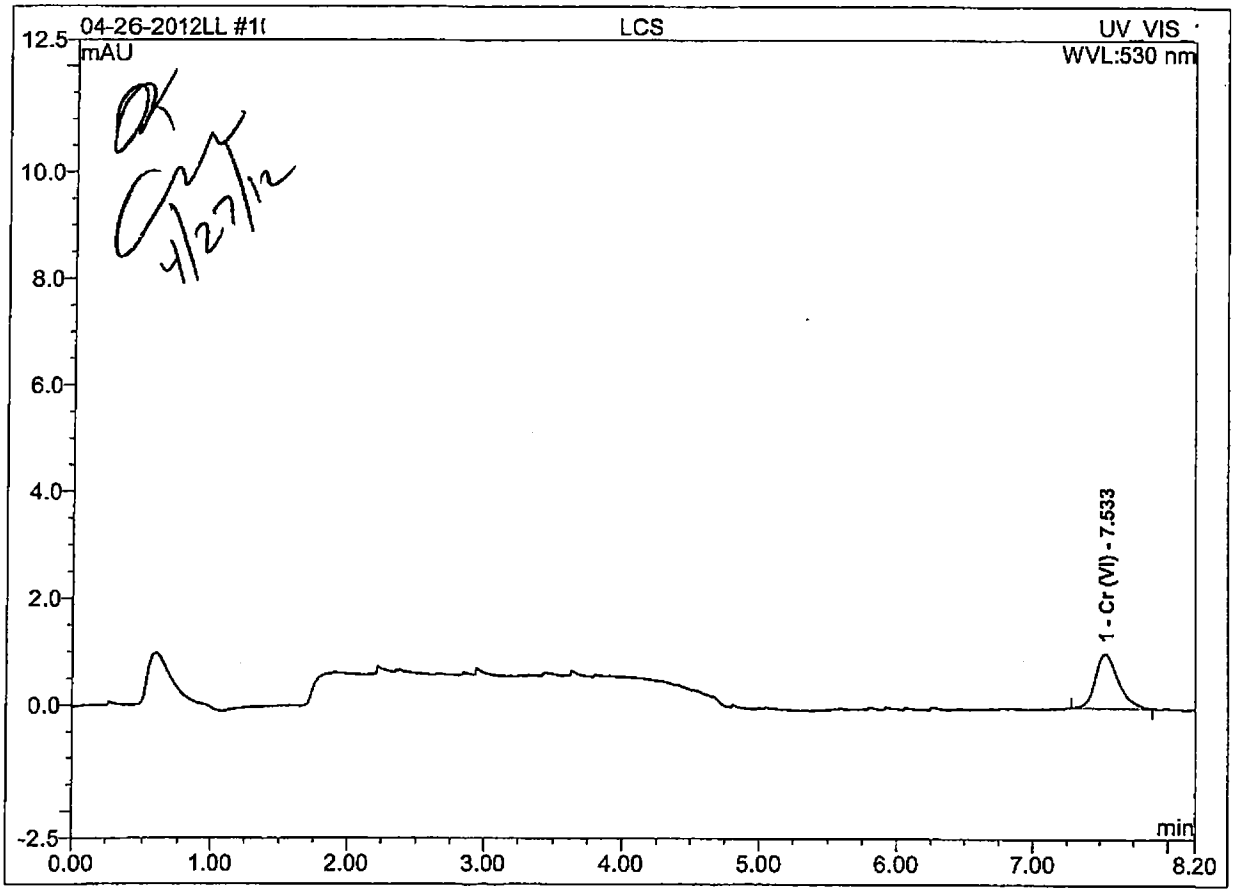
# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

LCS rep result 0.197 ug/L

10 LCS

218.6 LL

Sample Name:	**LCS**	*Injection Volume:*	**2000.0**
Vial Number:	**34**	*Channel:*	**UV_VIS_1**
Sample Type:	**unknown**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 12:25**		



OK 4/27/12

No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.533	Cr (VI)	1.023	0.201	100.00	0.19736	BMB
Total:			1.023	0.201	100.00	0.197	

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE:** **MAY 21, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202652

SAMPLES: 3/Aqueous/

GSP-MW1-042612 GSP-MW2-042612
GSP-MW3-042612

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202652, consists of three (3) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on April 26, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems – None.

Minor Problems - None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW1-042612			GSP-MW2-042612			GSP-MW3-042612		
SDG: R1202652	LAB_ID	R1202652-002			R1202652-001			R1202652-003		
FRACTION: MISC	SAMP_DATE	4/26/2012			4/26/2012			4/26/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202652
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/26/12 1325
Sample Matrix:	Water	**Date Received:**	4/27/12
Sample Name:	GSP-MW1-042612		
Lab Code:	R1202652-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/27/12 10:31	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202652
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/26/12 1320
Sample Matrix:	Water	**Date Received:**	4/27/12
Sample Name:	GSP-MW2-042612		
Lab Code:	R1202652-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/27/12 10:48	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202652
Date Collected: 4/26/12 1440
Date Received: 4/27/12

Sample Name: GSP-MW3-042612
Lab Code: R1202652-003

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/27/12 11:05	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202652
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	4/27/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 4/26/12 and received at CAS in good condition at a cooler temperature of 0.9 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Three water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA Ground water Sampling	Project Number: 112C04021-02
Project Manager: Tony Apanavage	Report CC:
Company/Address: Tetra Tech INC.	
20251 Century Blvd STE 200	
Germantown MD 20874	
Phone #: 301 528-3021	E-mail:
Sampler's Signature: Walt Ryon	Sampler's Printed Name: Walt Ryon

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hex Chrom	REMARKS/ ALTERNATE DESCRIPTION
GSP-MW2-042612		4-26-12	1320	Water	1								X	
GSP-MW1-042612		↓	1325	↓	1								X	
GSP-MW3-042612		↓	1440	↓	1								X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals 24 TAT

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
X RUSH (SURCHARGES APPLY)
X 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
___ Standard

REQUESTED REPORT DATE: _____

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION
PO #:
BILL TO:

R1202652 5
Tetra Tech NUS,Inc.
MSA Groundwater

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: Walt Ryon	Signature: Amy Hentschke	Signature	Signature	Signature	Signature
Printed Name: Walt Ryon	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: TT INC.	Firm: AGS	Firm	Firm	Firm	Firm
Date/Time: 4-26-12 / 1700	Date/Time: 4/27/12 0925	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1202557

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MT-MW06S-042412	R1202581-002	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW05S-042512	R1202604-003	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW04S-042412	R1202581-001	NM	4/24/2012	4/26/2012	4/26/2012	2	0	2
CR6	UG/L	MT-MW03S-042512	R1202604-002	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MT-MW01S-042512	R1202604-001	NM	4/25/2012	4/26/2012	4/26/2012	1	0	1
CR6	UG/L	MSA-MW35S-042312	R1202557-006	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20S-042312	R1202557-001	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20I-042312	R1202557-002	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW20D-042312	R1202557-003	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17S-042312	R1202557-004	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	MSA-MW17I-042312	R1202557-005	NM	4/23/2012	4/24/2012	4/24/2012	1	0	1
CR6	UG/L	GSP-MW3-042612	R1202652-003	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW2-042612	R1202652-001	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1
CR6	UG/L	GSP-MW1-042612	R1202652-002	NM	4/26/2012	4/27/2012	4/27/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
4/26/12 1000	R1202604 -003	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	4/25/12 1530	(Yes) No Field	R1A5416201 Millex HV	—	4.51	9.36	CMW 4/26/12 1133	Buffer	WC1032785
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 4/26/12	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	4/25/12 —	(Yes) No Field	↓	—	8.40	9.39	CMW 4/26/12 1135	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
4/26/12 1000	R1202582 -010	(7199) 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	4/25/12 1600	Yes (No) Field	—	—	5.51	9.46	CMW 4/26/12 1455	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
↓	R1202582 -012	(7199) 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	4/25/12 1605	Yes (No) Field	—	—	5.63	9.39	CMW 4/26/12 1458	Buffer	WC1032781
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
4/27/12 0925	Filter Blank For 4/27/12	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	—	(Yes) No Field	Millex HV R1A5416201	—	7.65	9.33	CMW 4/27/12 1004	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
↓	MW1 R1202652-002	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	4/26/12 1325	(Yes) No Field	↓	—	6.60	9.38	CMW 4/27/12 1005	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	MW2 R1202652 -001	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	4/26/12 1320	(Yes) No Field		—	5.31	9.63	CMW 4/27/12 1007	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	MW3 R1202652 -003	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	4/26/12 1440	(Yes) No Field		—	6.01	9.67	CMW 4/27/12 1008	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optionnl
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

H:\SMODOCS\Forms\cr+6SMO log

Analytical Results Summary

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 289262 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204287-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.523 µg/L	1					4/27/12 08:57:00	N	IV
RQ1204287-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/27/12 09:12:00	N	IV
RQ1204287-07	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/27/12 09:12:00	N	IV
RQ1204287-08	Chromium, Hexavalent, Dissolved	LCS		Water	0.21 µg/L	10 mL	0.207 µg/L	1	0.004	0.020	103		4/27/12 09:27:00	N	IV
R1202652-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/27/12 10:31:00	N	IV
R1202652-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/27/12 10:48:00	N	IV
R1202652-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/27/12 11:05:00	N	IV
RQ1204287-01	Chromium, Hexavalent, Dissolved	DUP	R1202652-003	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	4/27/12 11:23:00	N	IV
RQ1204287-02	Chromium, Hexavalent, Dissolved	MS	R1202652-003	Water	0.18 µg/L	10 mL	0.181 µg/L	1	0.004	0.020	91		4/27/12 11:40:00	N	IV
RQ1204287-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.518 µg/L	1					4/27/12 11:57:00	N	IV
RQ1204287-05	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			4/27/12 12:14:00	N	IV

00018

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202652
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202652-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	4/27/12 09:12	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202652
Date Analyzed: 4/27/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202652-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.207	0.200	103	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202652
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	289262	RQ1204287-04	4/27/12 08:57	0.500	0.523	105	95 - 105
CCV2	289262	RQ1204287-03	4/27/12 11:57	0.500	0.518	104	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202652
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

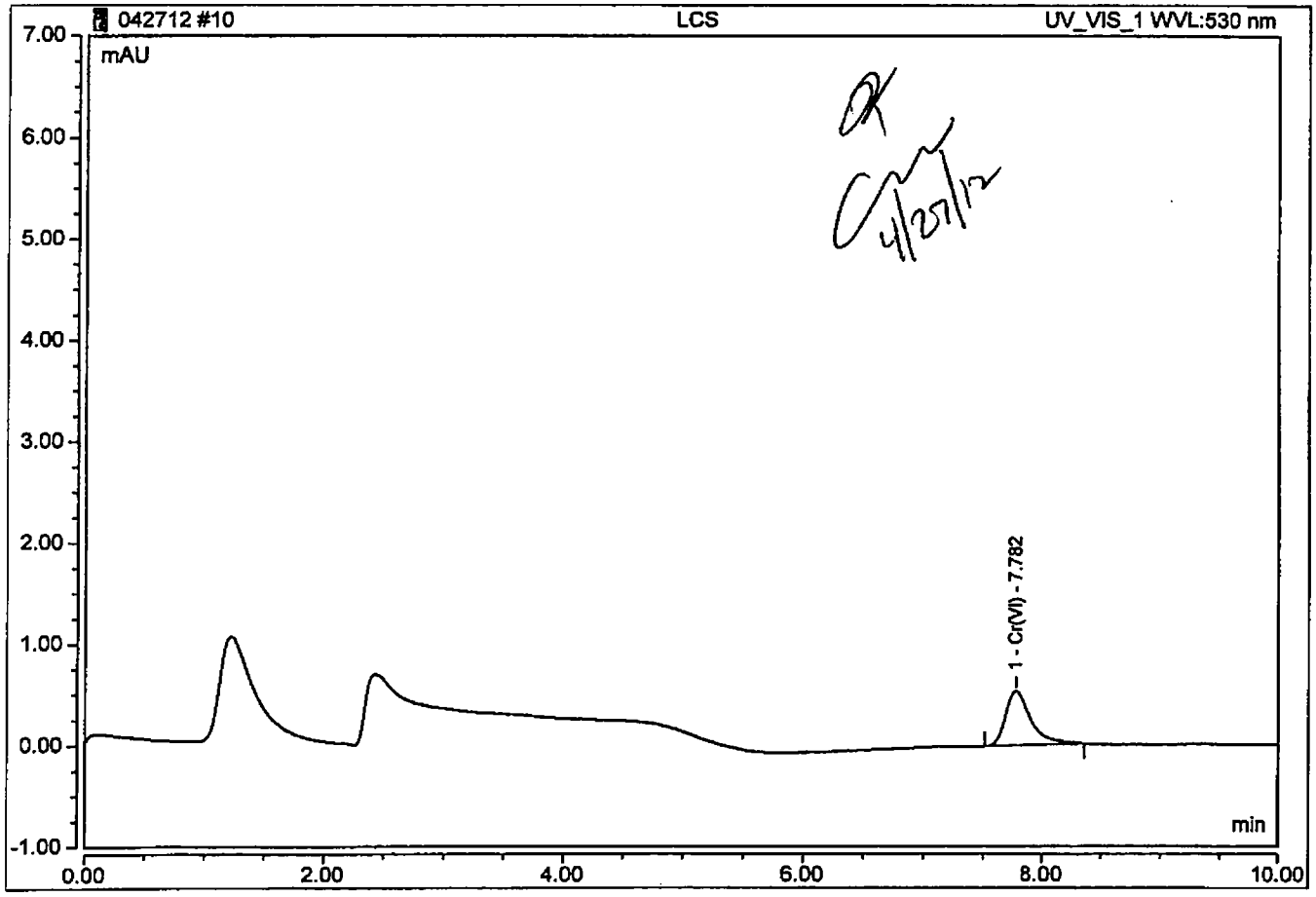
Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	289262	RQ1204287-06	4/27/12 09:12	0.004	0.020	0.020	U
CCB2	289262	RQ1204287-05	4/27/12 12:14	0.004	0.020	0.020	U

Peak Integration Report

Sample Name:	LCS	*Inj. Vol.:*	1000.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Processing Method:	8-042612	*Program:*	Cr(VI) 218.6
Inj. Date / Time:	27-Apr-2012 / 09:27	*Run Time:*	10.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.78	Cr(VI)	BMB	0.134	0.529	0.2067
TOTAL:				0.13	0.53	0.21



OK
4/27/12

LCS
rep result
0.207 ug/L

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 6, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202694

SAMPLES: 6/Aqueous/

GSP-MW4-043012	GSP-MW5-043012
GSP-MW6-043012	GSP-MW7-043012
GSP-MW8-043012	MT-02S-043012

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202694, consists of six (6) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on April 30, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory duplicate results, matrix spike recoveries, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems- None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	GSP-MW4-043012			GSP-MW5-043012			GSP-MW6-043012			GSP-MW7-043012		
SDG: R1202694	LAB_ID	R1202694-003			R1202694-002			R1202694-001			R1202694-004		
FRACTION: MISC	SAMP_DATE	4/30/2012			4/30/2012			4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.118			0.11		

PROJ_NO: 04021	NSAMPLE	GSP-MW8-043012			MT-02S-043012		
SDG: R1202694	LAB_ID	R1202694-005			R1202694-006		
FRACTION: MISC	SAMP_DATE	4/30/2012			4/30/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.097			0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/30/12 1230
Sample Matrix:	Water	**Date Received:**	5/ 1/12
Sample Name:	GSP-MW4-043012		
Lab Code:	R1202694-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/1/12 11:49	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/30/12 1220
Sample Matrix:	Water	**Date Received:**	5/ 1/12
Sample Name:	GSP-MW5-043012		
Lab Code:	R1202694-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/1/12 11:34	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/30/12 1210
Sample Matrix:	Water	**Date Received:**	5/ 1/12
Sample Name:	GSP-MW6-043012		
Lab Code:	R1202694-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.118**		µg/L	0.020	0.004	1	NA	5/1/12 11:19	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/30/12 1235
Sample Matrix:	Water	**Date Received:**	5/ 1/12
Sample Name:	GSP-MW7-043012		
Lab Code:	R1202694-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.110**		µg/L	0.020	0.004	1	NA	5/1/12 12:04	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/30/12 1240
Sample Matrix:	Water	**Date Received:**	5/ 1/12
Sample Name:	GSP-MW8-043012		
Lab Code:	R1202694-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.097**		µg/L	0.020	0.004	1	NA	5/1/12 12:19	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/30/12 1320
Sample Matrix:	Water	**Date Received:**	5/ 1/12
Sample Name:	MT-02S-043012		
Lab Code:	R1202694-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/1/12 12:34	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
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Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202694
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/01/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 4/30/12 and received at CAS in good condition at a cooler temperature of 2.9 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Six water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

A matrix spike and duplicate analyses was not requested but was analyzed on sample MT-02S-043012. The recovery and RPD were with QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

ALS

Chain of Custody Record

ALS TestAmerica
THE LEADER IN ENVIRONMENTAL TESTING

~~TestAmerica~~ Laboratory location: 1565 Jefferson Rd Rochester NY 14623

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: Tetra Tech	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact:	COC No: 006078
Address: 20251 Century Blvd Ste 200	Telephone: (301) 528-5552	Telephone: (703) 342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown MD 20874	Email: Tony.Apanavage@tetratech.com	Analysis Turnaround Time (in BUS days)		
Phone: (301) 528-5552		TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Project Name: MSA GW Sampling	Method of Shipment/Carrier: Fed Ex			
Project Number: 112IC04021	Shipping/Tracking No: 873935710956			
PO #				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C/Grab G	Hexavalent Chromium	Sample Specific Notes / Special Instructions:
GSP-MW6-043012	4/30/12	1210		X									1		N	G	X	
GSP-MW5-043012	↓	1220		X									1		N	G	X	
GSP-MW4-043012	↓	1230		X									1		N	G	X	
GSP-MW7-043012	↓	1235		X									1		N	G	X	
GSP-MW8-043012	↓	1240		X									1		N	G	X	
MT-025-043012	↓	1320		X									1		N	G	X	

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For

Special Instructions/QC Requirements & Comments: Samples Must be analyzed within 24 hrs of sample time.

R1202694 5
Tetra Tech NUS, Inc.
MSA Groundwater

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	4-30-12 / 1500			
			Received in Laboratory by: [signature]	ALS	5/1/12 0815

90000

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TAL 0018-1 (04/10)

HOLDTIME

SDG R1202694

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW6S-040312	R1202808-001	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW5-043012	R1202694-002	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW6-043012	R1202694-001	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW7-043012	R1202694-004	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW8-043012	R1202694-005	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW1A-050212	R1202767-005	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW1B-050212	R1202767-006	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW2A-040312	R1202808-005	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4D-040312	R1202808-008	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4I-040312	R1202808-007	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4S-040312	R1202808-006	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW4-043012	R1202694-003	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW6I-040312	R1202808-002	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MT-02S-043012	R1202694-006	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW7S-040312	R1202808-004	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW8D-050212	R1202767-003	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8I-050212	R1202767-002	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8S-050212	R1202767-001	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW14D-050112	R1202733-005	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW14I-050112	R1202733-004	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW26S-050112	R1202733-006	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32I-050112	R1202733-001	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32S-050212	R1202767-004	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW33I-050112	R1202733-003	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW33S-050112	R1202733-002	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-DMW6D-040312	R1202808-003	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/1/12	Filter Blank for 4f 5/1/12 CMW 5/1/12	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	—	(Yes) No Field	Millex HV R8A5420K	—	5.27	9.41	CMW 5/1/12 0939	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/1/12 0815	R1202694-001	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1210	(Yes) No Field		—	7.02	9.34	CMW 5/1/12 0941	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-002	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1220	(Yes) No Field		—	5.98	9.43	CMW 5/1/12 0942	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-003	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1230	(Yes) No Field		—	6.59	9.55	CMW 5/1/12 0944	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-004	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1235	(Yes) No Field		—	5.38	9.60	CMW 5/1/12 0945	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-005	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1240	(Yes) No Field		—	6.99	9.56	CMW 5/1/12 0947	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-006	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1320	(Yes) No Field		—	5.68	9.53	CMW 5/1/12 0949	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

000026

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202694-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/1/12 10:49	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202694
Date Collected: 4/30/12
Date Received: 5/1/12
Date Analyzed: 5/ 1/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MT-02S-043012
Lab Code: R1202694-006

Units: µg/L
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	MT-02S-043012DUP Duplicate Sample R1202694-006DUP Result	Average	RPD	RPD Limit
Chromium, Hexavalent, Dissolved	218.6	0.020	0.004	0.020 U	0.020 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202694
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	4/30/12
Sample Matrix:	Water	**Date Received:**	5/1/12
		Date Analyzed:	5/ 1/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name:	MT-02S-043012	**Units:**	µg/L
Lab Code:	R1202694-006	**Basis:**	NA

Analytical Method: 218.6

MT-02S-043012MS
Matrix Spike
R1202694-006MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	ND	0.192	0.200	96	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202694
Date Analyzed: 5/ 1/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202694-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.203	0.200	102	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202694
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	289669	RQ1204413-04	5/1/12 10:33	0.500	0.509	102	95 - 105
CCV2	289669	RQ1204413-03	5/1/12 13:33	0.500	0.511	102	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202694
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

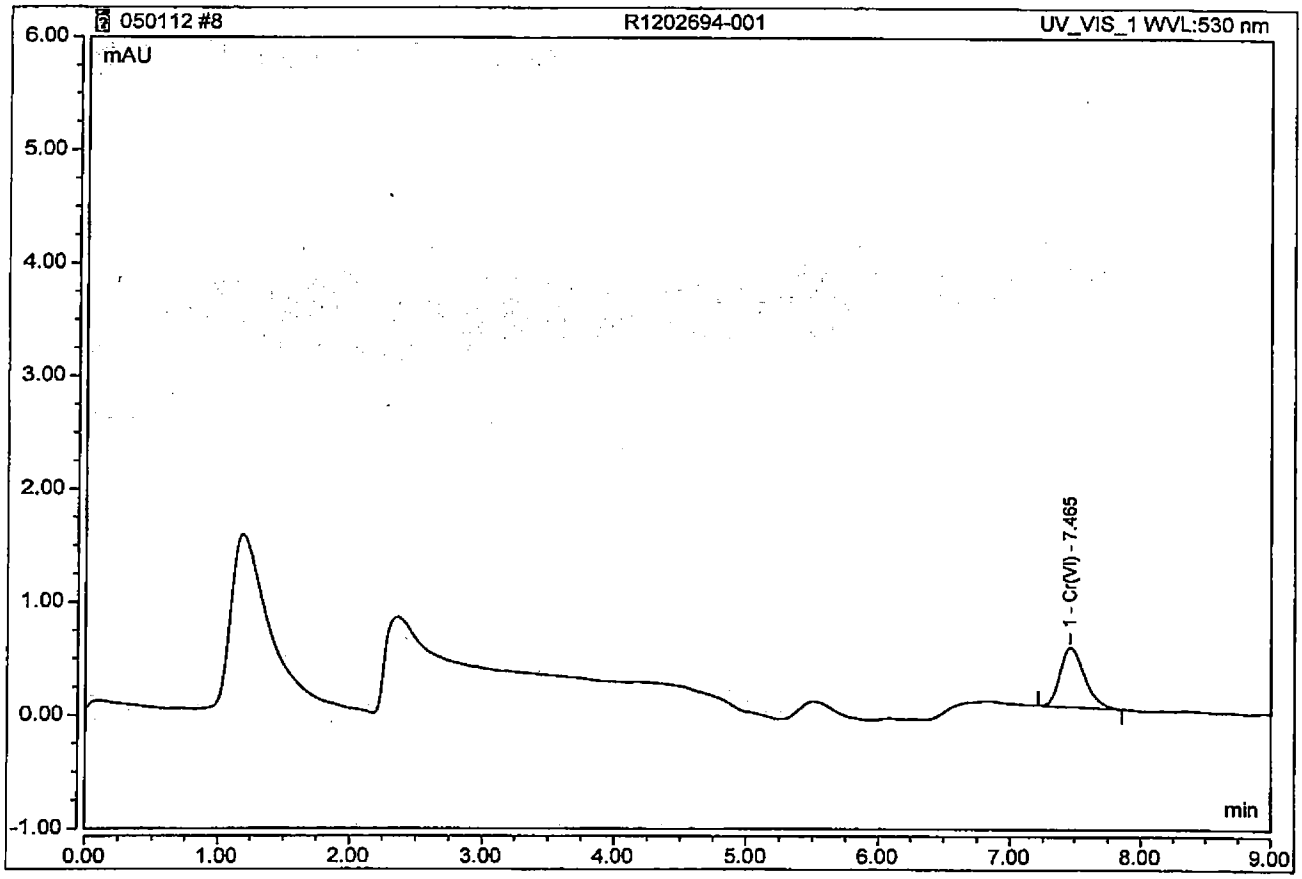
	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	289669	RQ1204413-06	5/1/12 10:49	0.004	0.020	0.020	U
CCB2	289669	RQ1204413-05	5/1/12 13:48	0.004	0.020	0.020	U

Sample GSP-mw6-043012 Hex Reported 0.118 ug/L

Peak Integration Report

Sample Name:	R1202694-001	Inj. Vol:	1000.00
Injection Type:	Unknown	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date / Time:	01-May-2012 / 11:19	Run Time:	9.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.46	Cr(VI)	BMB	0.116	0.525	0.1177
TOTAL:				0.12	0.53	0.12



Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

6-15-12
JAJ

X-VALUE	Y-VALUE
0.02	0.019
0.2	0.196
1	1.003

CORREL	SLOPE
0.999992545	**1.005499755**
Y-INTERC	
-0.002903234	

MW6-043012 ✓

0.118252872	0.116

Calibration Batch Report

Sequence:	050112	Injection Volume (uL):	1,000.00
Processing Method:	8-050112	Calibration Type:	Lin. WithOffset, 1/A
Corr. Coefficient:	99.997	Instrument Method:	Cr(VI) 218.6

Calibration Summary

Injection Name / Cr(VI)	Ret. Time min / Cr(VI)	Area mAU*min / Cr(VI)	Height mAU / Cr(VI)	Amount ppb / Cr(VI)
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
STANDARD 1	n.a.	n.a.	n.a.	n.a.
STANDARD 2	7.487	0.0186	0.090	0.020
STANDARD 3	7.493	0.1956	0.846	0.197
STANDARD 4	7.490	1.0035	4.183	1.003
Average	7.490			
Rel. Std. Dev.	0.045 %			

Detection Parameters

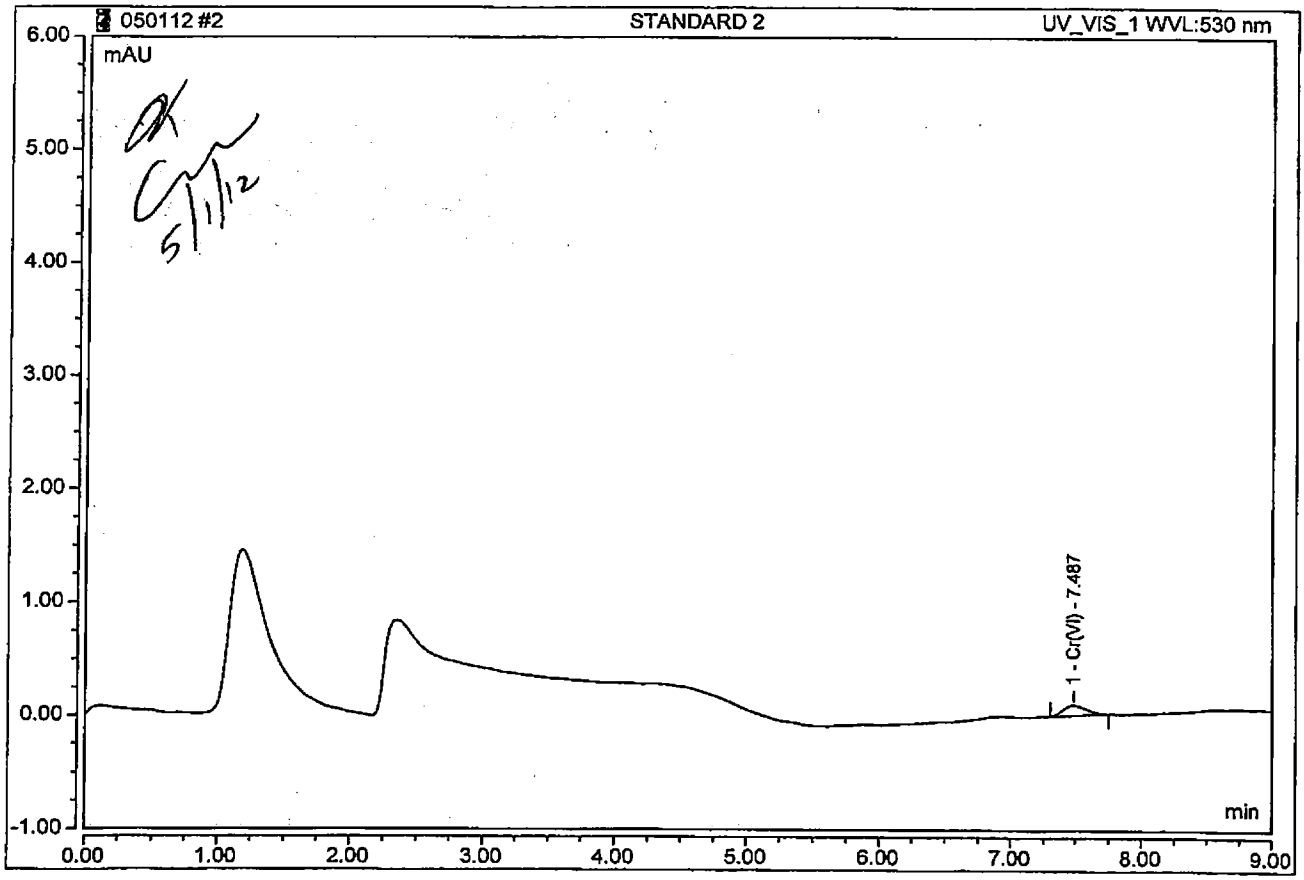
Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Inhibit Integration	On	Any	All Channels
7.000	Valley To Valley	On	Any	All Channels
7.000	Inhibit Integration	Off	Any	All Channels
7.000	Minimum Area	0.0005 [Signal*min]	Any	All Channels
7.000	Maximum Height Reject	0.050 [Signal]	Any	All Channels

000052

Peak Integration Report

Sample Name:	STANDARD 2	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date & Time:	01-May-2012 / 09:46	Run Time:	10.00

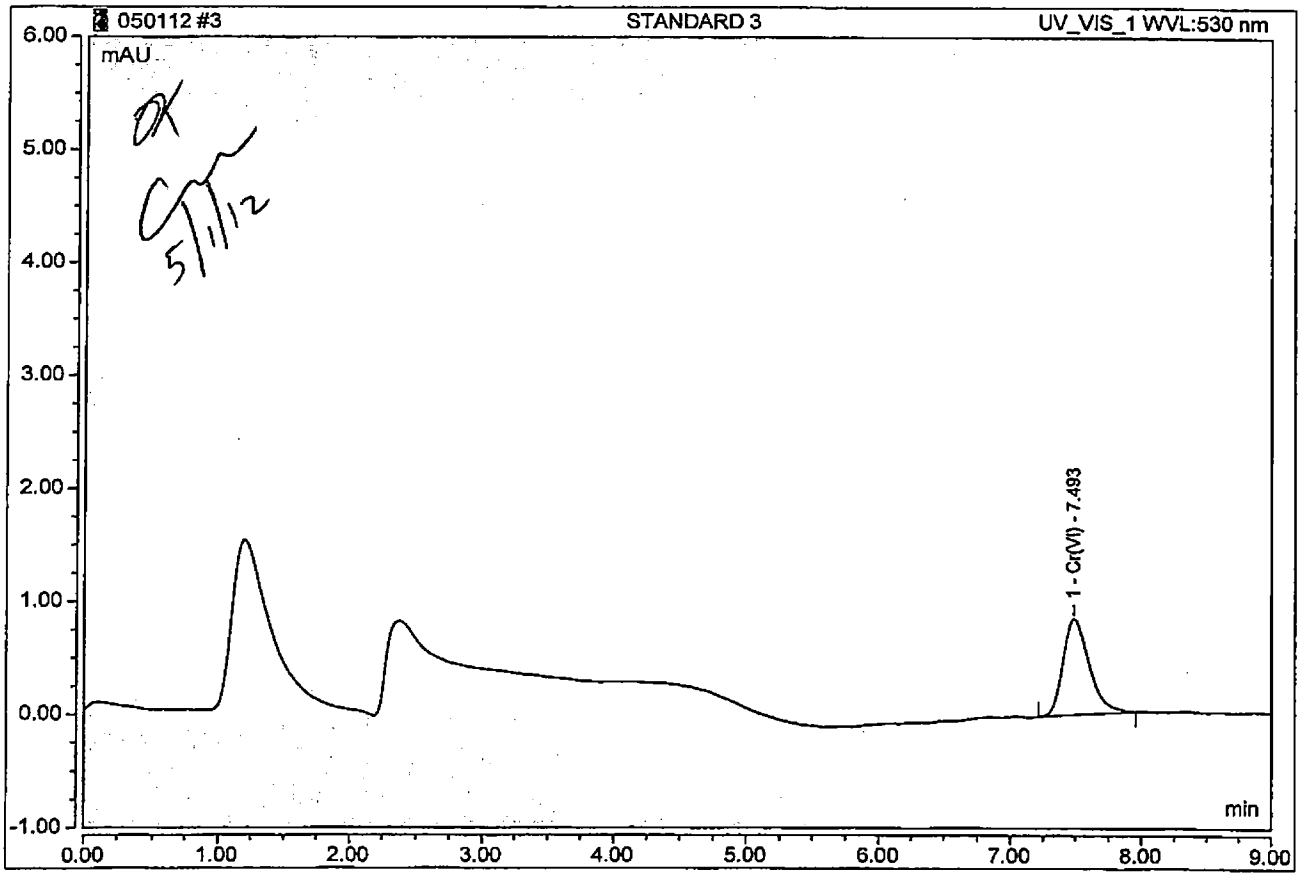
No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.49	Cr(VI)	BMB	0.019	0.090	0.0203
TOTAL:				0.02	0.09	0.02



Peak Integration Report

Sample Name:	STANDARD 3	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date / Time:	01 May 2012 / 10:01	Run Time:	10.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.49	Cr(VI)	BMB	0.196	0.846	0.1969
TOTAL:				0.20	0.85	0.20

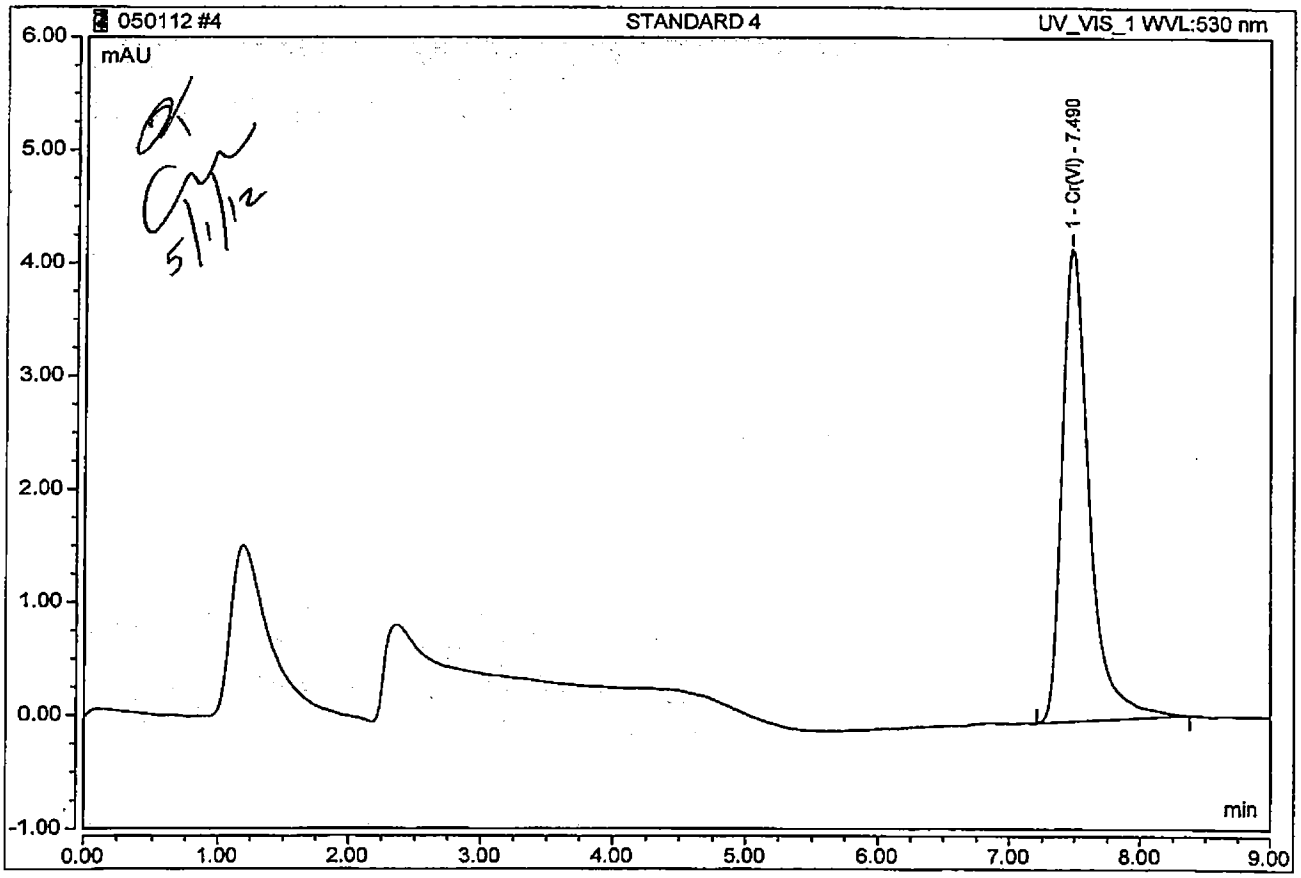


OK
5/1/12

Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol.:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date / Time:	01-May-2012 / 10:17	Run Time:	10.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.49	Cr(VI)	BMB	1.003	4.183	1.0029
TOTAL:				1.00	4.18	1.00



Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00030

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE:** **JUNE 1, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202733

SAMPLES: 6/Aqueous/

MSA-MW14D-050112	MSA-MW14I-050112
MSA-MW26S-050112	MSA-MW32I-050112
MSA-MW33I-050112	MSA-MW33S-050112

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202733, consists of six (6) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 1, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory duplicate results, matrix spike recoveries, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems- None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW14D-050112			MSA-MW14I-050112			MSA-MW26S-050112			MSA-MW32I-050112		
SDG: R1202733	LAB_ID	R1202733-005			R1202733-004			R1202733-006			R1202733-001		
FRACTION: MISC	SAMP_DATE	5/1/2012			5/1/2012			5/1/2012			5/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.04			0.02	U		0.02	U		0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW33I-050112			MSA-MW33S-050112		
SDG: R1202733	LAB_ID	R1202733-003			R1202733-002		
FRACTION: MISC	SAMP_DATE	5/1/2012			5/1/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 1/12 1330
Sample Matrix:	Water	**Date Received:**	5/ 2/12
Sample Name:	MSA-MW14D-050112		
Lab Code:	R1202733-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.040		µg/L	0.020	0.004	1	NA	5/2/12 11:24	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 1/12 1210
Sample Matrix:	Water	**Date Received:**	5/ 2/12
Sample Name:	MSA-MW14I-050112		
Lab Code:	R1202733-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/2/12 10:39	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 1/12 1515
Sample Matrix:	Water	**Date Received:**	5/ 2/12
Sample Name:	MSA-MW26S-050112		
Lab Code:	R1202733-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/2/12 11:39	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 1/12 1446
Sample Matrix:	Water	**Date Received:**	5/ 2/12
Sample Name:	MSA-MW32I-050112		
Lab Code:	R1202733-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/2/12 10:09	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 1/12 1515
Sample Matrix:	Water	**Date Received:**	5/ 2/12
Sample Name:	MSA-MW33I-050112		
Lab Code:	R1202733-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/2/12 11:53	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 1/12 1512
Sample Matrix:	Water	**Date Received:**	5/ 2/12
Sample Name:	MSA-MW33S-050112		
Lab Code:	R1202733-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/2/12 10:24	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202733
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/02/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/01/12 and received at CAS in good condition at a cooler temperature of 3.5 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Six water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

A matrix spike and duplicate analyses was requested and was analyzed on sample MSA-MW14I-050112. The recovery and RPD were with QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Chain of Custody Record

ALS ~~TestAmerica~~ Laboratory location: 1565 Jefferson Rd. Rochester NY 14623

Regulatory program: ☐ DW ☐ NPDES ☐ RCRA ☐ Other

ALS ~~TestAmerica~~ THE LEADER IN ENVIRONMENTAL TESTING

TestAmerica Laboratories, Inc.

Client Contact				
Company Name: TetraTech NUS	Client Project Manager: Tony Apanavage	Site Contact: Stu Cameron	Lab Contact:	COC No: 006081
Address: 20251 Century Blvd Suite 200	Telephone: (301) 528-5552	Telephone: (703) 342-8389	Telephone:	1 of 1 COCs
City/State/Zip: Germantown, MD 20874	Email: Tony.Apanavage@TetraTech.com	Analysis Turnaround Time (in BUS days) TAT if different from below ☐ 3 weeks ☐ 2 weeks ☐ 1 week ☐ 2 days ☐ 1 day		
Phone: (301) 528-5552				
Project Name: MSA GW Sampling 2012	Method of Shipment/Carrier:			
Project Number: 112IC04021	Shipping/Tracking No: 8739 3571 0945			
PO #				

Analyses

Sample Identification	Sample Date	Sample Time	Matrix: Air	Aqueous	Sediment	Solid	Other:	Containers & Preservatives: H2SO4	HNO3	HCl	NaOH	ZnAc/NaOH	Unpres	Other:	Filtered Sample (Y/N)	Composite C/Grab G	Hex. Chrom.	Sample Specific Notes / Special Instructions:
MSA-MW32I-050112	5/1/12	1446		X									X				X	
MSA-MW33S-050112	↓	1512		X									X				X	
MSA-MW33I-050112	↓	1515		X									X				X	
MSA-MW14I-050112	↓	1210		X									X				X	MS/MSD
MSA-MW14D-050112	↓	1330		X									X				X	
MSA-MW26S-050112	↓	1515		X									X				X	

Possible Hazard Identification: ☒ Non-Hazard ☐ Flammable ☐ Skin Irritant ☐ Poison B ☐ Unknown

Sample Disposal (A fee may be assessed if samples are retained longer than 1 month): ☐ Return to Client ☒ Disposal By Lab ☐ Archive For

R1202733 5

Tetra Tech NUS,Inc.
MSA Groundwater

Special Instructions/QC Requirements & Comments:
Samples must be analyzed within 24 hours of sample time

Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
[signature]	Tetra Tech	5-1-12 / 1615	[signature]	ALS	5-2-12 @08:00
Relinquished by:	Company:	Date/Time:	Received by:	Company:	Date/Time:
Relinquished by:	Company:	Date/Time:	Received in Laboratory by:	Company:	Date/Time:

S0000

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TAL 0018- 1 (04/10)

HOLDTIME

SDG R1202694

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW6S-040312	R1202808-001	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW5-043012	R1202694-002	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW6-043012	R1202694-001	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW7-043012	R1202694-004	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW8-043012	R1202694-005	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW1A-050212	R1202767-005	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW1B-050212	R1202767-006	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW2A-040312	R1202808-005	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4D-040312	R1202808-008	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4I-040312	R1202808-007	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4S-040312	R1202808-006	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW4-043012	R1202694-003	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW6I-040312	R1202808-002	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MT-02S-043012	R1202694-006	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW7S-040312	R1202808-004	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW8D-050212	R1202767-003	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8I-050212	R1202767-002	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8S-050212	R1202767-001	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW14D-050112	R1202733-005	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW14I-050112	R1202733-004	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW26S-050112	R1202733-006	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32I-050112	R1202733-001	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32S-050212	R1202767-004	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW33I-050112	R1202733-003	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW33S-050112	R1202733-002	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-DMW6D-040312	R1202808-003	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/1/12	Filter Blank for H 5/1/12 CW 5/1/12	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	—	(Yes) No Field	Millex HV R1SA5420K	—	5.27	9.41	CW 5/1/12 0939	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/1/12 0815	R1202694-001	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1210	(Yes) No Field		—	7.02	9.34	CW 5/1/12 0941	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-002	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1220	(Yes) No Field		—	5.98	9.43	CW 5/1/12 0942	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-003	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1230	(Yes) No Field		—	6.59	9.55	CW 5/1/12 0944	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-004	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1235	(Yes) No Field		—	5.38	9.60	CW 5/1/12 0945	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-005	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1240	(Yes) No Field		—	6.99	9.56	CW 5/1/12 0947	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202694-006	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	4/30/12 1320	(Yes) No Field		—	5.68	9.53	CW 5/1/12 0949	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/2/12 0800	R1202733-001	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	5/1/12 1446	Yes No Field	~~Millex HV R1SA5420K~~ R1SA5420K	5/2/12 —	6.85	9.62	CW 5/2/12 0916	Buffer	WC1120222E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

00026

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/2/12 0800	R1202733-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1512	Yes No Field	Millex HN RISA54620K	—	7.21	9.67	CMW 5/2/12 0917	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1515	Yes No Field		—	10.55	9.64	CMW 5/2/12 0918	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1210	Yes No Field		—	6.27	9.32	CMW 5/2/12 0913	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-005	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1330	Yes No Field		—	8.02	9.62	CMW 5/2/12 0920	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-006	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1515	Yes No Field		—	7.02	9.54 ☆	CMW 5/2/12 0915	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
5/2/12	Filter Blank for 5/2/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field		—	8.32	9.61	CMW 5/2/12 0922	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

☆ Formed white ppt w/ addition of buffer ☆

H:\SMODOCS\Forms\cr-6SMO.log

00027

0033

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 289838 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204476-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.50 µg/L	10 mL	0.496 µg/L	1					5/2/12 09:12:00	N	IV
RQ1204476-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 09:27:00	N	IV
RQ1204476-07	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 09:27:00	N	IV
RQ1204476-08	Chromium, Hexavalent, Dissolved	LCS		Water	0.19 µg/L	10 mL	0.188 µg/L	1	0.004	0.020	94		5/2/12 09:42:00	N	IV
R1202733-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 10:09:00	N	IV
R1202733-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 10:24:00	N	IV
R1202733-004	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 10:39:00	Y	IV
RQ1204476-01	Chromium, Hexavalent, Dissolved	DUP	R1202733-004	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	5/2/12 10:54:00	N	IV
RQ1204476-02	Chromium, Hexavalent, Dissolved	MS	R1202733-004	Water	0.18 µg/L	10 mL	0.181 µg/L	1	0.004	0.020	90		5/2/12 11:09:00	N	IV
R1202733-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.04 µg/L	10 mL	0.040 µg/L	1	0.004	0.020			5/2/12 11:24:00	N	IV
R1202733-006	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 11:39:00	N	IV
R1202733-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 11:53:00	N	IV
RQ1204476-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.50 µg/L	10 mL	0.496 µg/L	1					5/2/12 12:23:00	N	IV
RQ1204476-05	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/2/12 12:38:00	N	IV

f indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

h2004

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202733-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/2/12 09:27	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202733
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/1/12
Sample Matrix:	Water	**Date Received:**	5/2/12
		Date Analyzed:	5/ 2/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name:	MSA-MW14I-050112	**Units:**	µg/L
Lab Code:	R1202733-004	**Basis:**	NA

Analyte Name	Method	MRL	MDL	Sample Result	MSA-MW14I-050112 DUP Duplicate Sample R1202733-004DUP Result	Average	RPD	RPD Limit
Chromium, Hexavalent, Dissolved	218.6	0.020	0.004	0.020 U	0.020 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202733
Date Collected: 5/1/12
Date Received: 5/2/12
Date Analyzed: 5/ 2/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name: MSA-MW14I-050112
Lab Code: R1202733-004

Units: µg/L
Basis: NA

Analytical Method: 218.6

MSA-MW14I-050112MS
Matrix Spike
R1202733-004MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	ND	0.181	0.200	90	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202733
Date Analyzed: 5/ 2/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202733-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.188	0.200	94	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202733
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	289838	RQ1204476-04	5/2/12 09:12	0.500	0.496	99	95 - 105
CCV2	289838	RQ1204476-03	5/2/12 12:23	0.500	0.496	99	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202733
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

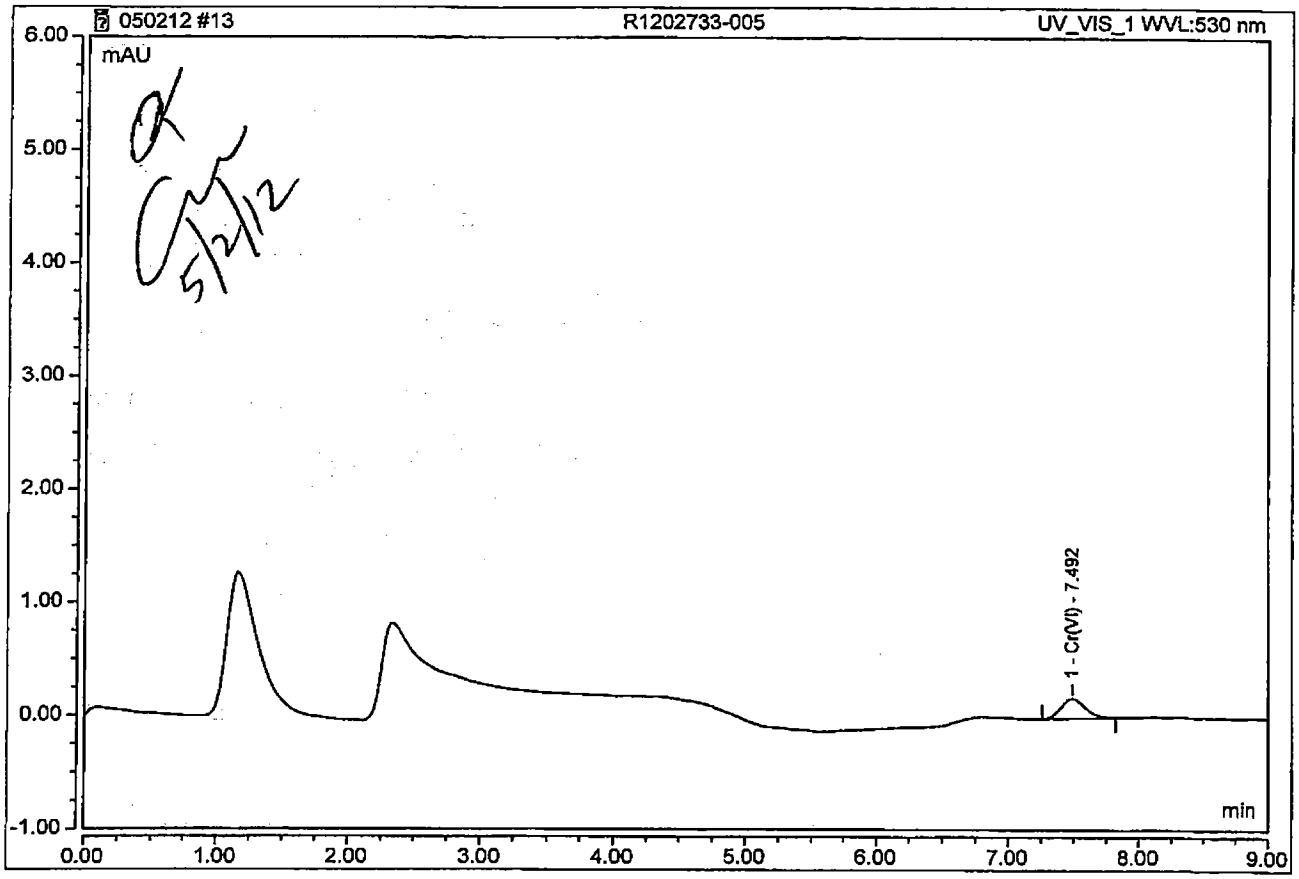
Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	289838	RQ1204476-06	5/2/12 09:27	0.004	0.020	0.020	U
CCB2	289838	RQ1204476-05	5/2/12 12:38	0.004	0.020	0.020	U

Peak Integration Report

Sample Name:	R1202733-005	Inj. Vol.:	1000.00
Injection Type:	Unknown	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date / Time:	02-May-2012 / 11:24	Run Time:	9.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.49	Cr(VI)	BMB	0.038	0.175	0.0399
TOTAL:				0.04	0.17	0.04



OK
5/2/12

SAmple
MSA-MW14D-050112
rep result
0.040ug/L

6-15-12
JAT

X-VALUE	Y-VALUE	CORREL	SLOPE	
0.02	0.0186		0.999991887	1.006480892
0.2	0.1956	Y-INTERC		
1	1.0035		-0.003402229	

Matrix Spike

0.041135634	0.038

Calibration Batch Report

Sequence:	050112	Injection Volume (uL):	1,000.00
Processing Method:	8-050112	Calibration Type:	Lin. WithOffset, 1/A
Corr. Coefficient:	99.997	Instrument Method:	Cr(VI) 218.6

Calibration Summary

Injection Name Cr(VI)	Ret. Time min Cr(VI)	Area mAU*min Cr(VI)	Height mAU Cr(VI)	Amount ppb Cr(VI)	
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1	
STANDARD 1	n.a.	n.a.	n.a.	n.a.	
STANDARD 2	7.487	0.0186	0.090	0.020	0.02
STANDARD 3	7.493	0.1956	0.846	0.197	0.2
STANDARD 4	7.490	1.0035	4.183	1.003	1.0
Average	7.490				
Rel. Std. Dev.	0.045 %				

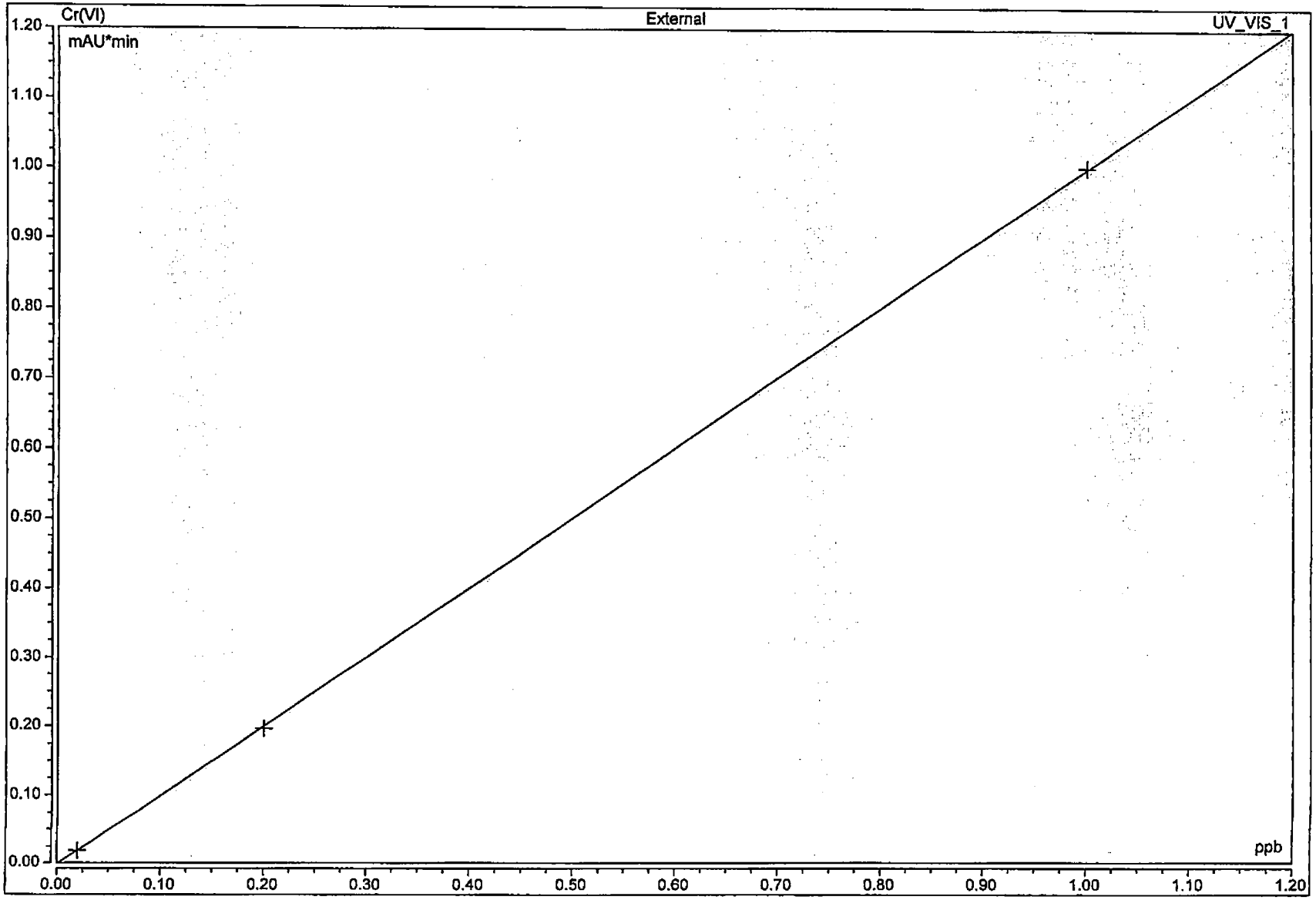
Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Inhibit Integration	On	Any	All Channels
7.000	Valley To Valley	On	Any	All Channels
7.000	Inhibit Integration	Off	Any	All Channels
7.000	Minimum Area	0.0005 [Signal*min]	Any	All Channels
7.000	Maximum Height Reject	0.050 [Signal]	Any	All Channels

5h000

Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

Processing Method: 8-050112
Correlation Coefficient: 99.997
Calibration Type: Lin, WithOffset, 1/A

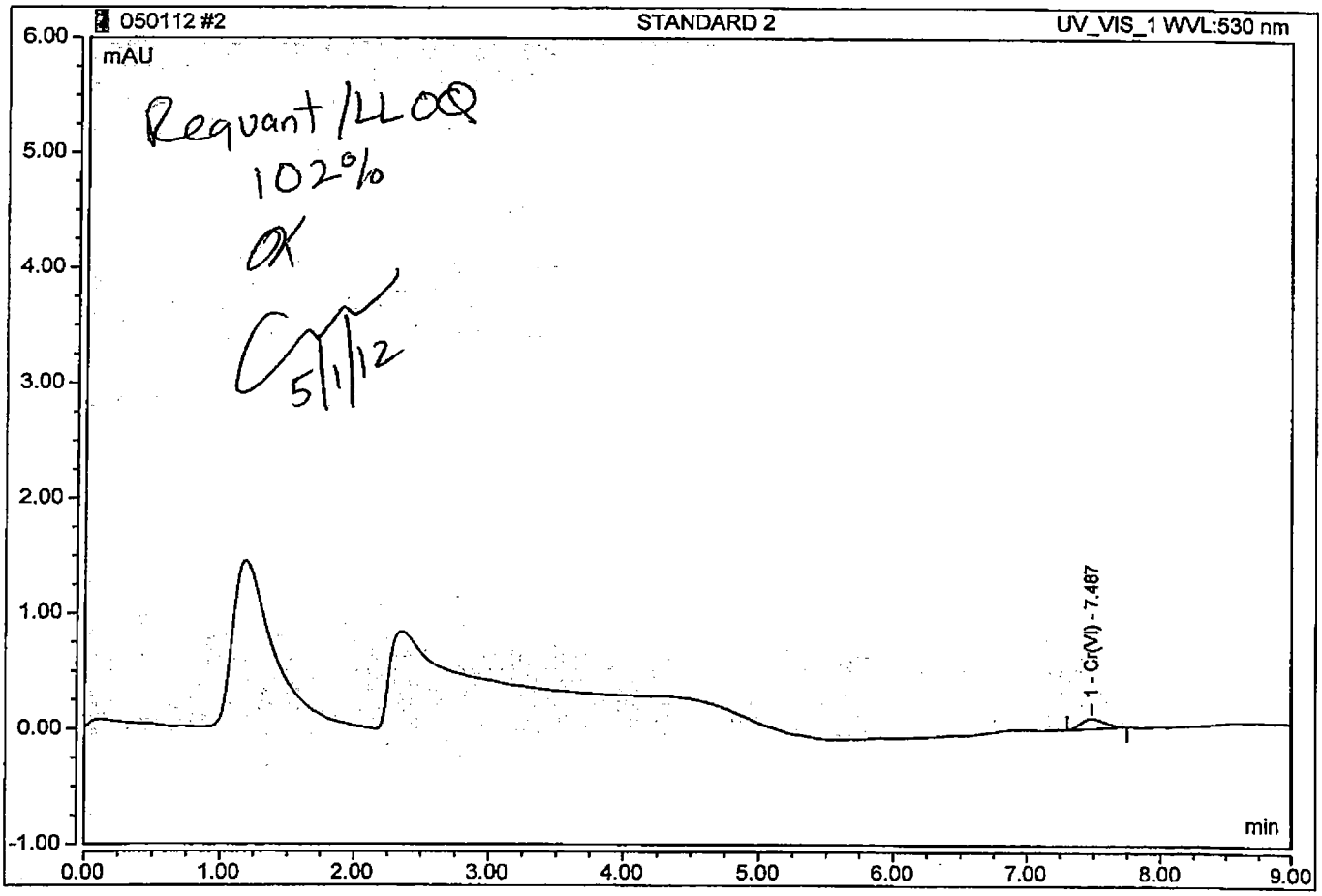


Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

Peak Integration Report

Sample Name:	STANDARD 2	Inj. Vol.:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date / Time:	01-May-2012 / 09:46	Run Time:	10.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.49	Cr(VI)	BMB	0.019	0.090	0.0203
TOTAL:				0.02	0.09	0.02



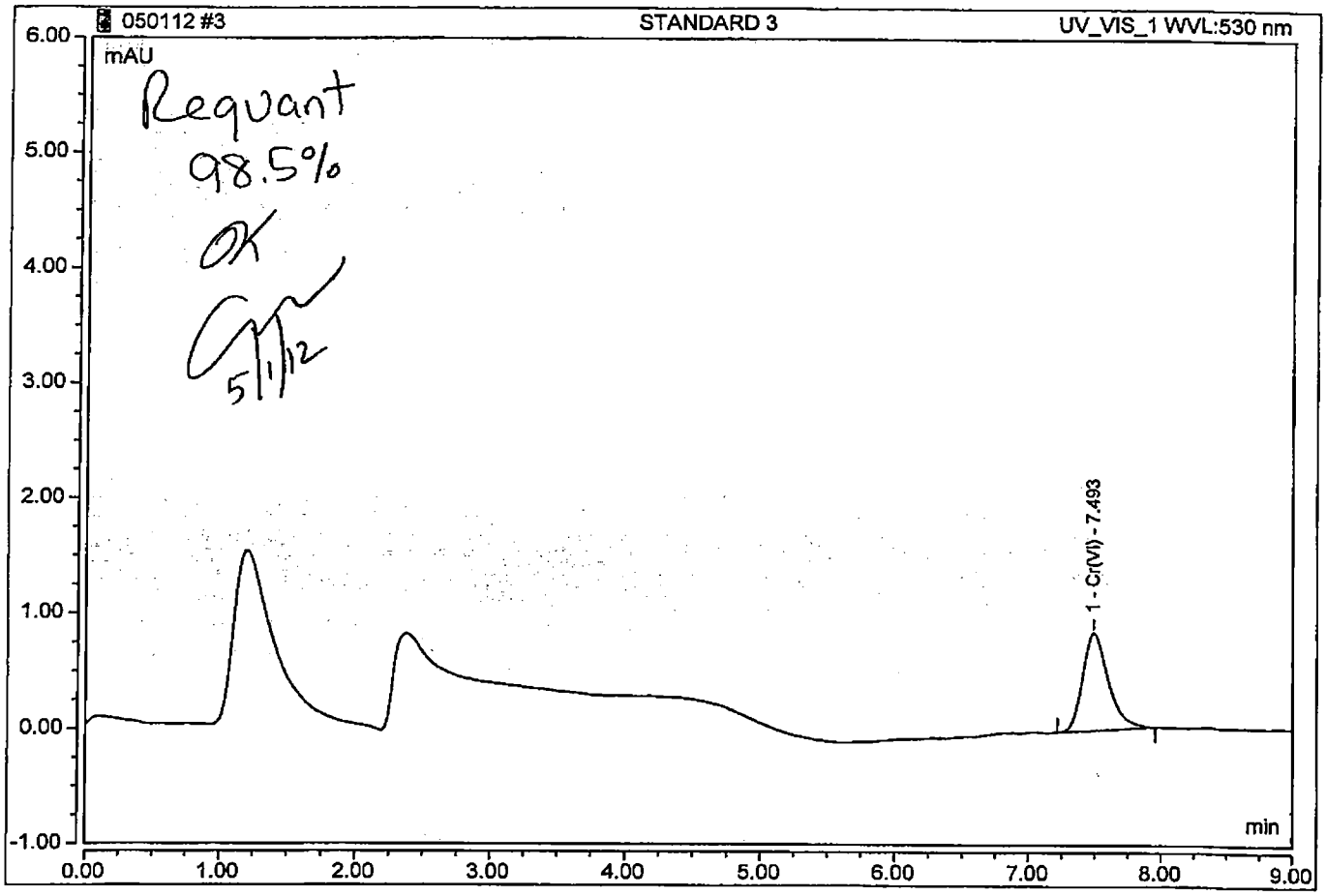
Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00051

Peak Integration Report

Sample Name:	STANDARD 3	Inj. Vol.:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date / Time:	01-May-2012 / 10:01	Run Time:	10.00

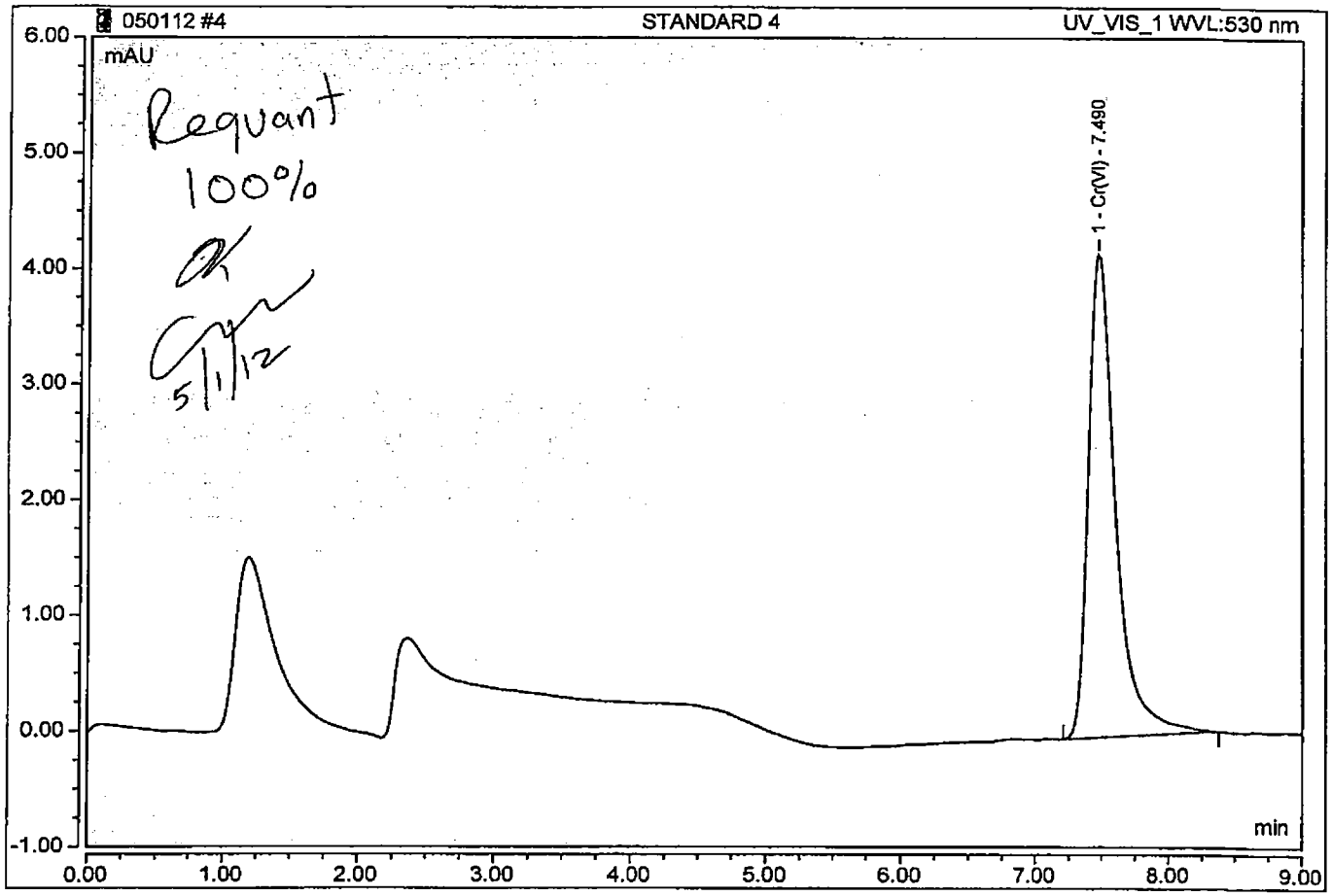
No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.49	Cr(VI)	BMB	0.196	0.846	0.1969
TOTAL:				0.20	0.85	0.20



Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050112	Program:	Cr(VI) 218.6
Inj. Date/Time:	01-May-2012 / 10:17	Run Time:	10:00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.49	Cr(VI)	BMB	1.003	4.183	1.0029
TOTAL:				1.00	4.18	1.00



Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE:** **JUNE 1, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202767

SAMPLES: 6/Aqueous/

MSA-DMW1A-050212	MSA-DMW1B-050212
MSA-DMW8D-050212	MSA-DMW8I-050212
MSA-DMW8S-050212	MSA-MW32S-050212

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202767, consists of six (6) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 2, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems- None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Positive results for hexavalent chromium were present in a continuing calibrations blank on 05/03/2012 at 12:38 (0.061 ug/L) affecting sample MSA-DMW8I-050212. No validation actions were warranted as the sample result was nondetected.

The continuing calibration percent recovery on 05/03/2012 at 12:23 for hexavalent chromium was greater than the laboratory limit affecting sample MSA-DMW8I-050212. No validation actions were warranted as the sample result was nondetected.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW1A-050212			MSA-DMW1B-050212			MSA-DMW8D-050212			MSA-DMW8I-050212		
SDG: R1202767	LAB_ID	R1202767-005			R1202767-006			R1202767-003			R1202767-002		
FRACTION: MISC	SAMP_DATE	5/2/2012			5/2/2012			5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.027			0.02	U		0.02	U		0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW8S-050212			MSA-MW32S-050212		
SDG: R1202767	LAB_ID	R1202767-001			R1202767-004		
FRACTION: MISC	SAMP_DATE	5/2/2012			5/2/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 2/12 1438
Sample Matrix:	Water	**Date Received:**	5/ 3/12
Sample Name:	MSA-DMW1A-050212		
Lab Code:	R1202767-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.027**		µg/L	0.020	0.004	1	NA	5/3/12 14:24	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 2/12 1440
Sample Matrix:	Water	**Date Received:**	5/ 3/12
Sample Name:	MSA-DMW1B-050212		
Lab Code:	R1202767-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/3/12 14:32	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 2/12 1410
Sample Matrix:	Water	**Date Received:**	5/ 3/12
Sample Name:	MSA-DMW8D-050212		
Lab Code:	R1202767-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/3/12 14:07	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 2/12 1310
Sample Matrix:	Water	**Date Received:**	5/ 3/12
Sample Name:	MSA-DMW8I-050212		
Lab Code:	R1202767-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/3/12 10:09	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 2/12 1420
Sample Matrix:	Water	**Date Received:**	5/ 3/12
Sample Name:	MSA-DMW8S-050212		
Lab Code:	R1202767-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/3/12 14:16	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 2/12 1400
Sample Matrix:	Water	**Date Received:**	5/ 3/12
Sample Name:	MSA-MW32S-050212		
Lab Code:	R1202767-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/3/12 13:59	

APPENDIX C
SUPPORT DOCUMENTATION

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

0173

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA GW Sampling
Project Number: 112IC04021-03
Project Manager: Tony Apanavage
Report CC:
Company/Address: Tetra Tech
20251 Century Blvd Ste 200
Germantown MD 20874
Phone #: (301) 528-5552
E-mail: Tony.Apanavage@tetratech.com
Sampler's Signature:
Sampler's Printed Name: Stuart Cameron

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 4°C

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hexavalent Chromium							REMARKS/ ALTERNATE DESCRIPTION
MSA-DMW8S-050212	✓	5/2/12	1420	AQ	1								X							
MSA-DMW8I-050212	✓	↓	1310	AQ	1								X							
MSA-DMW8D-050212	✓	↓	1410	AQ	1								X							
MSA-MW32S-050212		↓	1400	AQ	1								X							
MSA-DMW1A-050212	✓	↓	1438	AQ	1								X							
MSA-DMW1B-050212	✓	↓	14[illegible]	AQ	1								X							

SPECIAL INSTRUCTIONS/COMMENTS
Metals
Samples need analyzed within 24 hrs of sample time.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
____ Standard

REQUESTED REPORT DATE _____

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ____ Yes ____

INVOICE INFORMATION
PO #:
BILL TO:

R1202767 5
Tetra Tech NUS, Inc.
MSA Groundwater

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: Stuart Cameron	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Tetra tech	Printed Name: [signature]	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 5-2-12 / 1530	Firm: ALC	Firm	Firm	Firm	Firm
Date/Time	Date/Time: 5/3/12 0800	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

HOLDTIME

SDG R1202694

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW6S-040312	R1202808-001	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW5-043012	R1202694-002	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW6-043012	R1202694-001	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW7-043012	R1202694-004	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW8-043012	R1202694-005	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW1A-050212	R1202767-005	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW1B-050212	R1202767-006	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW2A-040312	R1202808-005	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4D-040312	R1202808-008	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4I-040312	R1202808-007	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4S-040312	R1202808-006	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW4-043012	R1202694-003	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW6I-040312	R1202808-002	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MT-02S-043012	R1202694-006	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW7S-040312	R1202808-004	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW8D-050212	R1202767-003	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8I-050212	R1202767-002	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8S-050212	R1202767-001	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW14D-050112	R1202733-005	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW14I-050112	R1202733-004	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW26S-050112	R1202733-006	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32I-050112	R1202733-001	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32S-050212	R1202767-004	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW33I-050112	R1202733-003	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW33S-050112	R1202733-002	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-DMW6D-040312	R1202808-003	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202767
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/03/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/02/12 and received at CAS in good condition at a cooler temperature of 2.1 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Six water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met except CCV2 (110%) was outside QC limits high. No data was affected since all the samples under this CCV was non-detects..

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blank associated with these samples was free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/2/12 0800	R1202733-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1512	Yes No Field	Millex HV 21SA54620K	—	7.21	9.67	CMW 5/2/12 0917	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1515	Yes No Field		—	10.55	9.64	CMW 5/2/12 0918	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1210	Yes No Field		—	6.27	9.32	CMW 5/2/12 0913	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-005	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1330	Yes No Field		—	8.02	9.62	CMW 5/2/12 0920	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202733-006	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/1/12 1515	Yes No Field		—	7.02	9.54 ☆	CMW 5/2/12 0915	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
5/2/12	Filter Blank for 5/2/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field		—	8.32	9.61	CMW 5/2/12 0922	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
5/3/12 0800	R1202767-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/2/12 1420	Yes No Field	Millex HV 21SA54620K	—	5.80	9.33	CMW 5/3/12 0941	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
	R1202767-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/2/12 1310	Yes No Field		—	4.07	9.33	CMW 5/3/12 0943	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

☆ Formed white ppt w/ addition of buffer ☆

H:\SMODOCS\Forms\cr-SSMO.log

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
05/3/12 0800	R1202767-003	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1410	(Yes) No Field	Millex HV R1SA5546ZX	—	4.78	9.52	CMW 5/3/12 0944	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202767-004	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1400	(Yes) No Field		—	5.86	9.37	CMW 5/3/12 0945	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202767-005	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1438	(Yes) No Field		—	5.82	9.42	CMW 5/3/12 0947	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202767-006	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1440	(Yes) No Field		—	6.14	9.37	CMW 5/3/12 0948	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/3/12	Filter Blank for 5/3/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	(Yes) No Field		—	8.22	9.56	CMW 5/3/12 0950	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/4/12 0805	R1202808-008	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1249	(Yes) No Field	Millex HV R1SA5546ZX	—	4.01	9.33	CMW 5/4/12 0943	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-007	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1247	(Yes) No Field		—	4.16	9.33	CMW 5/4/12 0944	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-005	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1357	(Yes) No Field		—	4.21	9.39	CMW 5/4/12 0946	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Analytical Results Summary

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 290176 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204591-02	Chromium, Hexavalent, Dissolved	CCV		Water	0.48 µg/L	10 mL	0.478 µg/L	1					5/3/12 09:15:00	N	IV
RQ1204591-04	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 09:30:00	N	IV
RQ1204591-05	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 09:30:00	N	IV
RQ1204591-06	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.203 µg/L	1	0.004	0.020	102		5/3/12 09:45:00	N	IV
R1202767-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 10:09:00	N	IV
RQ1204591-01	Chromium, Hexavalent, Dissolved	CCV		Water	0.55 µg/L	10 mL	0.551 µg/L	1					5/3/12 12:23:00	N	IV
RQ1204591-03	Chromium, Hexavalent, Dissolved	CCB		Water	0.06 µg/L	10 mL	0.061 µg/L	1	0.004	0.020			5/3/12 12:38:00	N	IV

H2000

/ indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-05 **Analyst:** CWOODS **Analysis Lot:** 290179 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204593-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.518 µg/L	1					5/3/12 13:31:00	N	IV
RQ1204593-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 13:42:00	N	IV
RQ1204593-07	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 13:42:00	N	IV
RQ1204593-08	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.203 µg/L	1	0.004	0.020	102		5/3/12 13:50:00	N	IV
R1202767-004	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 13:59:00	N	IV
R1202767-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 14:07:00	N	IV
R1202767-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 14:16:00	N	IV
R1202767-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.03 µg/L	10 mL	0.027 µg/L	1	0.004	0.020			5/3/12 14:24:00	N	IV
R1202767-006	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 14:32:00	N	IV
RQ1204593-01	Chromium, Hexavalent, Dissolved	DUP	R1202767-001	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	5/3/12 14:49:00	N	IV
RQ1204593-02	Chromium, Hexavalent, Dissolved	MS	R1202767-001	Water	0.18 µg/L	10 mL	0.176 µg/L	1	0.004	0.020	88*		5/3/12 14:57:00	N	IV
RQ1204593-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.52 µg/L	10 mL	0.520 µg/L	1					5/3/12 15:14:00	N	IV
RQ1204593-05	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/3/12 15:23:00	N	IV

59065

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202767-MB1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/3/12 09:30	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202767
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202767-MB2	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/3/12 13:42	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202767
Date Analyzed: 5/ 3/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202767-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.203	0.200	102	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202767
Date Analyzed: 5/ 3/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202767-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.203	0.200	102	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202767
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery		Acceptance Limits
CCV1	290176	RQ1204591-02	5/3/12 09:15	0.500	0.478	96		95 - 105
CCV2	290176	RQ1204591-01	5/3/12 12:23	0.500	0.551	110	*	95 - 105
CCV3	290179	RQ1204593-04	5/3/12 13:31	0.500	0.518	104		95 - 105
CCV4	290179	RQ1204593-03	5/3/12 15:14	0.500	0.520	104		95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202767
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	290176	RQ1204591-04	5/3/12 09:30	0.004	0.020	0.020	U
CCB2	290176	RQ1204591-03	5/3/12 12:38	0.004	0.020	0.061	
CCB3	290179	RQ1204593-06	5/3/12 13:42	0.004	0.020	0.020	U
CCB4	290179	RQ1204593-05	5/3/12 15:23	0.004	0.020	0.020	U

6-15-12
JRD

X-VALUE	Y-VALUE
0.02	0.017
0.1	0.095
0.2	0.21
0.5	0.498
0.7	0.671
1	9.84E-01

CORREL	SLOPE
0.999639017	**0.976830601**
Y-INTERC	
0.002231148	

SAMPLE MSA-DMW1A-050212

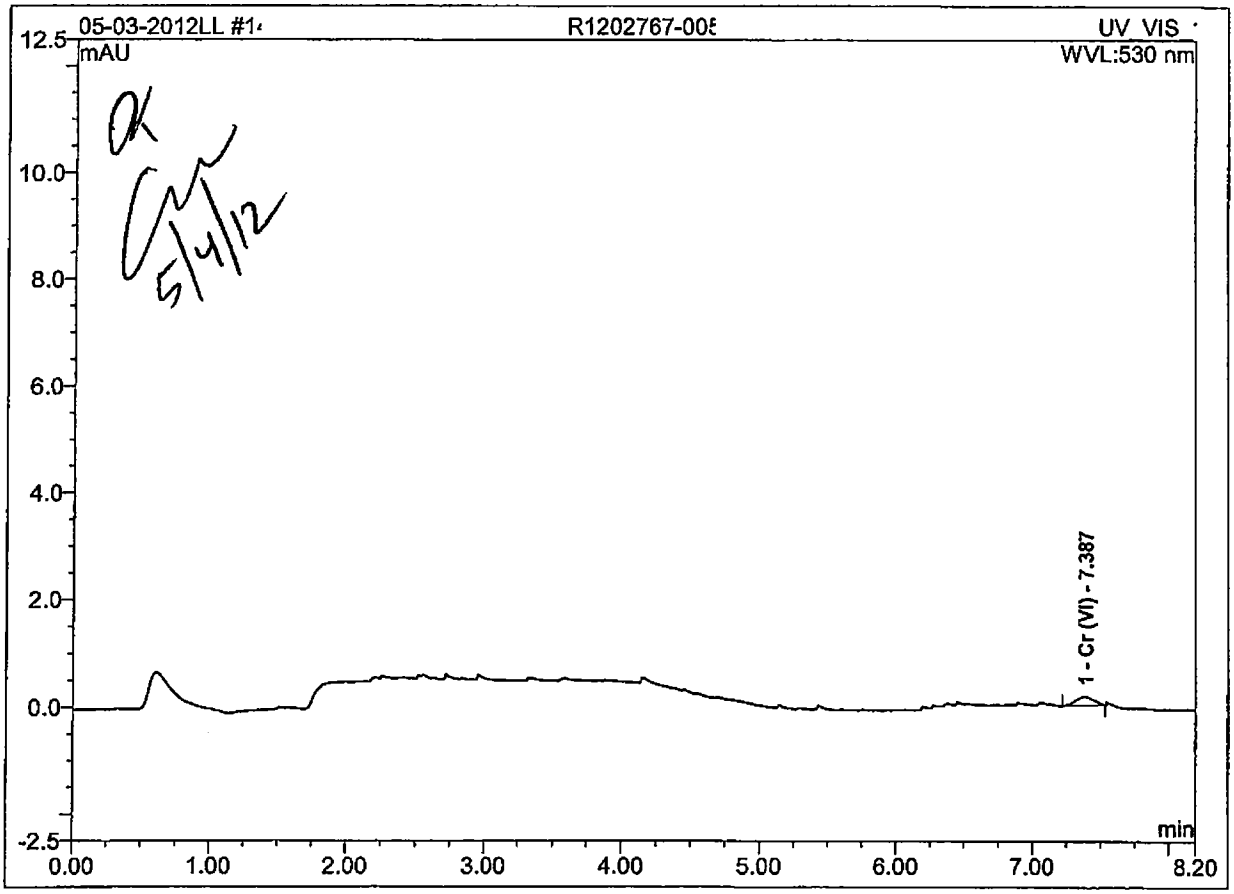
0.022285187	0.024

Sample MSA-DMW1A-050312 Rep result 0.027 ug/L

14 R1202767-005

218.6 LL

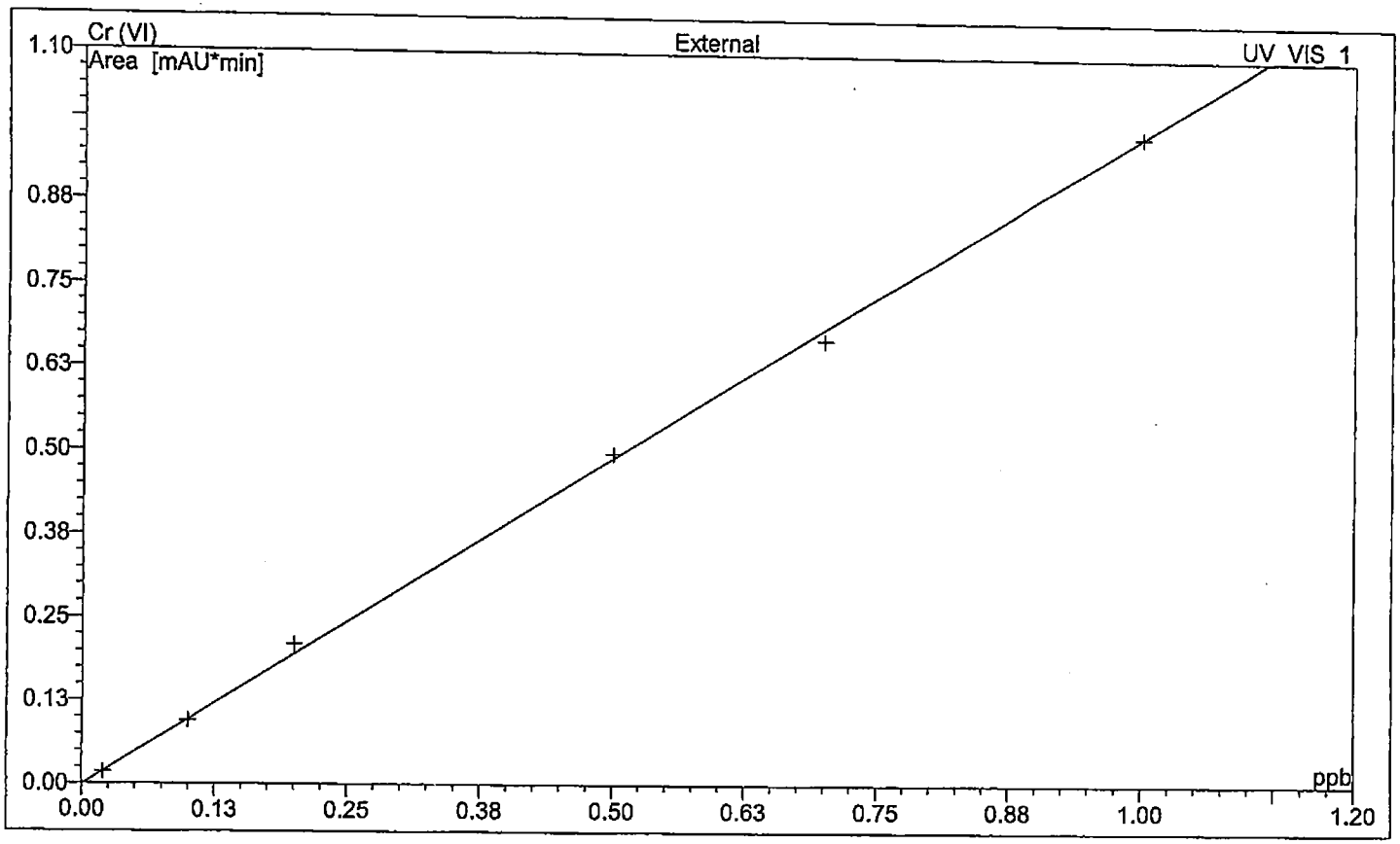
Sample Name:	**R1202767-005**	*Injection Volume:*	**2000.0**
Vial Number:	**38**	*Channel:*	**UV_VIS_1**
Sample Type:	**unknown**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**5/3/2012 14:24**		



OK
5/4/12

No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.387	Cr (VI)	0.162	0.024	100.00	0.02700	BMB
Total:			0.162	0.024	100.00	0.027	

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)



No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det. %	Offset	Slope	Quantification Method
2	7.55	Cr (VI)	XLOff	6	99.9127	-0.0016	0.9862	5-042612CLL

Linearity Check Only.

4/27/12

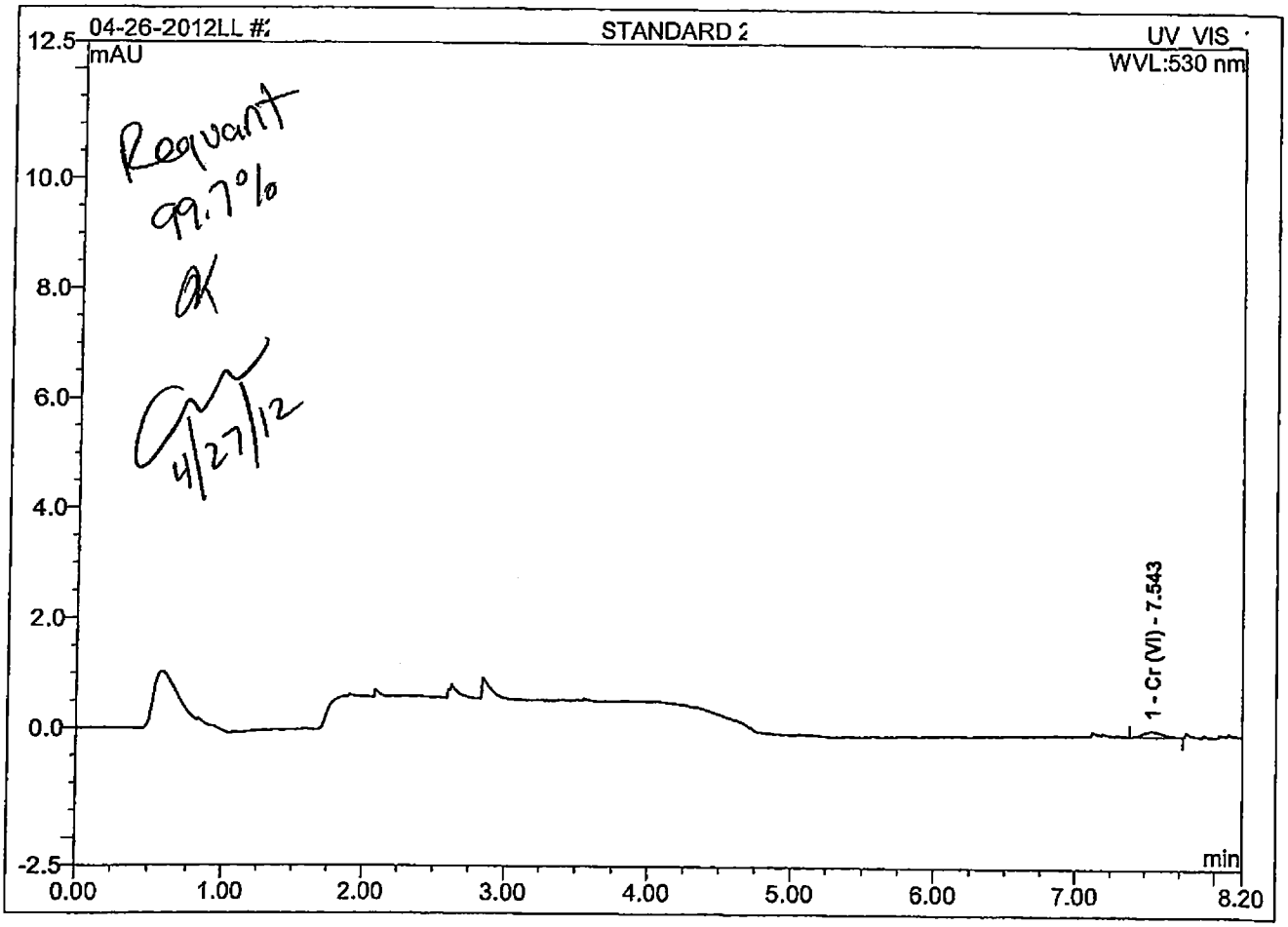
001115

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)

2 STANDARD 2

218.6 LL

Sample Name:	**STANDARD 2**	*Injection Volume:*	**2000.0**
Vial Number:	**23**	*Channel:*	**UV_VIS_1**
Sample Type:	**standard**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 11:18**		

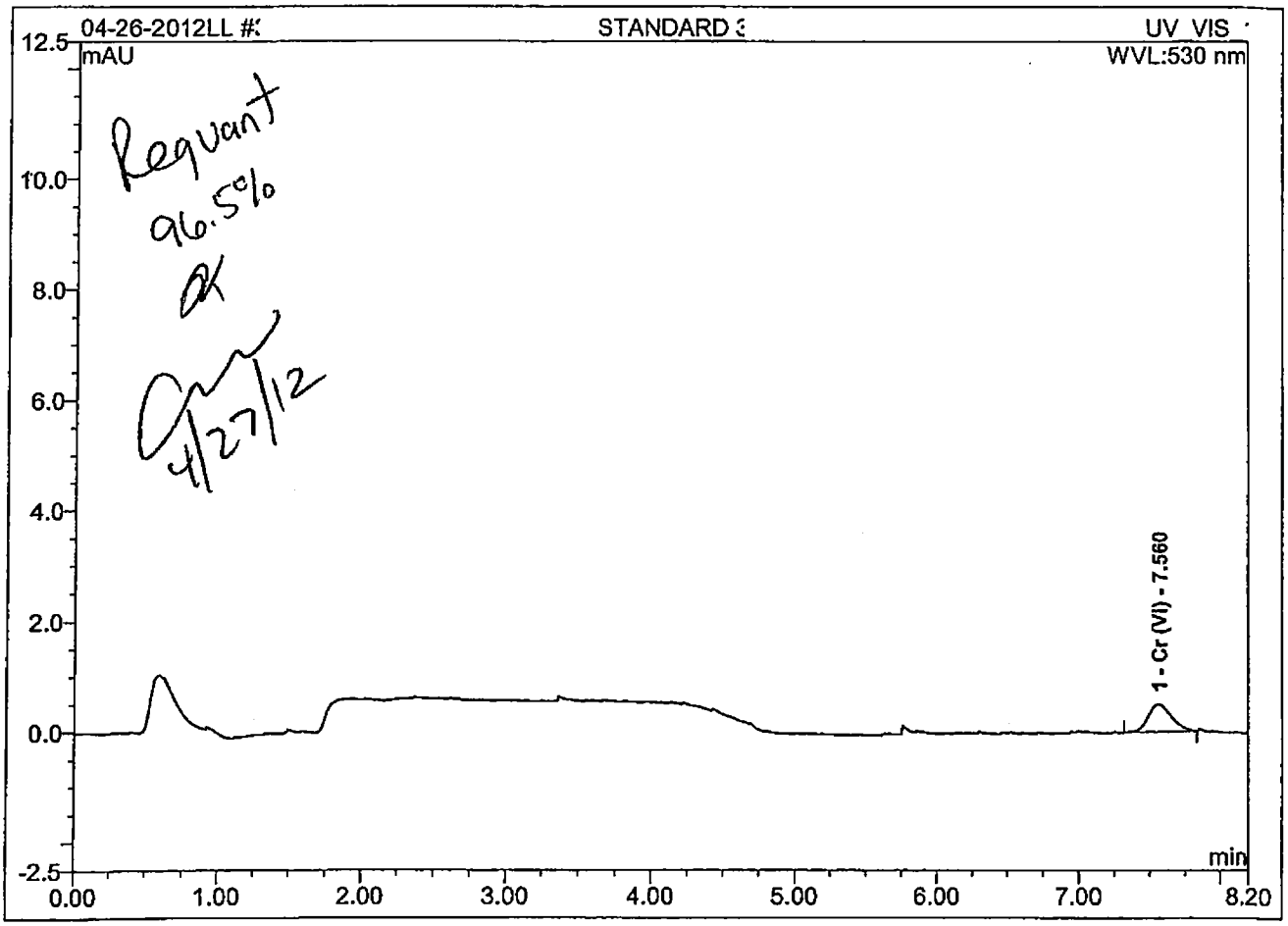


No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.543	Cr (VI)	0.114	0.017	100.00	0.01994	BMB
Total:			0.114	0.017	100.00	0.020	

3 STANDARD 3

218.6 LL

Sample Name:	**STANDARD 3**	*Injection Volume:*	**2000.0**
Vial Number:	**23**	*Channel:*	**UV_VIS_1**
Sample Type:	**standard**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 11:27**		



No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.560	Cr (VI)	0.504	0.095	100.00	0.09651	BMB
Total:			0.504	0.095	100.00	0.097	

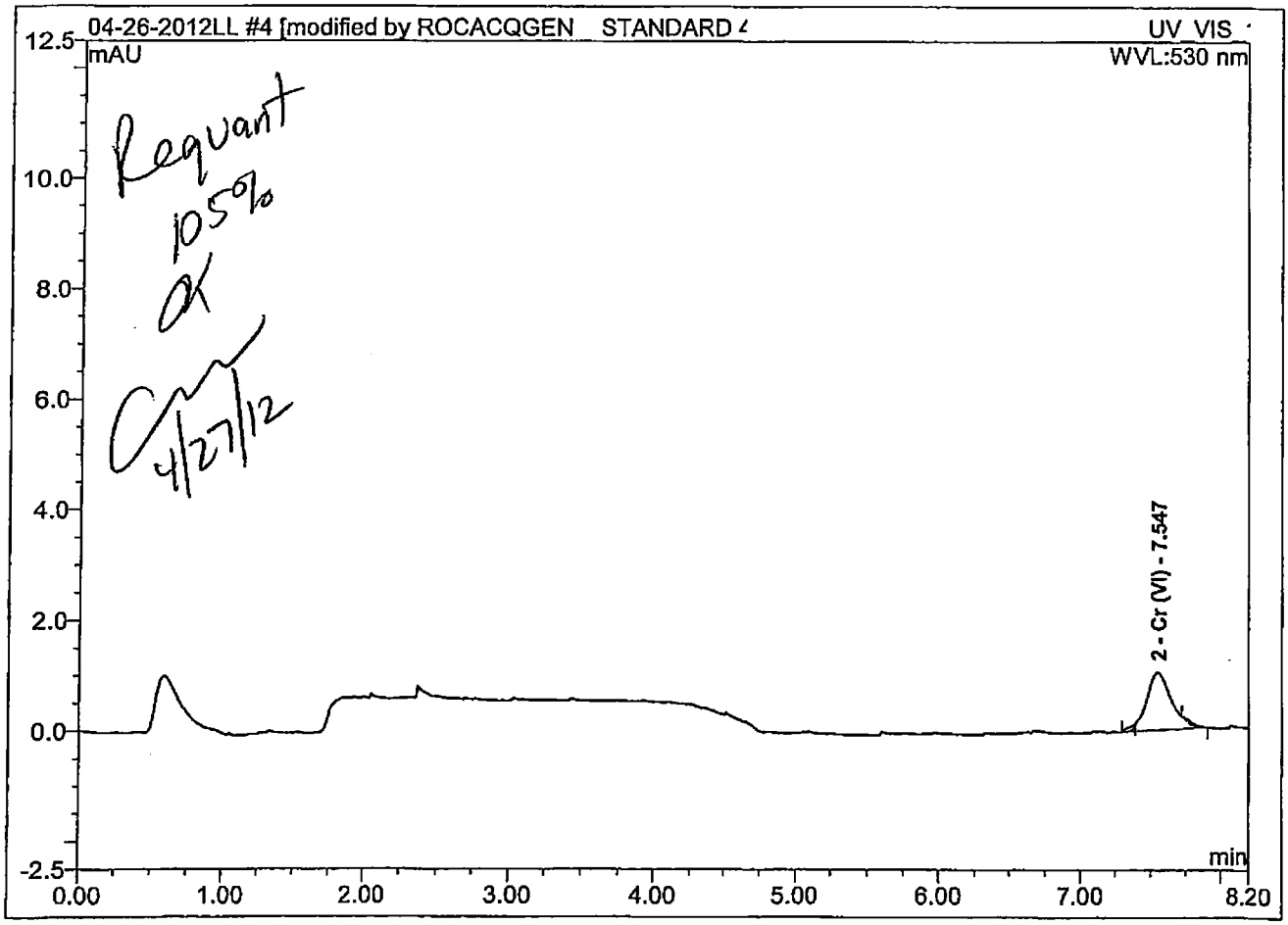
Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)

00110

4 STANDARD 4

218.6 LL

Sample Name:	**STANDARD 4**	*Injection Volume:*	**2000.0**
Vial Number:	**24**	*Channel:*	**UV_VIS_1**
Sample Type:	**standard**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 11:35**		



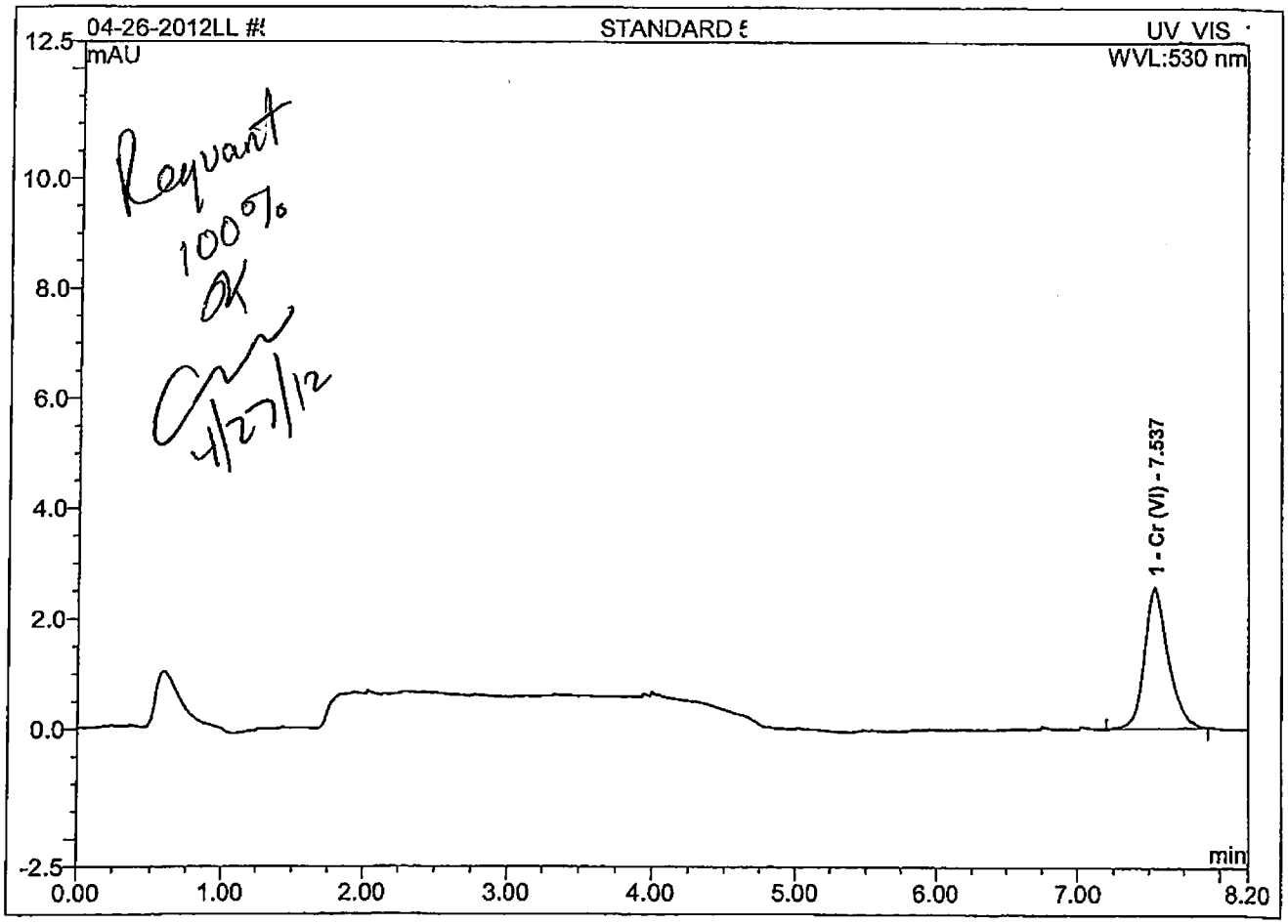
No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
2	7.547	Cr (VI)	1.044	0.210	95.17	0.21049	BMB*
Total:			1.044	0.210	95.17	0.210	

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)

5 STANDARD 5

218.6 LL

Sample Name:	**STANDARD 5**	*Injection Volume:*	**2000.0**
Vial Number:	**29**	*Channel:*	**UV_VIS_1**
Sample Type:	**standard**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 11:43**		

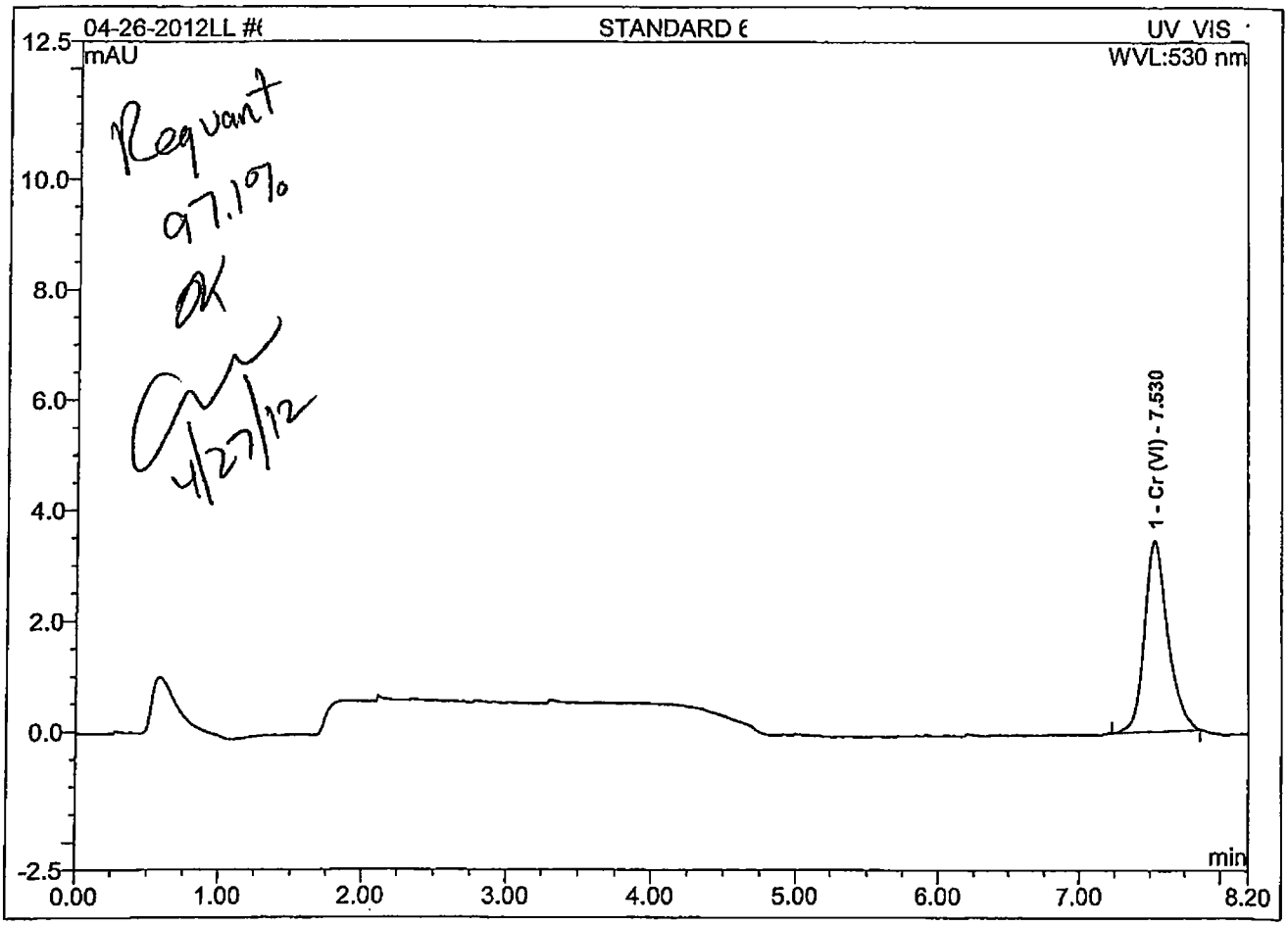


No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.537	Cr (VI)	2.548	0.498	100.00	0.50128	BMB
Total:			2.548	0.498	100.00	0.501	

6 STANDARD 6

218.6 LL

Sample Name:	**STANDARD 6**	*Injection Volume:*	**2000.0**
Vial Number:	**30**	*Channel:*	**UV_VIS_1**
Sample Type:	**standard**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 11:52**		



Requant
97.1%
OK
4/27/12

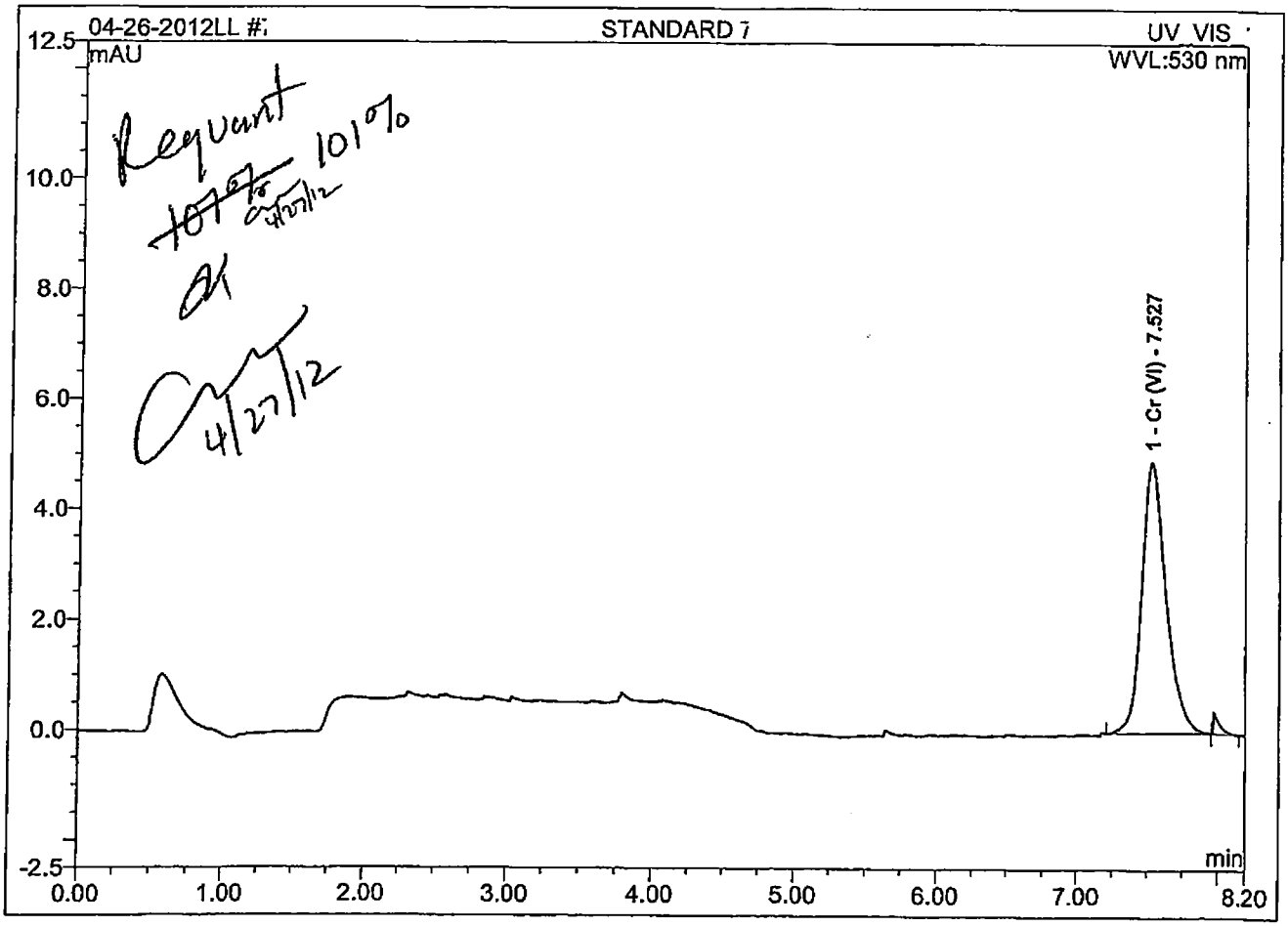
No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.530	Cr (VI)	3.455	0.671	100.00	0.67979	BMB
Total:			3.455	0.671	100.00	0.680	

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)

7 STANDARD 7

218.6 LL

Sample Name:	**STANDARD 7**	*Injection Volume:*	**2000.0**
Vial Number:	**31**	*Channel:*	**UV_VIS_1**
Sample Type:	**standard**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**4/26/2012 12:00**		



No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.527	Cr (VI)	4.919	0.984	97.88	1.01205	BMB
Total:			4.919	0.984	97.88	1.012	

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 1, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202808

SAMPLES: 8/Aqueous/

MSA-DMW2A-050312	MSA-DMW4D-050312
MSA-DMW4I-050312	MSA-DMW4S-050312
MSA-DMW6D-050312	MSA-DMW6I-050312
MSA-DMW6S-050312	MSA-DMW7S-050312

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202808, consists of eight (8) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 3, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems- None.

Notes

The original sample IDs reported by the laboratory did not match the chain of custody (COC). The sample IDs were amended to match the COC.

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Positive results for hexavalent chromium were present in a continuing calibrations blank (0.03 ug/L) affecting the samples. However, no validation actions were warranted as the sample results were nondetects.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW2A-050312			MSA-DMW4D-050312			MSA-DMW4I-050312			MSA-DMW4S-050312		
SDG: R1202808	LAB_ID	R1202808-005			R1202808-008			R1202808-007			R1202808-006		
FRACTION: MISC	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U		0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-DMW6D-050312			MSA-DMW6I-050312			MSA-DMW6S-050312			MSA-DMW7S-050312		
SDG: R1202808	LAB_ID	R1202808-003			R1202808-002			R1202808-001			R1202808-004		
FRACTION: MISC	SAMP_DATE	5/3/2012			5/3/2012			5/3/2012			5/3/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021-02	**Date Collected:**	5/3/12 1357
Sample Matrix:	Water	**Date Received:**	5/4/12
Sample Name:	MSA-DMW2A-050312		
Lab Code:	R1202808-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 11:04	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 3/12 1249
Sample Matrix:	Water	**Date Received:**	5/ 4/12
Sample Name:	MSA-DMW4D-040312		
Lab Code:	R1202808-008	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 10:39	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 3/12 1247
Sample Matrix:	Water	**Date Received:**	5/ 4/12
Sample Name:	MSA-DMW4I-050312		
Lab Code:	R1202808-007 TS 611	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 10:30	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 3/12 1223
Sample Matrix:	Water	**Date Received:**	5/ 4/12
Sample Name:	MSA-DMW4S-050312		
Lab Code:	R1202808-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 10:22	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 3/12 1320
Sample Matrix:	Water	**Date Received:**	5/ 4/12
Sample Name:	MSA-DMW6D-040312		
Lab Code:	R1202808-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 10:47	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 3/12 1200
Sample Matrix:	Water	**Date Received:**	5/ 4/12
Sample Name:	MSA-DMW6I-050312		
Lab Code:	R1202808-002 TCS 6/1	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 10:13	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 3/12 1330
Sample Matrix:	Water	**Date Received:**	5/ 4/12
Sample Name:	MSA-DMW6S-050312		
Lab Code:	R1202808-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 10:55	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
Analytical Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 3/12 1440
Sample Matrix:	Water	**Date Received:**	5/ 4/12
Sample Name:	MSA-DMW7S-040312		
Lab Code:	R1202808-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 11:12	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202808
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/04/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/03/12 and received at CAS in good condition at a cooler temperature of 2.3 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Eight water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blanks associated with these samples were free of contamination except CCB2 was greater than the MRL. No data was affected since all the samples under this CCB was non-detects.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services — CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

0130

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA- GW Sampling	Project Number: 112IC04021-03
Project Manager: Tony Aprahamian	Report CC:
Company/Address: 20251 Century Blvd Ste 200, Germantown MD 20874	
Phone #: (301) 528-5552	E-mail: Tony.Aprahamian@tetratech.com
Sampler's Signature:	Sampler's Printed Name: Stuart Cameron

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐8260 ☐624 ☐CLP	GC/MS SVOA's ☐8270 ☐625	GC VOA's ☐8021 ☐601/602	PESTICIDES ☐8081 ☐608	PCB's ☐8082 ☐608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hexavalent Chromium	REMARKS/ ALTERNATE DESCRIPTION
MSA-DMW6S-050312		5/3/12	1330		1								X	
MSA-DMW6I-050312			1200		1								X	
MSA-DMW6D-050312			1320		1								X	
MSA-DMW7S-050312			1440		1								X	
MSA-DMW2A-050312			1357		1								X	
MSA-DMW4S-050312			1223		1								X	
MSA-DMW4I-050312			1247		1								X	
MSA-DMW4D-050312		↓	1249		1								X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals

Samples must be analyzed within 24 hrs of sample time

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED:

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
____ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ____ Yes ____

INVOICE INFORMATION
PO #:
BILL TO:

R1202808 5
Tetra Tech NUS, Inc.
MSA Groundwater

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Stuart Cameron	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Tetra Tech	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 5-3-12/1600	Date/Time: 5/3/12 0805	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

HOLDTIME

SDG R1202694

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW6S-040312	R1202808-001	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW5-043012	R1202694-002	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW6-043012	R1202694-001	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW7-043012	R1202694-004	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	GSP-MW8-043012	R1202694-005	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW1A-050212	R1202767-005	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW1B-050212	R1202767-006	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW2A-040312	R1202808-005	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4D-040312	R1202808-008	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4I-040312	R1202808-007	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MSA-DMW4S-040312	R1202808-006	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	GSP-MW4-043012	R1202694-003	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW6I-040312	R1202808-002	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1
CR6	UG/L	MT-02S-043012	R1202694-006	NM	4/30/2012	5/1/2012	5/1/2012	1	0	1
CR6	UG/L	MSA-DMW7S-040312	R1202808-004	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-DMW8D-050212	R1202767-003	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8I-050212	R1202767-002	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-DMW8S-050212	R1202767-001	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW14D-050112	R1202733-005	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW14I-050112	R1202733-004	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW26S-050112	R1202733-006	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32I-050112	R1202733-001	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW32S-050212	R1202767-004	NM	5/2/2012	5/3/2012	5/3/2012	1	0	1
CR6	UG/L	MSA-MW33I-050112	R1202733-003	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-MW33S-050112	R1202733-002	NM	5/1/2012	5/2/2012	5/2/2012	1	0	1
CR6	UG/L	MSA-DMW6D-040312	R1202808-003	NM	5/3/2012	5/4/2012	5/4/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
05/3/12 0800	R1202767-003	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1410	(Yes) No Field	Millex HV R1SA546ZZK	—	4.78	9.52	CMW 5/3/12 0944	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202767-004	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1400	(Yes) No Field		—	5.86	9.37	CMW 5/3/12 0945	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202767-005	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1438	(Yes) No Field		—	5.82	9.42	CMW 5/3/12 0947	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202767-006	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/2/12 1440	(Yes) No Field		—	6.14	9.37	CMW 5/3/12 0948	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/3/12	Filter Blank for 5/3/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	(Yes) No Field		—	8.22	9.56	CMW 5/3/12 0950	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/4/12 0805	R1202808-008	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1249	(Yes) No Field	Millex HV R1SP546ZOK	—	4.01	9.33	CMW 5/4/12 0943	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-007	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1247	(Yes) No Field		—	4.16	9.33	CMW 5/4/12 0944	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-005	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1357	(Yes) No Field		—	4.21	9.39	CMW 5/4/12 0946	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

92009

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/4/12 0805	R1202808-001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1330	Yes No Field	Millex HV R1SA54620K	—	6.32	9.32	CMW 5/4/12 0947	Buffer	WC1120225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-003	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1320	Yes No Field		—	4.65	9.52	CMW 5/4/12 0948	Buffer	WC1120225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-002	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1200	Yes No Field		—	4.03	9.50	CMW 5/4/12 0950	Buffer	WC1120225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-004	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1440	Yes No Field		—	6.58	9.44	CMW 5/4/12 0952	Buffer	WC1120225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202808-006	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/3/12 1223	Yes No Field		—	5.38	9.48	CMW 5/4/12 0953	Buffer	WC1120225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/4/12	Filter Blank for 5/4/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	Yes No Field		—	8.51	9.59	CMW 5/4/12 0955	Buffer	WC1120225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	BR-230	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field			9.48			Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	BR-86	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field			9.59			Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

000027

Client: Tetra Tech NUS, Inc. **Service Request:** R1202808
Project: MSA Groundwater/112IC04021-02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	290222	RQ1204607-05	5/4/12 09:25	0.500	0.479	96	95 - 105
CCV2	290222	RQ1204607-04	5/4/12 11:29	0.500	0.506	101	95 - 105
CCV3	290222	RQ1204607-03	5/4/12 12:14	0.500	0.488	98	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202808
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	290222	RQ1204607-08	5/4/12 09:38	0.004	0.020	0.020	U
CCB2	290222	RQ1204607-07	5/4/12 11:37	0.004	0.020	0.030	
CCB3	290222	RQ1204607-06	5/4/12 12:22	0.004	0.020	0.020	U

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202808
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202808-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/4/12 09:38	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202808
Date Analyzed: 5/ 4/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202808-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.197	0.200	99	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Analytical Results Summary

Instrument Name: R-IC-05 **Analyst:** CWOODS **Analysis Lot:** 290222 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204607-05	Chromium, Hexavalent, Dissolved	CCV		Water	0.48 µg/L	10 mL	0.479 µg/L	1					5/4/12 09:25:00	N	IV
RQ1204607-08	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 09:38:00	N	IV
RQ1204607-09	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 09:38:00	N	IV
RQ1204607-10	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.197 µg/L	1	0.004	0.020	99		5/4/12 09:47:00	N	IV
R1202808-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 10:13:00	N	IV
R1202808-006	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 10:22:00	N	IV
R1202808-007	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 10:30:00	N	IV
R1202808-008	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 10:39:00	N	IV
R1202808-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 10:47:00	N	IV
R1202808-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 10:55:00	N	IV
R1202808-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 11:04:00	N	IV
R1202808-004	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 11:12:00	N	IV
RQ1204607-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.51 µg/L	10 mL	0.506 µg/L	1					5/4/12 11:29:00	N	IV
RQ1204607-07	Chromium, Hexavalent, Dissolved	CCB		Water	0.03 µg/L	10 mL	0.030 µg/L	1	0.004	0.020			5/4/12 11:37:00	N	IV
RQ1204607-01	Chromium, Hexavalent, Dissolved	MS	R1202808-005	Water	0.18 µg/L	10 mL	0.180 µg/L	1	0.004	0.020	90		5/4/12 11:57:00	N	IV
RQ1204607-02	Chromium, Hexavalent, Dissolved	DMS	R1202808-005	Water	0.18 µg/L	10 mL	0.179 µg/L	1	0.004	0.020	89*	<1	5/4/12 12:06:00	N	IV
RQ1204607-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.49 µg/L	10 mL	0.488 µg/L	1					5/4/12 12:14:00	N	IV
RQ1204607-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/4/12 12:22:00	N	IV

0024

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

X-VALUE	Y-VALUE
0.02	0.017
0.1	0.095
0.2	0.21
0.5	0.498
0.7	0.671
1	9.84E-01

CORREL	SLOPE
0.999639017	**0.976830601**

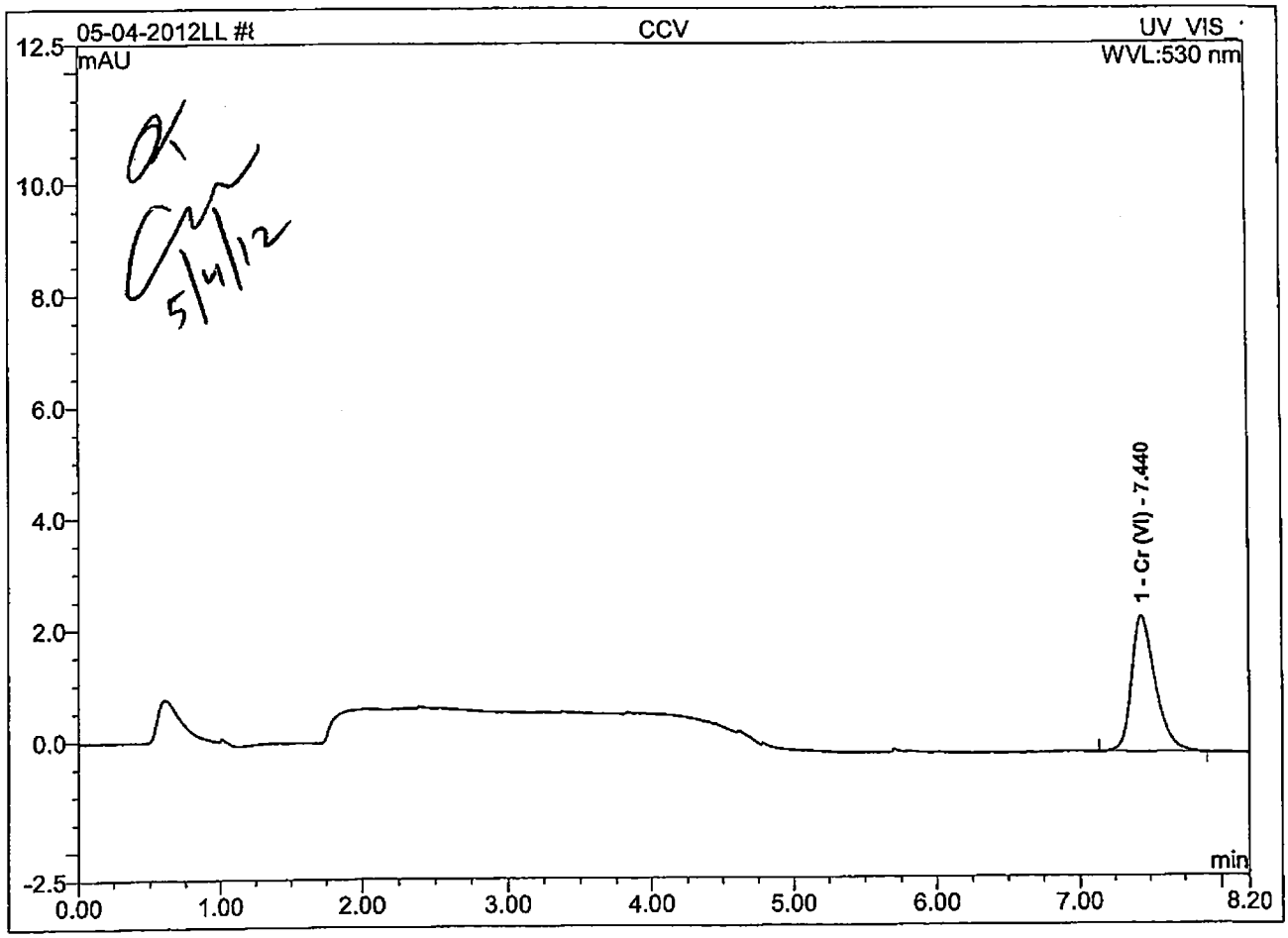
Y-INTERC
0.002231148

CCV1	
0.486029872	0.477

8 CCV

218.6 LL

Sample Name:	**CCV**	*Injection Volume:*	**2000.0**
Vial Number:	**32**	*Channel:*	**UV_VIS_1**
Sample Type:	**unknown**	*Dilution Factor:*	**1**
Control Program:	**Fast Hexavalent Chromium LL**	*Sample Weight:*	**1.0000**
Quantif. Method:	**5-042612CLL**	*Sample Amount:*	**1.0000**
Recording Time:	**5/4/2012 9:25**		



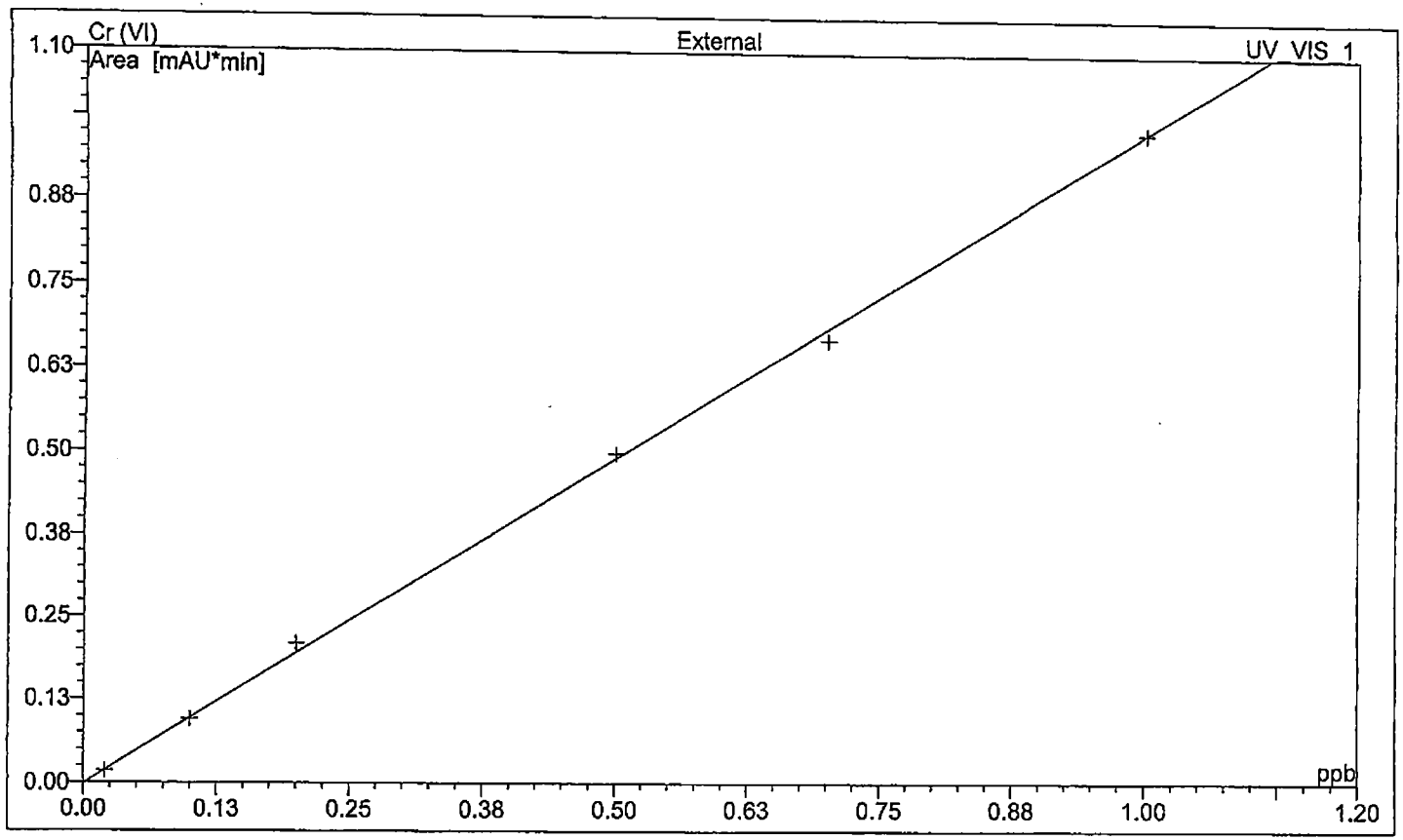
No.	Ret.Time min	Peak Name	Height mAU	Area mAU*min	Rel.Area %	Amount ppb	Type
1	7.440	Cr (VI)	2.436	0.477	100.00	0.47930	BMB
Total:			2.436	0.477	100.00	0.479	

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)

No.	Name	Amount ppb Cr (VI) UV_VIS_1	Time	Name	Area mAU*min Cr (VI) UV_VIS_1
1	STANDARD 1	0.0000	04.26.2012 11:10	5-042612CLL	n.a.
2	STANDARD 2	0.0200	04.26.2012 11:18	5-042612CLL	0.017
3	STANDARD 3	0.1000	04.26.2012 11:27	5-042612CLL	0.095
4	STANDARD 4	0.2000	04.26.2012 11:35	5-042612CLL	0.210
5	STANDARD 5	0.5000	04.26.2012 11:43	5-042612CLL	0.498
6	STANDARD 6	0.7000	04.26.2012 11:52	5-042612CLL	0.671
7	STANDARD 7	1.0000	04.26.2012 12:00	5-042612CLL	0.984

89068

Chromeleon (c) Dionex 1996-2006
Version 6.80 SR11 Build 3161 (184582)



No.	Ret.Time min	Peak Name	Cal.Type	Points	Coeff.Det. %	Offset	Slope	Quantification Method
2	7.55	Cr (VI)	XLOff	6	99.9127	-0.0016	0.9862	5-042612CLL

Linearity Check Only.

4/27/12

000081

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 8, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202849

SAMPLES: 7/Aqueous/

MSA-DMW5I-050712
MSA-MW24I-050712
MSA-MW27D-050712
MSA-MW6-050712
MSA-DMW5S-050712
MSA-MW24S-050712
MSA-MW28I-050712

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202849, consists of seven (7) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 7, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory duplicate results, matrix spike recoveries, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems – None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW5I-050712			MSA-DMW5S-050712			MSA-MW24I-050712			MSA-MW24S-050712		
SDG: R1202849	LAB_ID	R1202849-005			R1202849-004			R1202849-001			R1202849-002		
FRACTION: MISC	SAMP_DATE	5/7/2012			5/7/2012			5/7/2012			5/7/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U		0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW27D-050712			MSA-MW28I-050712			MSA-MW6-050712		
SDG: R1202849	LAB_ID	R1202849-006			R1202849-007			R1202849-003		
FRACTION: MISC	SAMP_DATE	5/7/2012			5/7/2012			5/7/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.016	J	P	0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 7/12 1525
Sample Matrix:	Water	**Date Received:**	5/ 8/12
Sample Name:	MSA-DMW5I-050712		
Lab Code:	R1202849-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/8/12 11:59	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 7/12 1520
Sample Matrix:	Water	**Date Received:**	5/ 8/12
Sample Name:	MSA-DMW5S-050712		
Lab Code:	R1202849-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/8/12 11:42	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 7/12 1210
Sample Matrix:	Water	**Date Received:**	5/ 8/12
Sample Name:	MSA-MW24I-050712		
Lab Code:	R1202849-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/8/12 10:16	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 7/12 1320
Sample Matrix:	Water	**Date Received:**	5/ 8/12
Sample Name:	MSA-MW24S-050712		
Lab Code:	R1202849-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/8/12 11:08	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202849
Date Collected: 5/ 7/12 1530
Date Received: 5/ 8/12

Sample Name: MSA-MW27D-050712
Lab Code: R1202849-006

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.016**	J	µg/L	0.020	0.004	1	NA	5/8/12 12:34	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 7/12 1535
Sample Matrix:	Water	**Date Received:**	5/ 8/12
Sample Name:	MSA-MW28I-050712		
Lab Code:	R1202849-007	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/8/12 12:16	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 7/12 1510
Sample Matrix:	Water	**Date Received:**	5/ 8/12
Sample Name:	MSA-MW6-050712		
Lab Code:	R1202849-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/8/12 11:25	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
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Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202849
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/08/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/07/12 and received at CAS in good condition at a cooler temperature of 4.6 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Seven water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

A matrix spike and duplicate analyses was analyzed on sample MSA-MW24I-050712. The recovery and RPD were with QC limits.

The Laboratory Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services – CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

0131

1 Mustard Street, Suite 250, Rochester, NY 14609 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA GW Sampling	Project Number: 112IC04021
Project Manager: Tony Apanavage	Report CC:
Company/Address: Tetra Tech 20251 Century Blvd Ste 200 Germantown MD 20874	
Phone #: (301) 528-5552	E-mail: Tony.Apanavage@tetratech.com
Sampler's Signature:	Sampler's Printed Name: Stuart Cameron

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hexavalent Chromium	REMARKS/ ALTERNATE DESCRIPTION
MSA-MW24I-050712		5/7/12	1210	AQ	3								X	MS/MSD
MSA-MW24S-050712			1320		1								X	
MSA-MW6-050712			1510		1								X	
MSA-DMW5S-050712			1520		1								X	
MSA-DMW5I-050712			1525		1								X	
MSA-MW27D-050712			1530		1								X	
MSA-MW28I-050712			1535		1								X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals Samples must be analyzed with 24 hrs. of sample time

See QAPP ☐

STATE WHERE SAMPLES WERE COLLECTED: MD

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
____ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ____ Yes ____ N

INVOICE INFORMATION
PO #:
BILL TO:

R1202849 5
Tetra Tech NUS, Inc.
MSA Groundwater

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Stuart Cameron	Printed Name: Gregory O. Esmerian	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Tetra Tech	Firm: ALS	Firm:	Firm:	Firm:	Firm:
Date/Time: 5/7/12 – 1600	Date/Time: 5-8-12 07:45	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 10/2010

HOLDTIME

SDG R1202849

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW18I-051012	R1202995-003	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW1S-051012	R1202995-005	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW2S-051012	R1202995-004	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-DMW5I-050712	R1202849-005	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW5S-050712	R1202849-004	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW9D-050912	R1202949-006	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9I-050912	R1202949-005	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9S-050912	R1202949-004	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW16D-050912	R1202949-003	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	DMW10S-051012	R1202995-006	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW16S-050912	R1202949-001	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW6-050712	R1202849-003	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW18S-051012	R1202995-001	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW24I-050712	R1202849-001	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW24S-050712	R1202849-002	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW25I-050812	R1202917-001	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW25S-050812	R1202917-002	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW27D-050712	R1202849-006	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW28I-050712	R1202849-007	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW31D-051012	R1202995-002	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW37S-050812	R1202917-003	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW16I-050912	R1202949-002	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/4/12 0950	BR-178 R1202823-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/3/12 1530	Yes No Field	—	-	9.61	—	CMW 5/4/12 1223	Buffer	—
											10%H2SO4	—
											10%NH4OH	—
											NH4OH(conc)	—
5/5/12 0928	EB-05242012 R1202833-001	7199 ~~218.6 RL~~ 218.6 LL 218.7	~~Water~~ Drinking Water	5/4/12 1430	Yes No Field	—	—	9.503	—	DRW 5/15/12 1001	Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	GCGC-EPA-PT-20 -BR-324 R1202833-004	7199 ~~218.6 RL~~ 218.6 LL 218.7	~~Water~~ Drinking Water	5/4/12 1230	Yes No Field	—	—	8.968	9.346	DRW 5/15/12 1018	Buffer	WC03144E exp.
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	GCGC-EPA-PT-20-BR -313 R1202833-003	7199 ~~218.6 RL~~ 218.6 LL 218.7	~~Water~~ Drinking Water	5/4/12 1015	Yes No Field	—	—	9.257	—	DRW 5/15/12 1021	Buffer	—
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	GCGC-EPA-PT-20 -BR-277 R1202833-002	7199 ~~218.6 RL~~ 218.6 LL 218.7	Water Drinking Water	5/4/12 0853	Yes No Field	—	—	9.574	—	DRW 5/15/12 1025	Buffer	—
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/8/12 0850	R1202849-001	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	5/7/12 1210	Yes No Field	Millex HV R1SP4794X	—	3.96	9.37	CMW 5/8/12 0919	Buffer	WC03144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-002	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	5/7/12 1320	Yes No Field		—	3.93	9.37 *	CMW 5/8/12 0920	Buffer	WC03144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-003	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	5/7/12 1510	Yes No Field		—	6.63	9.33 ≠	CMW 5/8/12 0922	Buffer	WC03144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

* blue ppt formed during pH adjustment *

≠ green ppt formed during pH adjustment ≠ CMW 5/8/12

H:\SMODOCS\Forms\cr+6SMO log

120059

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/8/12 0850	R1202849-004	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	5/7/12 1520	(Yes) No Field	Millex HV R1SA54620K	—	4.26	9.56	CMW 5/8/12 0936	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-005	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	5/7/12 1525	(Yes) No Field		—	4.39	9.66	CMW 5/8/12 0937	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-006	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	5/7/12 1530	(Yes) No Field		—	8.42	9.63	CMW 5/8/12 0939	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-007	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	5/7/12 1535	(Yes) No Field		—	6.68	9.58	CMW 5/8/12 0940	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 5/8/12	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	—	(Yes) No Field		—	8.45	9.55	CMW 5/8/12 0942	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/8/12 1039		7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	~~5/8~~ 5/7/12 1015	Yes No (Field)	—	—	10.07	9.62	CMW 5/8/12 1050	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202849-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/8/12 09:42	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202849
Date Collected: 5/7/12
Date Received: 5/8/12
Date Analyzed: 5/ 8/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MSA-MW24I-050712
Lab Code: R1202849-001

Units: µg/L
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	MSA-MW24I-05071 2DUP Duplicate Sample R1202849-001DUP Result	Average	RPD	RPD Limit
Chromium, Hexavalent, Dissolved	218.6	0.020	0.004	0.020 U	0.020 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
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QA/QC Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202849
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/7/12
Sample Matrix:	Water	**Date Received:**	5/8/12
		Date Analyzed:	5/ 8/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name:	MSA-MW24I-050712	**Units:**	µg/L
Lab Code:	R1202849-001	**Basis:**	NA

Analytical Method: 218.6

MSA-MW24I-050712MS
Matrix Spike
R1202849-001MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	ND	0.195	0.200	98	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202849
Date Analyzed: 5/ 8/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202849-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.197	0.200	98	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202849
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	290651	RQ1204782-04	5/8/12 09:12	0.500	0.490	98	95 - 105
CCV2	290651	RQ1204782-03	5/8/12 12:51	0.500	0.496	99	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202849
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	290651	RQ1204782-06	5/8/12 09:42	0.004	0.020	0.020	U
CCB2	290651	RQ1204782-05	5/8/12 13:08	0.004	0.020	0.020	U

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 290651 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204782-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.49 µg/L	10 mL	0.490 µg/L	1					5/8/12 09:12:00	N	IV
RQ1204782-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 09:42:00	N	IV
RQ1204782-07	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 09:42:00	N	IV
RQ1204782-08	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.197 µg/L	1	0.004	0.020	98		5/8/12 09:59:00	N	IV
R1202849-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 10:16:00	Y	IV
RQ1204782-01	Chromium, Hexavalent, Dissolved	DUP	R1202849-001	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	5/8/12 10:33:00	N	IV
RQ1204782-02	Chromium, Hexavalent, Dissolved	MS	R1202849-001	Water	0.20 µg/L	10 mL	0.195 µg/L	1	0.004	0.020	98		5/8/12 10:51:00	N	IV
R1202849-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 11:08:00	N	IV
R1202849-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 11:25:00	N	IV
R1202849-004	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 11:42:00	N	IV
R1202849-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 11:59:00	N	IV
R1202849-007	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 12:16:00	N	IV
R1202849-006	Chromium, Hexavalent, Dissolved	N/A		Water	0.02 µg/L	10 mL	0.016 µg/L J	1	0.004	0.020			5/8/12 12:34:00	N	IV
RQ1204782-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.50 µg/L	10 mL	0.496 µg/L	1					5/8/12 12:51:00	N	IV
RQ1204782-05	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/8/12 13:08:00	N	IV

52609

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Sample calc MSA-MW27D-050712
rep result 0.016 ug/L

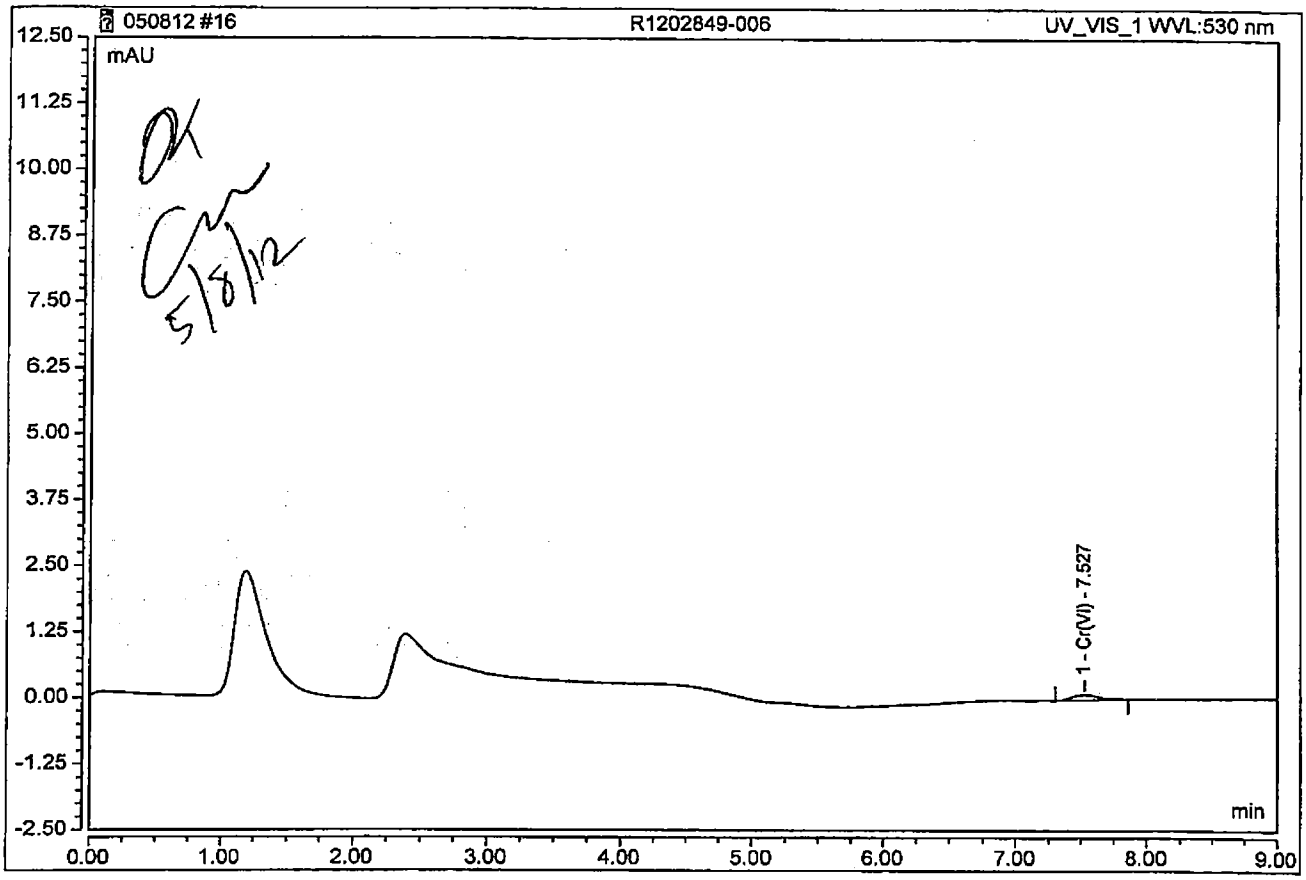
X-VALUE	Y-VALUE	CORREL	SLOPE	
0	0		**0.999824262**	**1.004997755**
0.02	0.027	**Y-INTERC**		
0.2	0.222		**0.008475685**	
1	1.011			

MSA-MW27D-050712	
0.015447115	0.024

Peak Integration Report

Sample Name:	R1202849-006	Inj. Vol:	1000.00
Injection Type:	Unknown	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI) 218.6
Inj. Date/Time:	08-May-2012 / 12:34	Injection Number:	16

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.53	Cr(VI)	BMB	0.024	0.101	0.0158
TOTAL:				0.02	0.10	0.02



OK
5/8/12

00046

Calibration Batch Report

Sequence:	050412	Injection Volume (uL):	1,000.00
Processing Method:	8-050412	Calibration Type:	Lin. WithOffset 1/A
Corr. Coefficient:	99.961	Instrument Method:	Cr(VI) 218.6

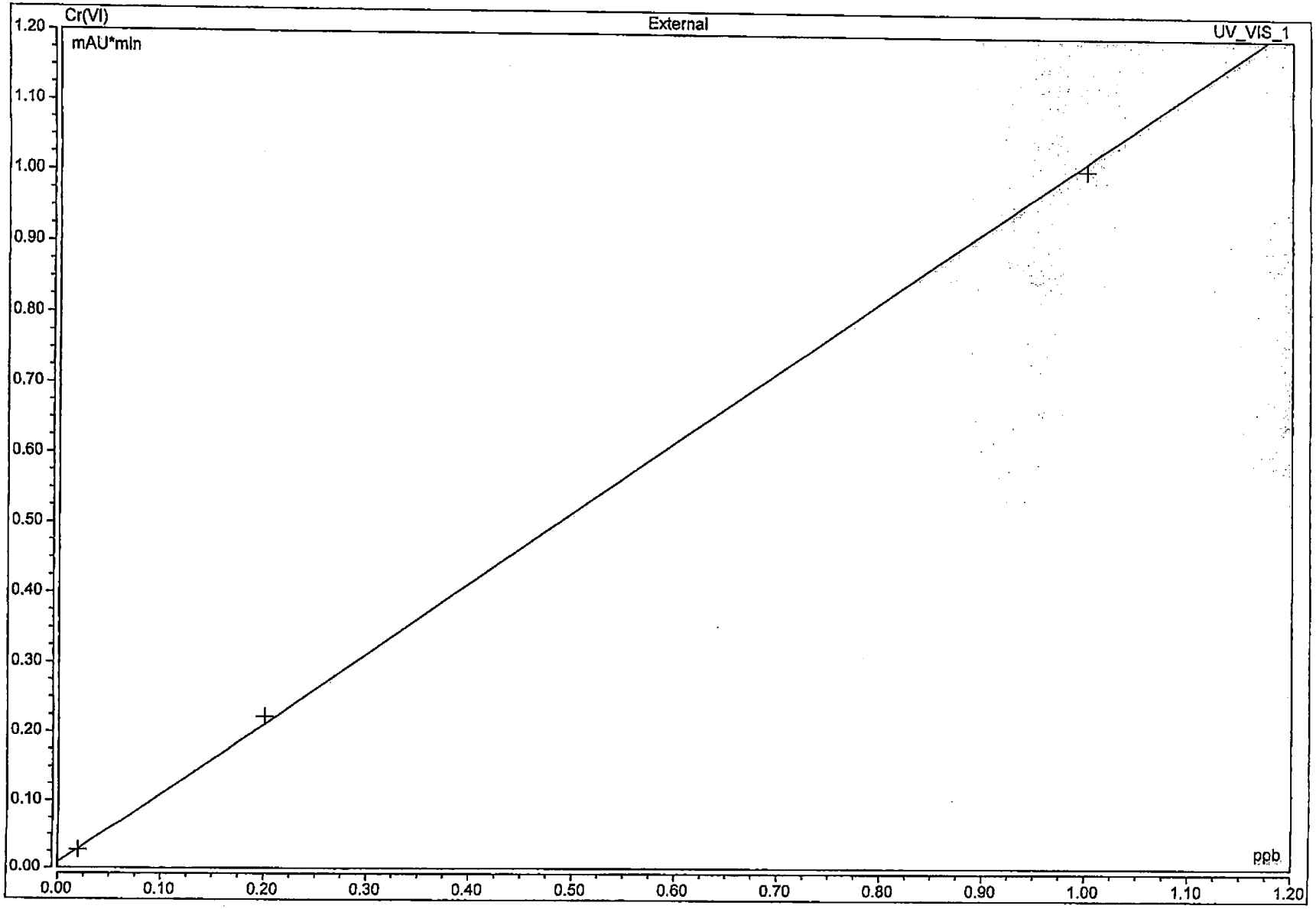
Calibration Summary

Injection Name Cr(VI)	Ret. Time min Cr(VI)	Area mAU*min Cr(VI)	Height mAU Cr(VI)	Amount ppb Cr(VI)
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
STANDARD 1	n.a.	n.a.	n.a.	n.a.
STANDARD 2	7.715	0.0270	0.124	0.019
STANDARD 3	7.682	0.2221	0.914	0.212
STANDARD 4	7.682	1.0106	4.171	0.989
Average	7.693			
Rel. Std. Dev.	0.250 %			

Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Inhibit Integration	On	Any	All Channels
7.000	Valley To Valley	On	Any	All Channels
7.000	Inhibit Integration	Off	Any	All Channels
7.000	Minimum Area	0.0005 [Signal*min]	Any	All Channels
7.000	Maximum Height Reject	0.050 [Signal]	Any	All Channels

Processing Method: 8-050412
Correlation Coefficient: 99.961
Calibration Type: Lin, WithOffset, 1/A

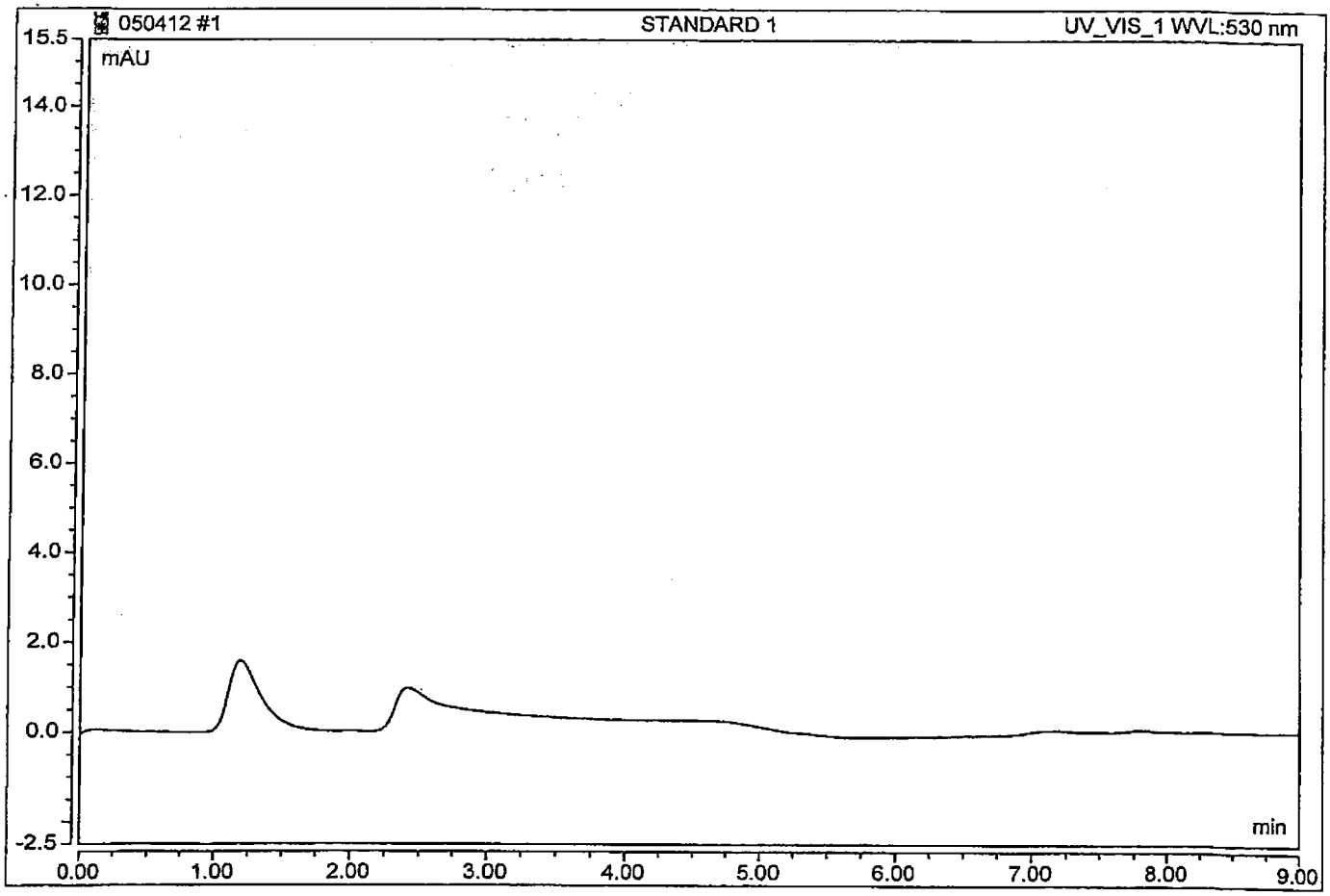


Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

Peak Integration Report

Sample Name:	STANDARD 1	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI) 218.6
Inj. Date/Time:	04-May-2012 10:10	Run Time:	9.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount n.a.
		TOTAL:		0.00	0.00	0.00



ok
5/7/12

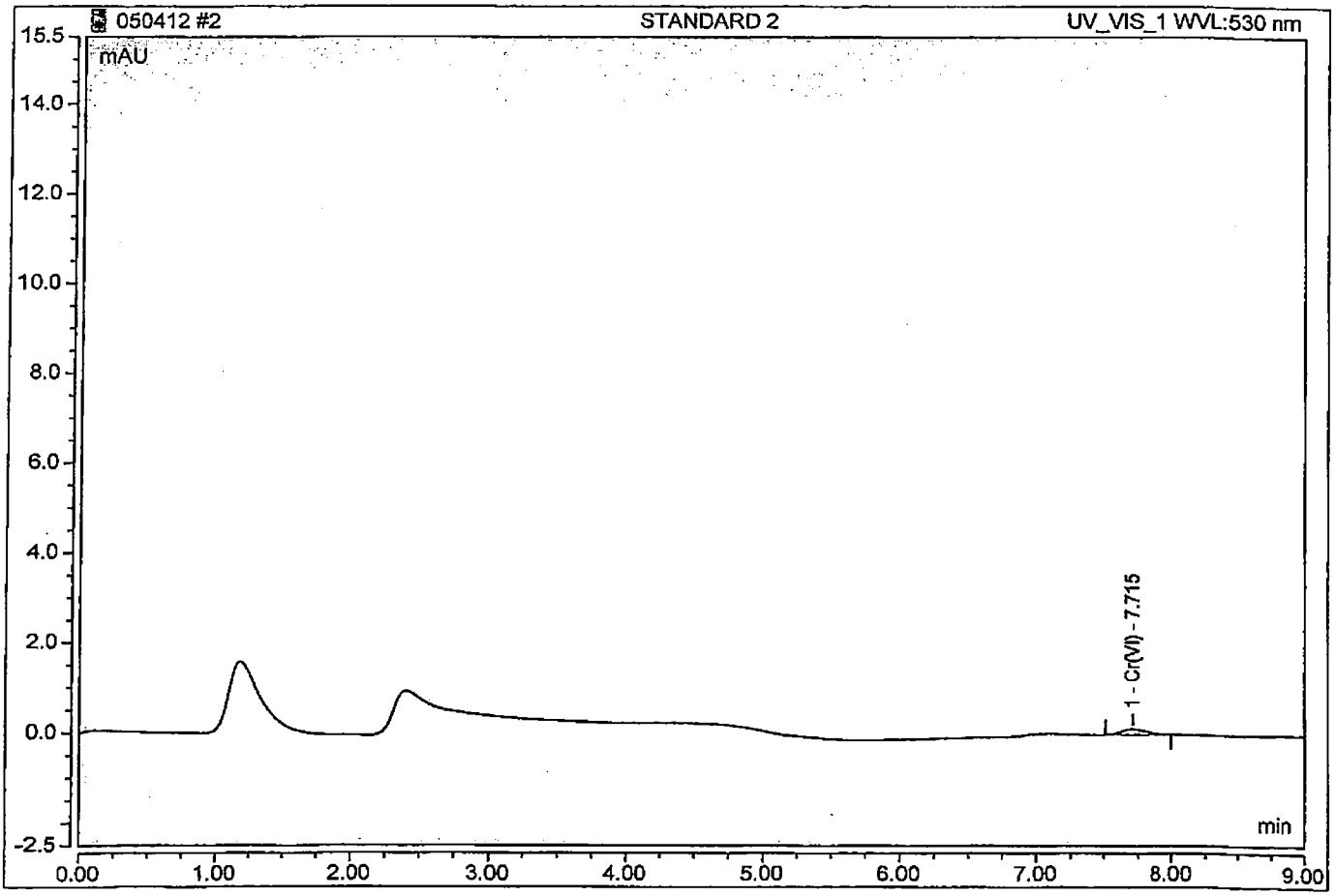
Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00047

Peak Integration Report

Sample Name:	STANDARD 2	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI) 218.6
Inj. Date/Time:	04-May-2012 10:27	Run Time:	9.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.71	Cr(VI)	BMB	0.027	0.124	0.0191
TOTAL:				0.03	0.12	0.02

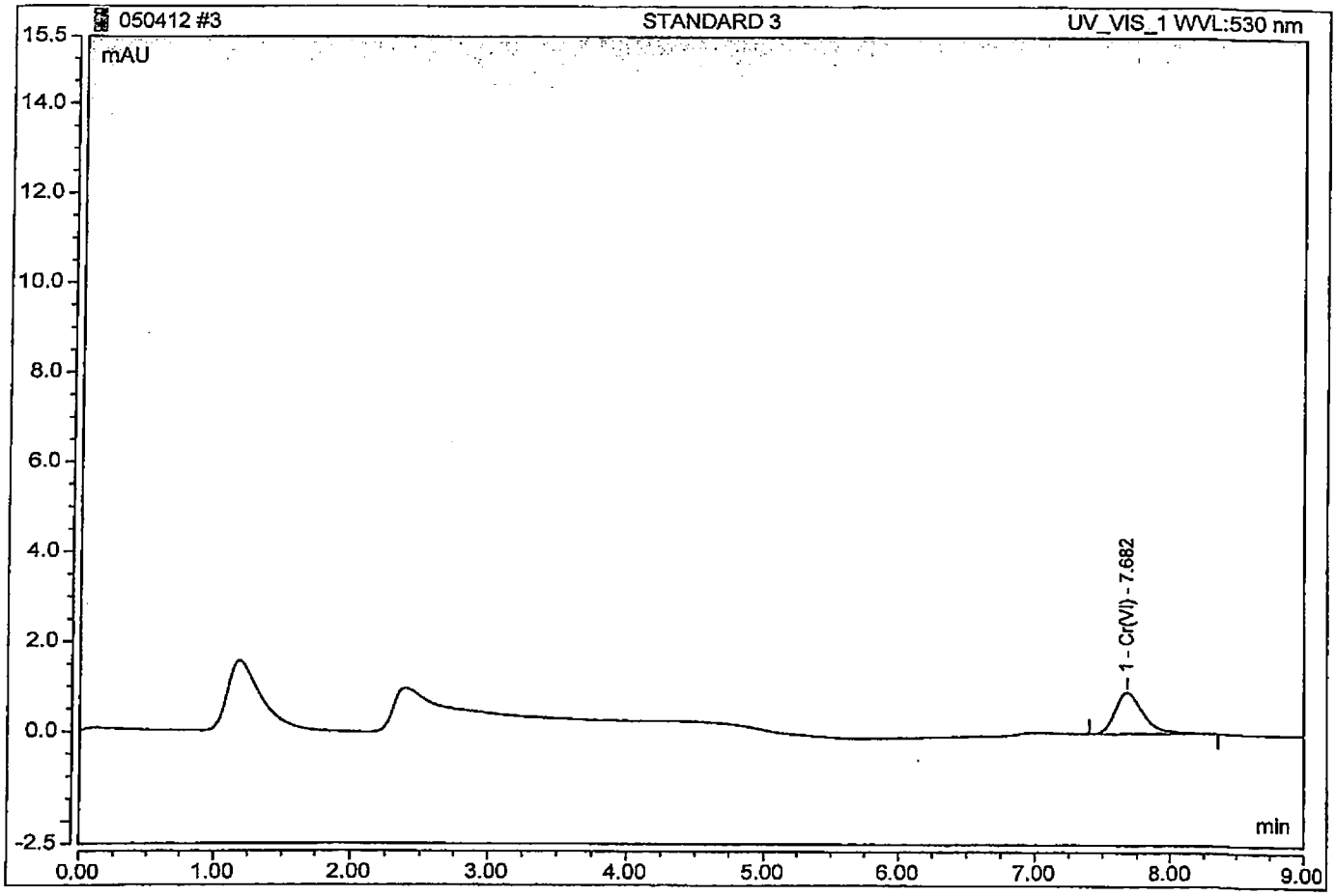


OK
5/7/12

Peak Integration Report

Sample Name:	STANDARD 3	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI) 218.6
Inj. Date / Time:	04-May-2012 10:44	Run Time:	9:00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.68	Cr(VI)	BMB	0.222	0.914	0.2115
TOTAL:				0.22	0.91	0.21



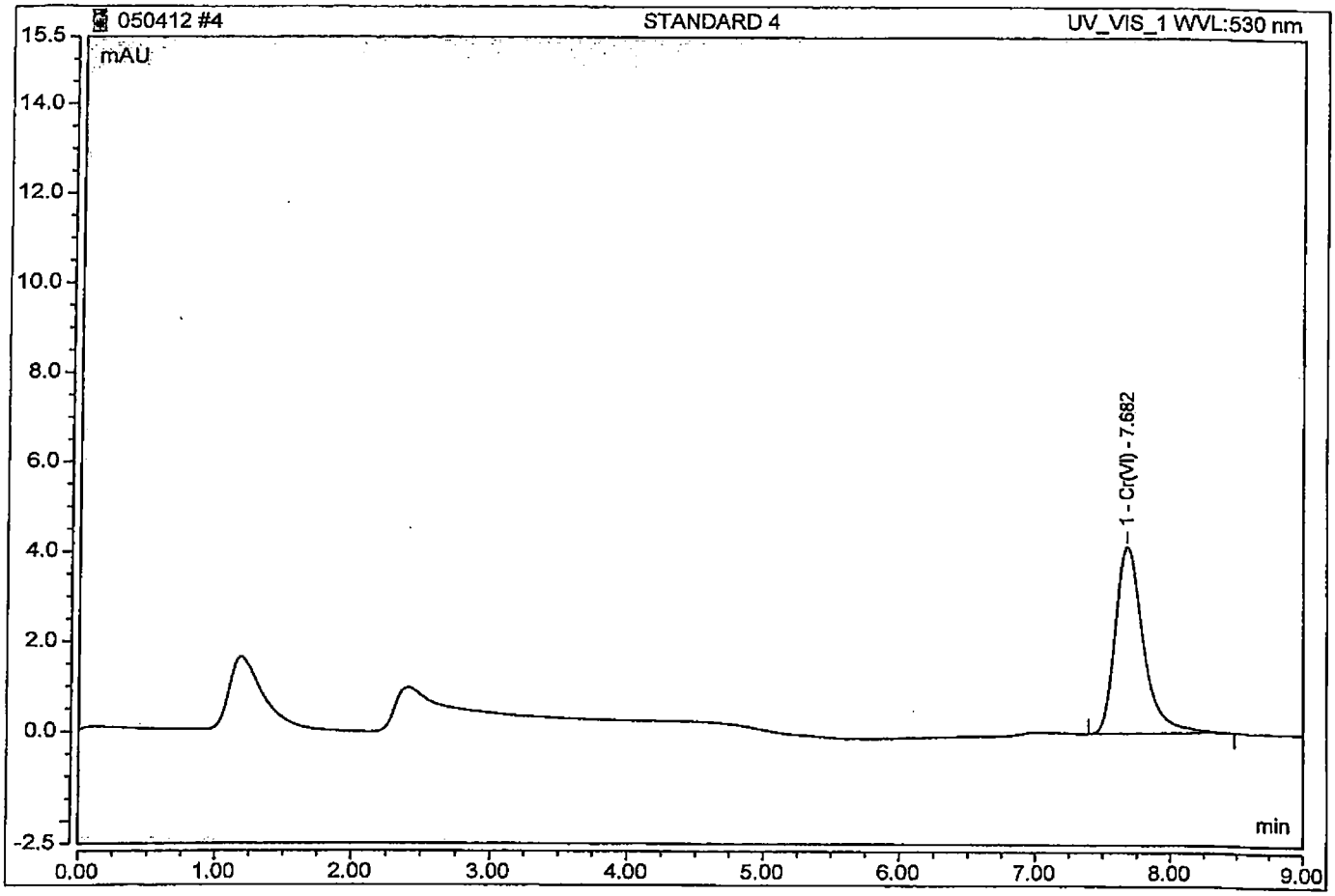
OK

5/7/12

Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI) 218.6
Inj. Date / Time:	04-May-2012 / 11:02	Run Time:	9.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.68	Cr(VI)	BMB	1.011	4.171	0.9894
TOTAL:				1.01	4.17	0.99



OK
5/7/12

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 8, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202917

SAMPLES: 3/Aqueous/

MSA-MW25I-050812 MSA-MW25S-050812
MSA-MW37S-050812

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202917, consists of three (3) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 8, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems – None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW25I-050812			MSA-MW25S-050812			MSA-MW37S-050812		
SDG: R1202917	LAB_ID	R1202917-001			R1202917-002			R1202917-003		
FRACTION: MISC	SAMP_DATE	5/8/2012			5/8/2012			5/8/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0		
	DUP_OF									
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202917
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 8/12 1213
Sample Matrix:	Water	**Date Received:**	5/ 9/12
Sample Name:	MSA-MW25I-050812		
Lab Code:	R1202917-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/9/12 12:18	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202917
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 8/12 1230
Sample Matrix:	Water	**Date Received:**	5/ 9/12
Sample Name:	MSA-MW25S-050812		
Lab Code:	R1202917-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/9/12 12:35	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	RI202917
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 8/12 1445
Sample Matrix:	Water	**Date Received:**	5/ 9/12
Sample Name:	MSA-MW37S-050812		
Lab Code:	R1202917-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/9/12 12:52	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202917
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/09/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/08/12 and received at CAS in good condition at a cooler temperature of 1.6 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Three water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling except samples MSA-MW25I-050812 and MSA-MW25S-050812 were analyzed 5 minutes outside the 24 hours from time of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

Columbia Analytical Services™ CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA Ground Water Sampling	Project Number: 112IC04021-02
Project Manager: Tony Aparrange	Report CC:
Company/Address: Tetra Tech Inc. 20251 Century Blvd STE 200 Germantown MD 20874	
Phone #: 301 528-3021	E-mail:
Sampler's Signature: Matt Poyon	Sampler's Printed Name: Matt Poyon

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	PRESERVATIVE	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hex Chrom								REMARKS/ ALTERNATE DESCRIPTION
MSA-MW25I-050812		5-8-12	1213	Water	1									X								
MSA-MW25S-050812		↓	1230	↓	1									X								
MSA-MW37S-050812		↓	1445	↓	1									X								

Preservative Key: 0. NONE 1. HCL 2. HNO_3 3. H_2SO_4 4. NaOH 5. Zn. Acetate 6. MeOH 7. $NaHSO_4$ 8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals 24 TAT

See QAPP ☐

TURNAROUND REQUIREMENTS
☐ RUSH (SURCHARGES APPLY)
☒ 1 day ☐ 2 day ☐ 3 day
☐ 4 day ☐ 5 day
☐ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
☐ I. Results Only
☐ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
☐ III. Results + QC and Calibration Summaries
☐ IV. Data Validation Report with Raw Data

Edata ☐ Yes ☐ No

INVOICE INFORMATION
PO #:
BILL TO:

R1202917 5
Tetra Tech NUS,Inc.
MSA Groundwater

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: Matt Poyon	Signature: Amy Hentschke	Signature	Signature	Signature	Signature
Printed Name: Matt Poyon	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: TT INC.	Firm: A/S	Firm	Firm	Firm	Firm
Date/Time: 5-8-12 / 1700	Date/Time: 5/9/12 1000	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1202849

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW18I-051012	R1202995-003	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW1S-051012	R1202995-005	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW2S-051012	R1202995-004	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-DMW5I-050712	R1202849-005	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW5S-050712	R1202849-004	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW9D-050912	R1202949-006	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9I-050912	R1202949-005	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9S-050912	R1202949-004	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW16D-050912	R1202949-003	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	DMW10S-051012	R1202995-006	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW16S-050912	R1202949-001	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW6-050712	R1202849-003	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW18S-051012	R1202995-001	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW24I-050712	R1202849-001	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW24S-050712	R1202849-002	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW25I-050812	R1202917-001	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW25S-050812	R1202917-002	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW27D-050712	R1202849-006	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW28I-050712	R1202849-007	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW31D-051012	R1202995-002	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW37S-050812	R1202917-003	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW16I-050912	R1202949-002	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/8/12 0850	R1202849-004	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/7/12 1520	(Yes) No Field	Millex HV R1SA5460K	—	4.26	9.56	CMW 5/8/12 0936	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-005	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/7/12 1525	(Yes) No Field		—	4.39	9.66	CMW 5/8/12 0937	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-006	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/7/12 1530	(Yes) No Field		—	8.42	9.63	CMW 5/8/12 0939	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202849-007	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/7/12 1535	(Yes) No Field		—	6.68	9.58	CMW 5/8/12 0940	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 5/8/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	(Yes) No Field		—	8.45	9.55	CMW 5/8/12 0942	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/8/12 1039	R1202883-001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	~~5/8~~ 5/7/12 1015	Yes No (Field)	—	—	10.07	9.62	CMW 5/8/12 1050	Buffer	WC103144E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/9/12 1000	MW25I R1202917-001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/8/12 1213	(Yes) No Field	Millex HV R1SA5460K	—	6.30	9.50	CMW 5/9/12 1145	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	MW25S R1202917-002	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/8/12 1230	(Yes) No Field		—	7.20	9.39	CMW 5/9/12 1146	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/9/12 1000	mw375 R1202917-003	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	5/8/12 1445	(Yes) No Field	MilexHV R1SA5460X	—	6.47	9.53	CMW 5/9/12 1148	Buffer	WC1202225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
↓	Filter Blank for 5/9/12	7199 218.6 RL ~~218.6 LL~~ 218.7	(Water) Drinking Water	—	(Yes) No Field	↓	—	8.39	9.61	CMW 5/9/12 1150	Buffer	WC1202225
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field	-					Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202917
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202917-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.004	1	NA	5/9/12 11:44	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202917
Date Analyzed: 5/ 9/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202917-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.187	0.200	94	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202917
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	290856	RQ1204842-04	5/9/12 11:26	0.500	0.493	99	95 - 105
CCV2	290856	RQ1204842-03	5/9/12 14:01	0.500	0.481	96	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202917
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	290856	RQ1204842-06	5/9/12 11:44	0.004	0.020	0.020	U
CCB2	290856	RQ1204842-05	5/9/12 14:18	0.004	0.020	0.020	U

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 290856 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204842-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.49 µg/L	10 mL	0.493 µg/L	1					5/9/12 11:26:00	N	IV
RQ1204842-06	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/9/12 11:44:00	N	IV
RQ1204842-07	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/9/12 11:44:00	N	IV
RQ1204842-08	Chromium, Hexavalent, Dissolved	LCS		Water	0.19 µg/L	10 mL	0.187 µg/L	1	0.004	0.020	94		5/9/12 12:01:00	N	IV
R1202917-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/9/12 12:18:00	N	IV
R1202917-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/9/12 12:35:00	N	IV
R1202917-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/9/12 12:52:00	N	IV
RQ1204842-01	Chromium, Hexavalent, Dissolved	DUP	R1202917-003	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020		NC	5/9/12 13:10:00	N	IV
RQ1204842-02	Chromium, Hexavalent, Dissolved	MS	R1202917-003	Water	0.18 µg/L	10 mL	0.185 µg/L	1	0.004	0.020	92		5/9/12 13:27:00	N	IV
RQ1204842-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.48 µg/L	10 mL	0.481 µg/L	1					5/9/12 14:01:00	N	IV
RQ1204842-05	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.004	0.020			5/9/12 14:18:00	N	IV

221559

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

sAmple CALC LCS rep result 0.187 ug/L

X-VALUE	Y-VALUE		CORREL	SLOPE
0	0		**0.999824262**	**1.004997755**
0.02	0.027		**Y-INTERC**	
0.2	0.222		**0.008475685**	
1	1.011			

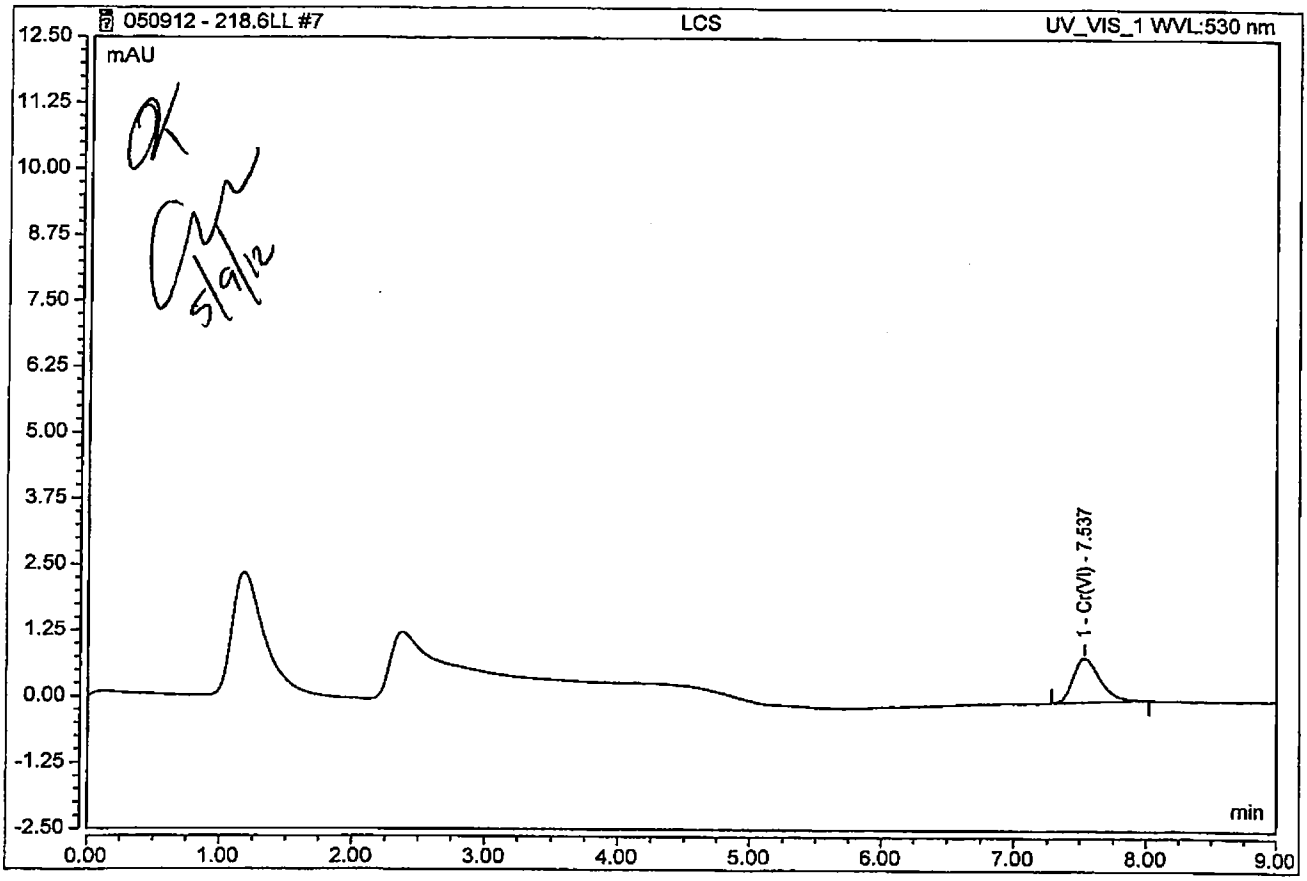
LCS

0.187586802	0.197

Peak Integration Report

Sample Name:	LCS	Inj. Vol:	1000.00
Injection Type:	Unknown	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI) 218.6
Inj. Date / Time:	09-May-2012 / 12:01	Injection Number:	7

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.54	Cr(VI)	BMB	0.197	0.833	0.1870
TOTAL:				0.20	0.83	0.19



OK
5/9/12

Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00024

Calibration Batch Report

Sequence:	050412	Injection Volume (uL):	1,000.00
Processing Method:	8-050412	Calibration Type:	Lin. WithOffset. 1/A
Corr. Coefficient:	99.961	Instrument Method:	Cr(VI) 218.6

Calibration Summary

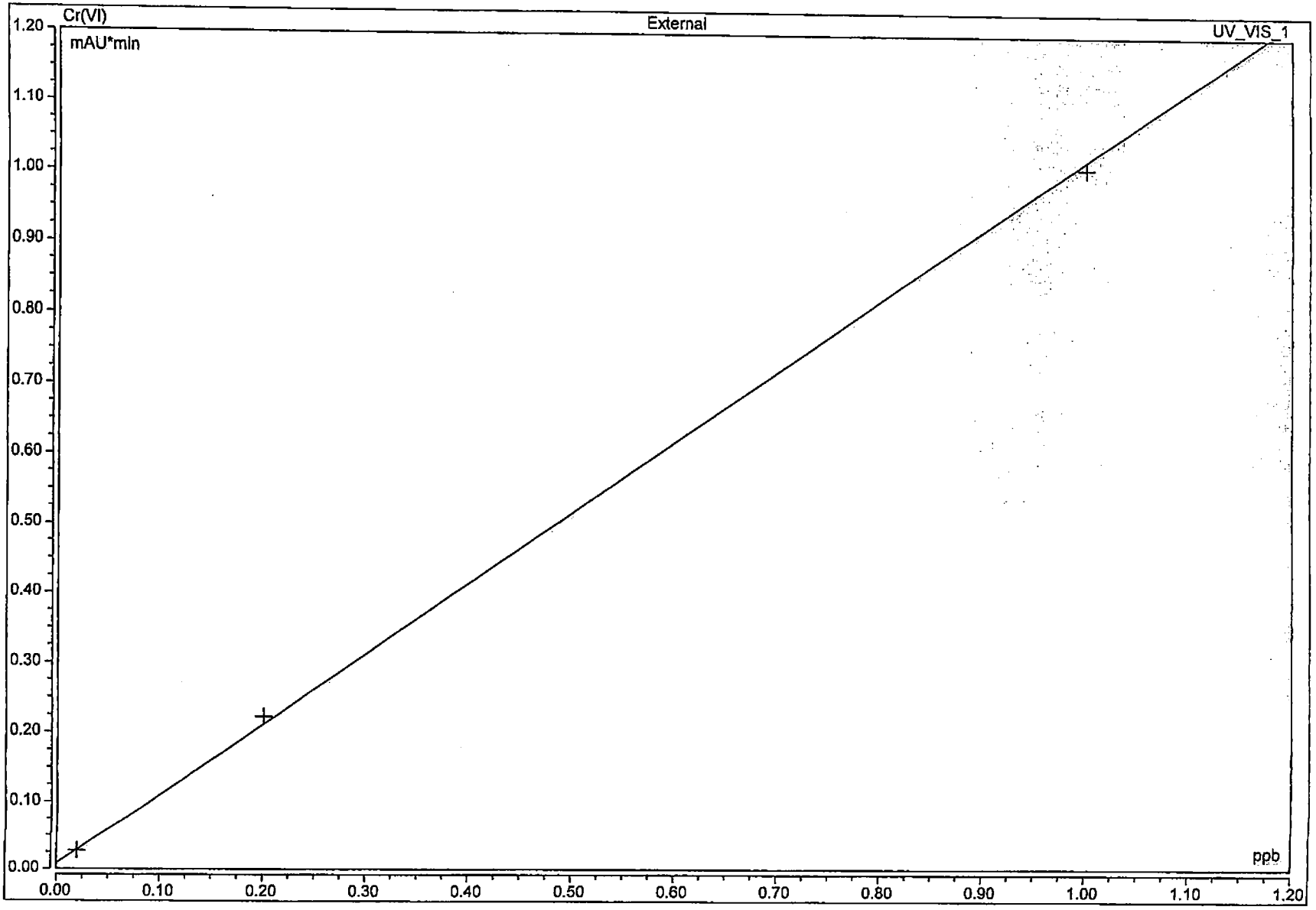
Injection Name / Cr(VI)	Ret. Time min Cr(VI)	Area mAU*min Cr(VI)	Height mAU Cr(VI)	Amount ppb Cr(VI)
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
STANDARD 1	n.a.	n.a.	n.a.	n.a.
STANDARD 2	7.715	0.0270	0.124	0.019
STANDARD 3	7.682	0.2221	0.914	0.212
STANDARD 4	7.682	1.0106	4.171	0.989
Average	7.693			
Rel. Std. Dev.	0.250 %			

Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Inhibit Integration	On	Any	All Channels
7.000	Valley To Valley	On	Any	All Channels
7.000	Inhibit Integration	Off	Any	All Channels
7.000	Minimum Area	0.0005 [Signal*min]	Any	All Channels
7.000	Maximum Height Reject	0.050 [Signal]	Any	All Channels

Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

Processing Method: 8-050412
Correlation Coefficient: 99.961
Calibration Type: Lin, WithOffset, 1/A

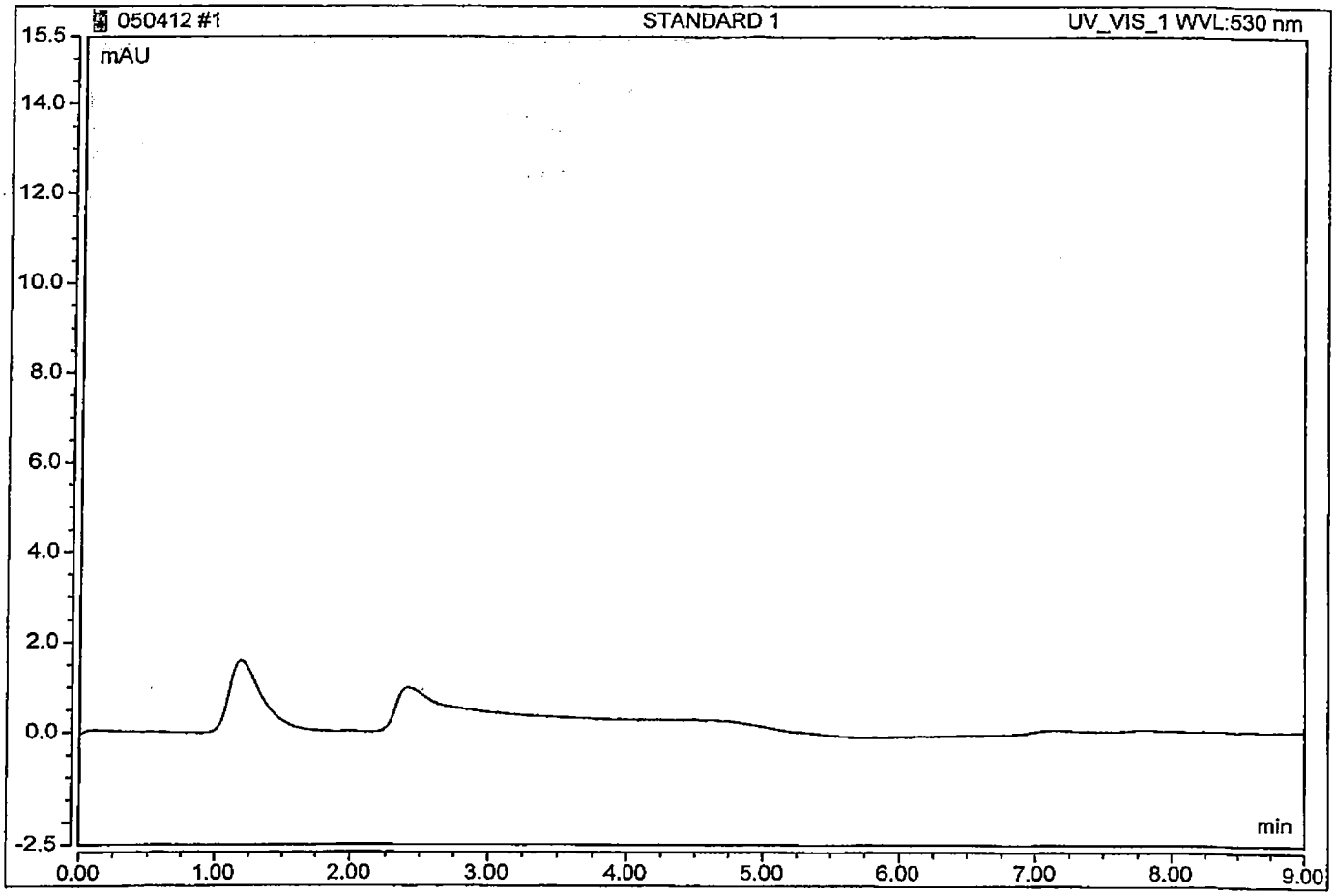


00041

Peak Integration Report

Sample Name:	STANDARD 1	Inj. Vol. [µL]:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI) 218.6
Inj. Date / Time:	04-May-2012 / 10:10	Run Time [min]:	9.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount n.a.
		TOTAL:		0.00	0.00	0.00



OK
5/7/12

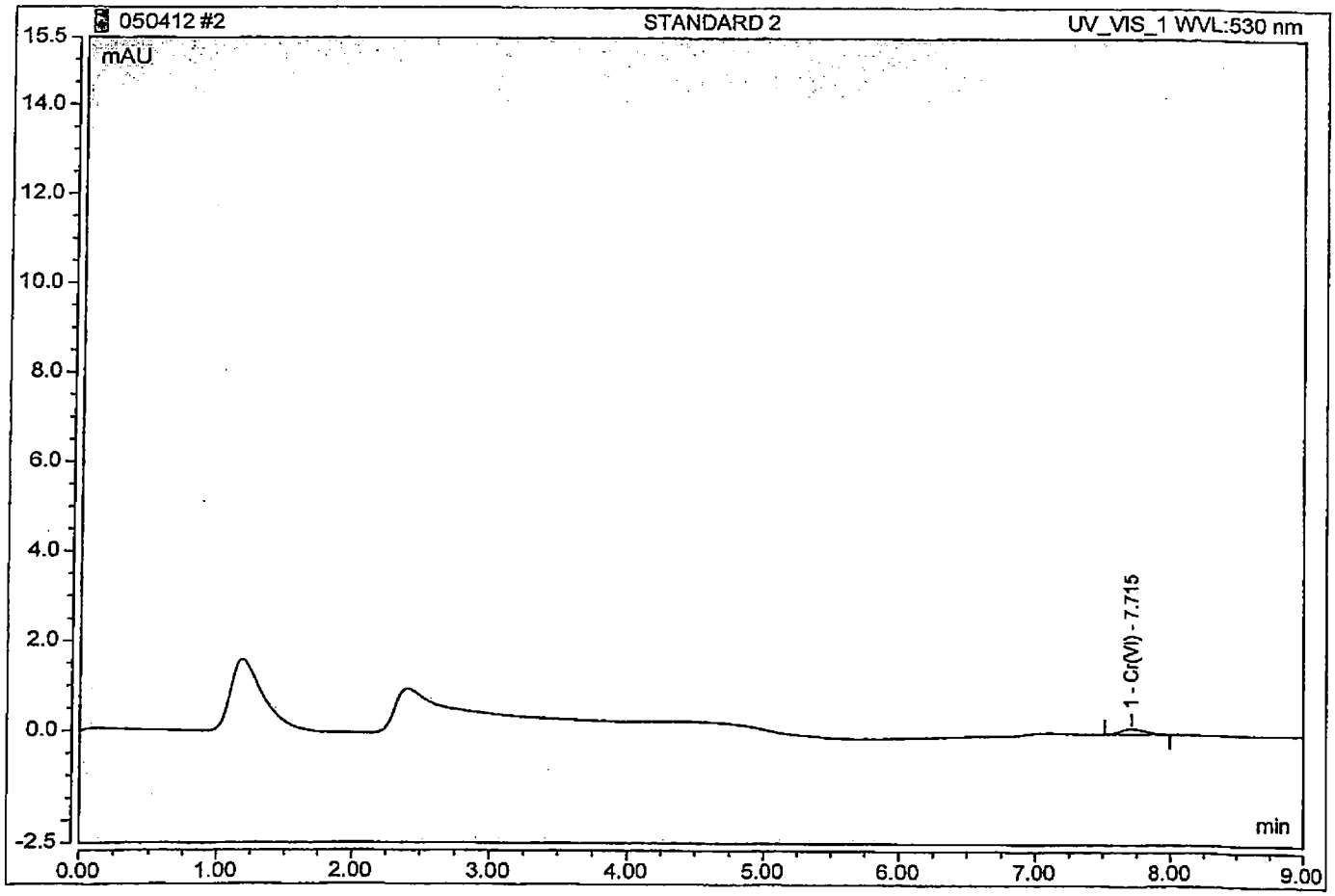
Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00034

Peak Integration Report

Sample Name:	STANDARD 2	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-050412	Program:	Cr(VI)-218.6
Inj. Date/Time:	04-May-2012 / 10:27	Run Time:	9.00

No	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.71	Cr(VI)	BMB	0.027	0.124	0.0191
TOTAL:				0.03	0.12	0.02



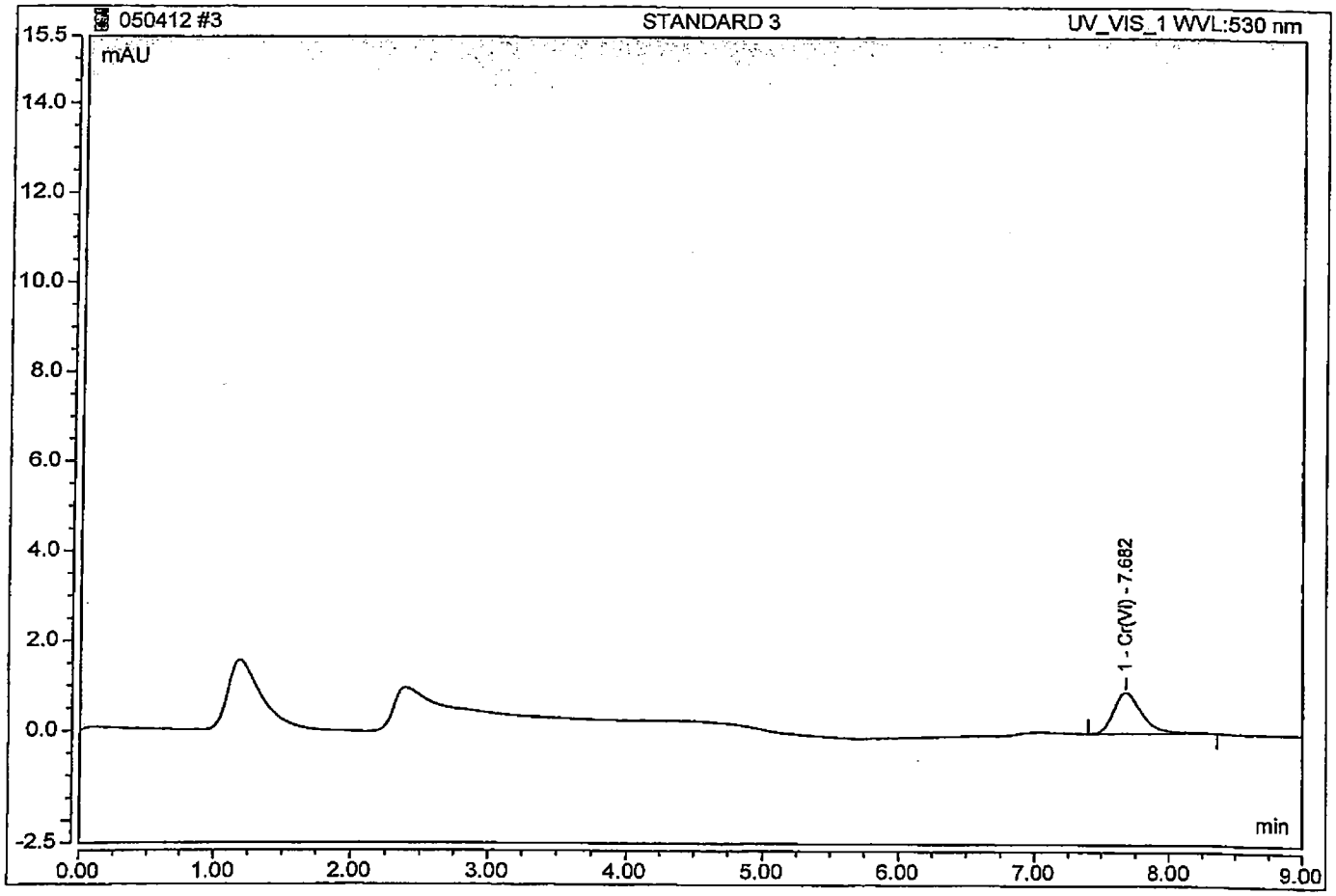
OK

5/7/12

Peak Integration Report

Sample Name:	STANDARD 3	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8.050412	Program:	Cr(VI) 218.6
Inj. Date/Time:	04-May-2012 / 10:44	Run Time:	9:00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.68	Cr(VI)	BMB	0.222	0.914	0.2115
TOTAL:				0.22	0.91	0.21



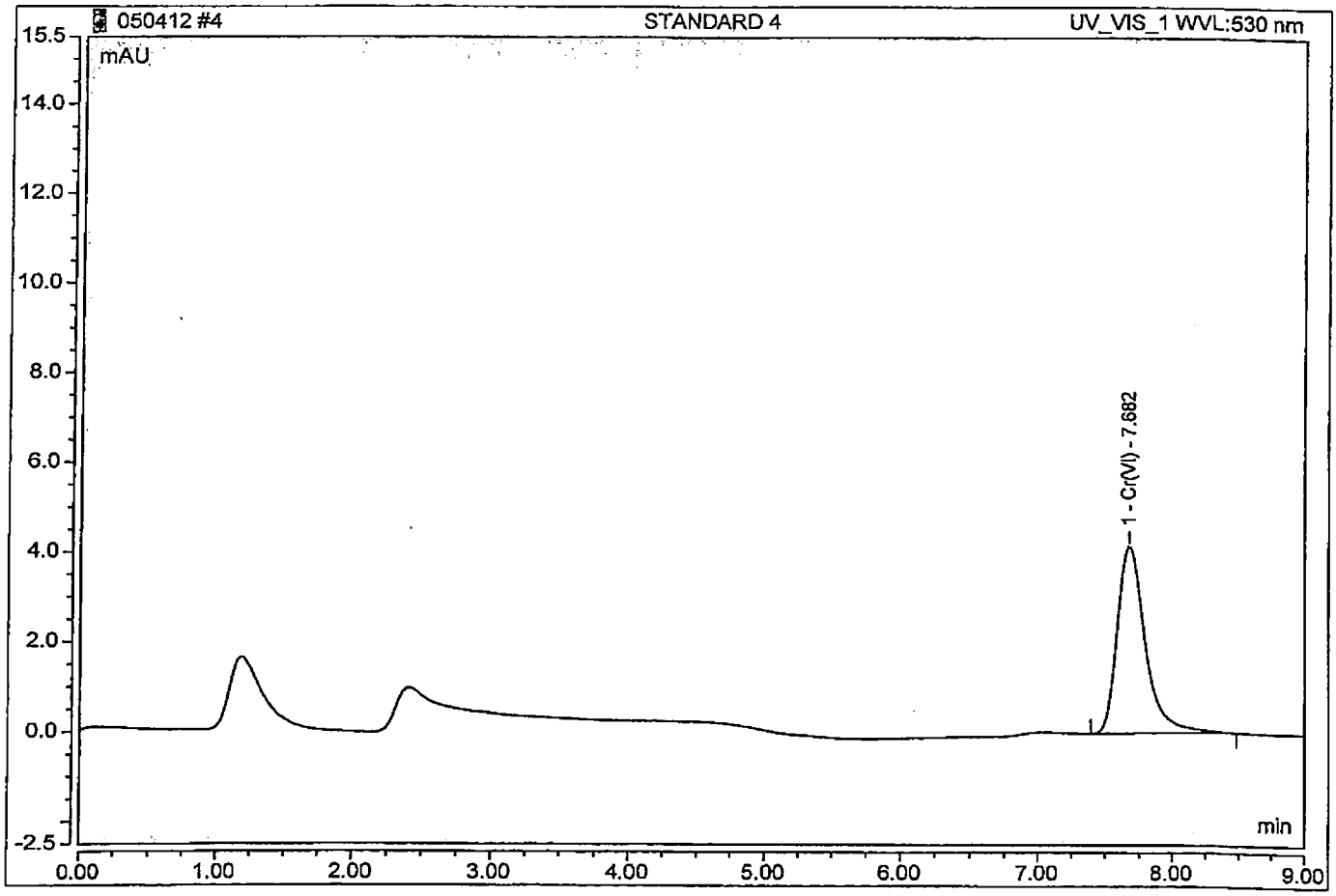
OK

5/7/12

Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	B:050412	Program:	Cr(VI) 218.6
Inj. Date / Time:	04-May-2012 / 11:02	Run Time:	9.00

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.68	Cr(VI)	BMB	1.011	4.171	0.9894
TOTAL:				1.01	4.17	0.99



OK
5/7/12

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE:** **JUNE 6, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202949

SAMPLES: 6/Aqueous/

MSA-DMW9D-050912	MSA-DMW9I-050912
MSA-DMW9S-050912	MSA-MW16D-050912
MSA-MW16I-050912	MSA-MW16S-050912

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202949, consists of six (6) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 9, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory duplicate results, matrix spike recoveries, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems

- The continuing calibration percent recovery on 05/10/2012 at 13:05 was below the laboratory quality control limit affecting all samples. The samples were reanalyzed outside of the 24 hour hold time. The original nondetected results were used for validation purposes and were qualified as biased low, "UL".

- The matrix spike percent recovery for hexavalent chromium was below the laboratory quality control limit affecting all samples. The samples were reanalyzed outside of the 24 hour hold time. The original nondetected results were used for validation purposes and were qualified as biased low, "UL".

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: The continuing calibration percent recovery on 05/10/2012 at 13:05 was below the laboratory quality control limit.

Other Factors Affecting Data Quality: The matrix spike percent recovery for hexavalent chromium was below the laboratory quality control limit.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW9D-050912			MSA-DMW9I-050912			MSA-DMW9S-050912			MSA-MW16D-050912		
SDG: R1202949	LAB_ID	R1202949-006			R1202949-005			R1202949-004			R1202949-003		
FRACTION: MISC	SAMP_DATE	5/9/2012			5/9/2012			5/9/2012			5/9/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	UL	CD	0.02	UL	CD	0.02	UL	CD	0.02	UL	CD

PROJ_NO: 04021	NSAMPLE	MSA-MW16I-050912			MSA-MW16S-050912		
SDG: R1202949	LAB_ID	R1202949-002			R1202949-001		
FRACTION: MISC	SAMP_DATE	5/9/2012			5/9/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	UL	CD	0.02	UL	CD

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202949
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 9/12 1338
Sample Matrix:	Water	**Date Received:**	5/10/12
Sample Name:	MSA-DMW9D-050912		
Lab Code:	R1202949-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/10/12 10:59	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202949
Date Collected: 5/ 9/12 1230
Date Received: 5/10/12

Sample Name: MSA-DMW9I-050912
Lab Code: R1202949-005

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/10/12 10:08	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202949
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 9/12 1509
Sample Matrix:	Water	**Date Received:**	5/10/12
Sample Name:	MSA-DMW9S-050912		
Lab Code:	R1202949-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/10/12 12:08	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202949
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 9/12 1440
Sample Matrix:	Water	**Date Received:**	5/10/12
Sample Name:	MSA-MW16D-050912		
Lab Code:	R1202949-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/10/12 11:17	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202949
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 9/12 1315
Sample Matrix:	Water	**Date Received:**	5/10/12
Sample Name:	MSA-MW16I-050912		
Lab Code:	R1202949-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/10/12 10:25	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202949
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/ 9/12 1320
Sample Matrix:	Water	**Date Received:**	5/10/12
Sample Name:	MSA-MW16S-050912		
Lab Code:	R1202949-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/10/12 10:42	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202949
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/10/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/09/12 and received at CAS in good condition at a cooler temperature of 0.3 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Six water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met except CCV2 (94 %) was slightly less than the 95 – 105 % limit. All data was accepted based on the other CCV recoveries as well as the LCS recovery. Also due to an instrument error, the ICB did not completely run and could not be calculated. All samples were re-analyzed and the original data was confirmed.

The Blank Spike (LCS) recovery was within QC limits.

A matrix spike and duplicate analyses was not requested but analyzed on sample MSA-MW16d-050912. The matrix spike recovery was initially low (81 %) and was flagged with an "*". The QC was re-analyzed and the recovery was within QC limits. The RPD were with QC limits.

The Laboratory Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

0123

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA GW Sampling
Project Number: 112IC04021-03
Project Manager: Tony Apanavage
Report CC:
Company/Address: Tetra Tech
20251 Century Blvd Ste 200
Germantown MD. 20874
Phone #: (301)528-5552
E-mail: Tony.Apanavage@tetratech.com
Sampler's Signature: [signature]
Sampler's Printed Name: Stuart Cameron

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hexavalent Chromium							REMARKS/ ALTERNATE DESCRIPTION
MSA-MW16S-050912	✓	5/9/12	1320	AQ	1								X							
MSA-MW16I-050912	✓	↓	1315	↓	1								X							
MSA-MW16D-050912	✓	↓	1440	↓	1								X							
MSA-DMW9S-050912	✓	↓	1509	↓	1								X							
MSA-DMW9I-050912	✓	↓	1230	↓	1								X							
MSA-DMW9D-050912	✓	↓	1338	↓	1								X							

SPECIAL INSTRUCTIONS/COMMENTS
Metals Samples need analyzed within 24 hrs, of sample time

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
____ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

INVOICE INFORMATION
PO #:
BILL TO:

R1202949 5
Tetra Tech NUS,Inc.
MSA Groundwater

Edata ____ Yes ____ N

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: [signature]	Signature: Amy Hentschke	Signature	Signature	Signature	Signature
Printed Name: Stuart Cameron	Printed Name: Amy Hentschke	Printed Name	Printed Name	Printed Name	Printed Name
Firm: Tetra Tech	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 5/9/12 - 1630	Date/Time: 5/10/12 0800	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1202849

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW18I-051012	R1202995-003	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW1S-051012	R1202995-005	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW2S-051012	R1202995-004	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-DMW5I-050712	R1202849-005	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW5S-050712	R1202849-004	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW9D-050912	R1202949-006	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9I-050912	R1202949-005	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9S-050912	R1202949-004	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW16D-050912	R1202949-003	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	DMW10S-051012	R1202995-006	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW16S-050912	R1202949-001	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW6-050712	R1202849-003	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW18S-051012	R1202995-001	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW24I-050712	R1202849-001	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW24S-050712	R1202849-002	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW25I-050812	R1202917-001	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW25S-050812	R1202917-002	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW27D-050712	R1202849-006	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW28I-050712	R1202849-007	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW31D-051012	R1202995-002	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW37S-050812	R1202917-003	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW16I-050912	R1202949-002	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/9/12 1000	MW375 R1202917-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/8/12 1445	Yes No Field	Millex HV R1SA5460X	—	6.47	9.53	CMW 5/9/12 1148	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	Filter Blank for 5/9/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	↓	—	8.39	9.61	CMW 5/9/12 1150	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
—	R1202884-001 A	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	—	<0.1	9.27	—	CMW 5/9/12 1600	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
—	R1202884-001 B	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	—	<0.1	9.33	—	CMW 5/9/12 1601	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
—	R1202884-001 C	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field	—	<0.1	9.31	—	CMW 5/9/12 1602	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
5/10/12 0800	R1202949-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1320	Yes No Field	Millex HV R1SA5460X	~~0.41~~ 05/10/12	6.41	9.43	CMW 5/10/12 0950	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	R1202949-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1315	Yes No Field	↓	—	6.91	9.59	CMW 5/10/12 0951	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	R1202949-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1440	Yes No Field	↓	—	5.34	9.60	CMW 5/10/12 0952	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/10/12 0800	R1202949-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1509	Yes No Field	Millex HV R1A5460K	—	6.53	9.38	CMW 9/10/12 0954	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202949-005	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1230	Yes No Field		—	6.77	9.41	CMW 5/10/12 0955	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202949-006	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1338	Yes No Field		—	5.48	9.43	CMW 5/10/12 0956	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 5/10/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	—	Yes No Field		—	8.40	9.56	CMW 5/10/12 0958	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/10/12 0955	MW02P R1202977-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1440	Yes No Field	—	—	6.98	9.07	CMW 5/10/12 1042	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	EB R1202977-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1615	Yes No Field	—	—	8.98	9.37	CMW 5/10/12 1043	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	MW02 R1202977-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1435	Yes No Field	—	—	7.51	9.11	CMW 5/10/12 1045	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	MW26 R1202977-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/9/12 1525	Yes No Field	—	—	7.82	9.27	CMW 5/10/12 1046	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Analytical Results Summary

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 291176 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204959-02	Chromium, Hexavalent, Dissolved	CCV		Water	0.48 µg/L	10 mL	0.482 µg/L	1					5/10/12 09:00:00	N	IV
RQ1204959-04	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 09:17:00	N	IV
RQ1204959-05	Chromium, Hexavalent, Dissolved	MB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 09:17:00	N	IV
RQ1204959-06	Chromium, Hexavalent, Dissolved	LCS		Water	0.20 µg/L	10 mL	0.201 µg/L	1	0.010	0.020	101		5/10/12 09:34:00	N	IV
R1202949-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 10:08:00	N	IV
R1202949-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 10:25:00	N	IV
R1202949-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 10:42:00	N	IV
R1202949-006	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 10:59:00	N	IV
R1202949-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 11:17:00	N	IV
RQ1204959-07	Chromium, Hexavalent, Dissolved	DUP	R1202949-003	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020		NC	5/10/12 11:34:00	N	IV
RQ1204959-08	Chromium, Hexavalent, Dissolved	MS	R1202949-003	Water	0.16 µg/L	10 mL	0.162 µg/L	1	0.010	0.020	81*		5/10/12 11:51:00	N	IV
R1202949-004	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 12:08:00	N	IV
RQ1204959-01	Chromium, Hexavalent, Dissolved	CCV		Water	0.47 µg/L	10 mL	0.471 µg/L	1					5/10/12 13:05:00	N	IV
RQ1204959-03	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 13:23:00	N	IV

original

00027

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Analytical Results Summary

Instrument Name: R-IC-08 **Analyst:** CWOODS **Analysis Lot:** 291230 **Method/Testcode:** 218.6/Cr6 D

Lab Code	Target Analytes	QC	Parent Sample	Matrix	Raw Result	Sample Amt.	Final Result	Dil	MDL	PQL	% Rec	% RSD	Date Analyzed	QC?	Tier
RQ1204982-04	Chromium, Hexavalent, Dissolved	CCV		Water	0.50 µg/L	10 mL	0.503 µg/L	1					5/10/12 15:25:00	N	IV
RQ1204982-08	Chromium, Hexavalent, Dissolved	LCS		Water	0.21 µg/L	10 mL	0.209 µg/L	1	0.010	0.020	105		5/10/12 16:12:00	N	IV
R1202949-005	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 16:29:00	N	IV
R1202949-002	Chromium, Hexavalent, Dissolved	N/A		Water	0.01 µg/L	10 mL	0.013 µg/L J	1	0.010	0.020			5/10/12 16:47:00	N	IV
R1202949-001	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 17:04:00	N	IV
R1202949-006	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 17:21:00	N	IV
R1202949-003	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 17:38:00	N	IV
RQ1204982-01	Chromium, Hexavalent, Dissolved	DUP	R1202949-003	Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020		NC	5/10/12 17:55:00	N	IV
RQ1204982-02	Chromium, Hexavalent, Dissolved	MS	R1202949-003	Water	0.19 µg/L	10 mL	0.187 µg/L	1	0.010	0.020	94		5/10/12 18:13:00	N	IV
R1202949-004	Chromium, Hexavalent, Dissolved	N/A		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 18:30:00	N	IV
RQ1204982-03	Chromium, Hexavalent, Dissolved	CCV		Water	0.51 µg/L	10 mL	0.508 µg/L	1					5/10/12 19:04:00	N	IV
RQ1204982-05	Chromium, Hexavalent, Dissolved	CCB		Water	0.00 µg/L	10 mL	0.020 µg/L U	1	0.010	0.020			5/10/12 19:21:00	N	IV

re analysis

29062

# indicates Final Result is not yet adjusted for Solids because it has not yet been determined.

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202949
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202949-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/10/12 09:17	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202949
Date Collected: 5/9/12
Date Received: 5/10/12
Date Analyzed: 5/10/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MSA-MW16D-050912
Lab Code: R1202949-003

Units: µg/L
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	MSA-MW16D-05091 2DUP Duplicate Sample R1202949-003DUP1 Result	Average	RPD	RPD Limit
Chromium, Hexavalent, Dissolved	218.6	0.020	0.010	0.020 U	0.020 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202949
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/9/12
Sample Matrix:	Water	**Date Received:**	5/10/12
		Date Analyzed:	5/10/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name:	MSA-MW16D-050912	**Units:**	µg/L
Lab Code:	R1202949-003	**Basis:**	NA

Analytical Method: 218.6

MSA-MW16D-050912MS
Matrix Spike
R1202949-003MS1

Analyte Name	Sample Result	Result	Spike Amount	% Rec		% Rec Limits
Chromium, Hexavalent, Dissolved	ND	0.162	0.200	81	*	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202949
Date Collected: 5/9/12
Date Received: 5/10/12
Date Analyzed: 5/10/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MSA-MW16D-050912
Lab Code: R1202949-003

Units: µg/L
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	MSA-MW16D-05091 2DUP Duplicate Sample R1202949-003DUP2 Result	Average	RPD	RPD Limit
Chromium, Hexavalent, Dissolved	218.6	0.020	0.010	0.020 U	0.020 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202949
Date Collected: 5/9/12
Date Received: 5/10/12
Date Analyzed: 5/10/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name: MSA-MW16D-050912
Lab Code: R1202949-003

Units: µg/L
Basis: NA

Analytical Method: 218.6

MSA-MW16D-050912MS
Matrix Spike
R1202949-003MS2

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	ND	0.187	0.200	94	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202949
Date Analyzed: 5/10/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202949-LCS1 Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.201	0.200	101	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202949
Date Analyzed: 5/10/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202949-LCS2 Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.209	0.200	105	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202949
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery		Acceptance Limits
CCV1	291176	RQ1204959-02	5/10/12 09:00	0.500	0.482	96		95 - 105
CCV2	291176	RQ1204959-01	5/10/12 13:05	0.500	0.471	94	*	95 - 105
CCV3	291230	RQ1204982-04	5/10/12 15:25	0.500	0.503	101		95 - 105
CCV4	291230	RQ1204982-03	5/10/12 19:04	0.500	0.508	102		95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202949
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	291176	RQ1204959-04	5/10/12 09:17	0.010	0.020	0.020	U
CCB2	291176	RQ1204959-03	5/10/12 13:23	0.010	0.020	0.020	U
CCB3	291230	RQ1204982-05	5/10/12 19:21	0.010	0.020	0.020	U

Tetra Tech **INTERNAL CORRESPONDENCE**

TO: **A. APANAVAGE** **DATE:** **JUNE 6, 2012**

FROM: **TERRI L. SOLOMON** **COPIES:** **DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1202995

SAMPLES: 6/Aqueous/

DMW10S-051012	DMW1S-051012
DMW2S-051012	MSA-MW18I-051012
MSA-MW18S-051012	MSA-MW31D-051012

Overview

The sample set for Martin State Airport – Groundwater, SDG R1202995, consists of six (6) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 10, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory duplicate results, matrix spike recoveries, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems – None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	DMW10S-051012			DMW1S-051012			DMW2S-051012			MSA-MW18I-051012		
SDG: R1202995	LAB_ID	R1202995-006			R1202995-005			R1202995-004			R1202995-003		
FRACTION: MISC	SAMP_DATE	5/10/2012			5/10/2012			5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.013	J	P	0.02	U		0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW18S-051012			MSA-MW31D-051012		
SDG: R1202995	LAB_ID	R1202995-001			R1202995-002		
FRACTION: MISC	SAMP_DATE	5/10/2012			5/10/2012		
MEDIA: WATER	QC_TYPE	NM			NM		
	UNITS	UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0		
	DUP_OF						
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202995
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/10/12 1555
Sample Matrix:	Water	**Date Received:**	5/11/12
Sample Name:	DMW10S-051012		
Lab Code:	R1202995-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/11/12 13:39	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202995
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/10/12 1515
Sample Matrix:	Water	**Date Received:**	5/11/12
Sample Name:	DMW1S-051012		
Lab Code:	R1202995-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.013**	J	µg/L	0.020	0.010	1	NA	5/11/12 13:22	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202995
Date Collected: 5/10/12 1510
Date Received: 5/11/12

Sample Name: DMW2S-051012
Lab Code: R1202995-004

Basis: NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/11/12 13:04	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202995
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/10/12 1325
Sample Matrix:	Water	**Date Received:**	5/11/12
Sample Name:	MSA-MW18I-051012		
Lab Code:	R1202995-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/11/12 12:47	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202995
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/10/12 1200
Sample Matrix:	Water	**Date Received:**	5/11/12
Sample Name:	MSA-MW18S-051012		
Lab Code:	R1202995-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/11/12 11:38	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202995
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/10/12 1242
Sample Matrix:	Water	**Date Received:**	5/11/12
Sample Name:	MSA-MW31D-051012		
Lab Code:	R1202995-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/11/12 11:56	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1202995
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/11/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/10/12 and received at CAS in good condition at a cooler temperature of 3.1 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Six water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

A matrix spike and duplicate analyses was analyzed on sample MSA-MW16d-050912. The matrix spike recovery and the RPD were with QC limits.

The Laboratory Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

0128

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA Ground water Sampling
Project Number: 112IC04021-02
Project Manager: Tony Apanavage
Report CC:
Company/Address: Tetra Tech INC.
20251 Century Blvd STE 200.
Germantown MD 20874
Phone #: 301 528-3021
E-mail:
Sampler's Signature: [signature]
Sampler's Printed Name: Walt Payer

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE: 0

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hex Chrom						REMARKS/ ALTERNATE DESCRIPTION
MSA-MW18s 051012		5-10-12	1200	Water	1								X						
MSA-MW31D-051012			1242		3								X						* MS/MSD
MSA-MW18I-051012			1325		1								X						
DMW2s-051012			1510		1								X						
DMW1s-051012			1515		1								X						
DMW10s-051012			1555		1								X						

SPECIAL INSTRUCTIONS/COMMENTS
Metals 24 TAT

See QAPP ☐

TURNAROUND REQUIREMENTS
X RUSH (SURCHARGES APPLY)
X 1 day ___ 2 day ___ 3 day
___ 4 day ___ 5 day
___ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
___ I. Results Only
___ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
___ III. Results + QC and Calibration Summaries
___ IV. Data Validation Report with Raw Data

Edata ___ Yes ___ No

INVOICE INFORMATION
PO #:
BILL TO:

R1202995 5
Tetra Tech NUS, Inc.
MSA Groundwater

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: Walt Pa	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Walt Payer	Printed Name: Gregory LaFore	Printed Name	Printed Name	Printed Name	Printed Name
Firm: TT INC.	Firm: ALS	Firm	Firm	Firm	Firm
Date/Time: 5-10-12 / 1800	Date/Time: 5/11/12 0825	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

50000

HOLDTIME

SDG R1202849

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW18I-051012	R1202995-003	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW1S-051012	R1202995-005	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	DMW2S-051012	R1202995-004	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-DMW5I-050712	R1202849-005	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW5S-050712	R1202849-004	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-DMW9D-050912	R1202949-006	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9I-050912	R1202949-005	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-DMW9S-050912	R1202949-004	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW16D-050912	R1202949-003	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	DMW10S-051012	R1202995-006	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW16S-050912	R1202949-001	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1
CR6	UG/L	MSA-MW6-050712	R1202849-003	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW18S-051012	R1202995-001	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW24I-050712	R1202849-001	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW24S-050712	R1202849-002	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW25I-050812	R1202917-001	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW25S-050812	R1202917-002	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW27D-050712	R1202849-006	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW28I-050712	R1202849-007	NM	5/7/2012	5/8/2012	5/8/2012	1	0	1
CR6	UG/L	MSA-MW31D-051012	R1202995-002	NM	5/10/2012	5/11/2012	5/11/2012	1	0	1
CR6	UG/L	MSA-MW37S-050812	R1202917-003	NM	5/8/2012	5/9/2012	5/9/2012	1	0	1
CR6	UG/L	MSA-MW16I-050912	R1202949-002	NM	5/9/2012	5/10/2012	5/10/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
	MW26 SD	~~7199~~ 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	5/9/12	Yes ~~No~~ Field	—	—	7.74	9.25	CMW 5/10/12 1048	Buffer	
						CMW	5/10/12				10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/11/12 0825	R1202995-001	7199 218.6 RL ~~218.6 LL~~ 218.7	Water Drinking Water	5/10/12 1200	Yes No Field	Millex HV R1SA9516201	—	6.82	9.36	CMW 5/11/12 1102	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202995-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1242	Yes No Field		—	7.84	9.59	CMW 5/11/12 1104	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202995-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1325	Yes No Field		—	5.53	9.34	CMW 5/11/12 1058	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202995-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1510	Yes No Field		—	4.62	9.37	CMW 5/11/12 1101	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202995-005	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1515	Yes No Field		—	7.62	9.64	CMW 5/11/12 1100	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1202995-006	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1555	Yes No Field		—	6.96	9.44	CMW 5/11/12 1059	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 5/11/12	7199 218.6 RL ~~218.6 LL~~ 218.7	~~Water~~ Drinking Water	—	~~Yes~~ No Field		—	8.33	9.59	CMW 5/11/12 1106	Buffer	WC1120226
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

00026

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/10/12 1000	R1203008-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1753	Yes No Field	—	—	9.65	—	CMW 5/11/12 1158	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
↓	R1203008-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1530	Yes No Field	—	—	9.59	—	CMW 5/11/12 1159	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
5/12/12 1055	GCGC-EPA-PT-21-BR-178 RH2 @5/12/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 0945	Yes No Field	—	—	9.339	—		Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
	GCGC-EPA-PT-21-BR-164	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 1143	Yes No Field	—	—	9.558	—		Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
	D-05112012-01	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 @800	Yes No Field	—	—	9.529	—		Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
↓	GCGC-EPA-PT-21-BR-154	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 1320	Yes No Field	—	—	9.539	—		Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

H:\SMODOCS\Forms\cr+6SMO log

00027

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1202995
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1202995-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/11/12 11:02	

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group
QA/QC Report

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202995
Date Collected: 5/10/12
Date Received: 5/11/12
Date Analyzed: 5/11/12

Replicate Sample Summary
General Chemistry Parameters

Sample Name: MSA-MW31D-051012
Lab Code: R1202995-002

Units: µg/L
Basis: NA

Analyte Name	Method	MRL	MDL	Sample Result	MSA-MW31D-05101 2DUP Duplicate Sample R1202995-002DUP Result	Average	RPD	RPD Limit
Chromium, Hexavalent, Dissolved	218.6	0.020	0.010	0.020 U	0.020 U	NC	NC	20

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1202995
Date Collected: 5/10/12
Date Received: 5/11/12
Date Analyzed: 5/11/12

Matrix Spike Summary
General Chemistry Parameters

Sample Name: MSA-MW31D-051012
Lab Code: R1202995-002

Units: µg/L
Basis: NA

Analytical Method: 218.6

MSA-MW31D-051012MS
Matrix Spike
R1202995-002MS

Analyte Name	Sample Result	Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	ND	0.198	0.200	99	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Results flagged with a pound (#) indicate the control criteria is not applicable.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021-02
Sample Matrix: Water

Service Request: R1202995
Date Analyzed: 5/11/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1202995-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.219	0.200	109	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1202995
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	291394	RQ1205043-05	5/11/12 10:44	0.500	0.508	102	95 - 105
CCV2	291394	RQ1205043-04	5/11/12 14:13	0.500	0.511	102	95 - 105
CCV3	291394	RQ1205043-03	5/11/12 15:39	0.500	0.500	100	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1202995
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

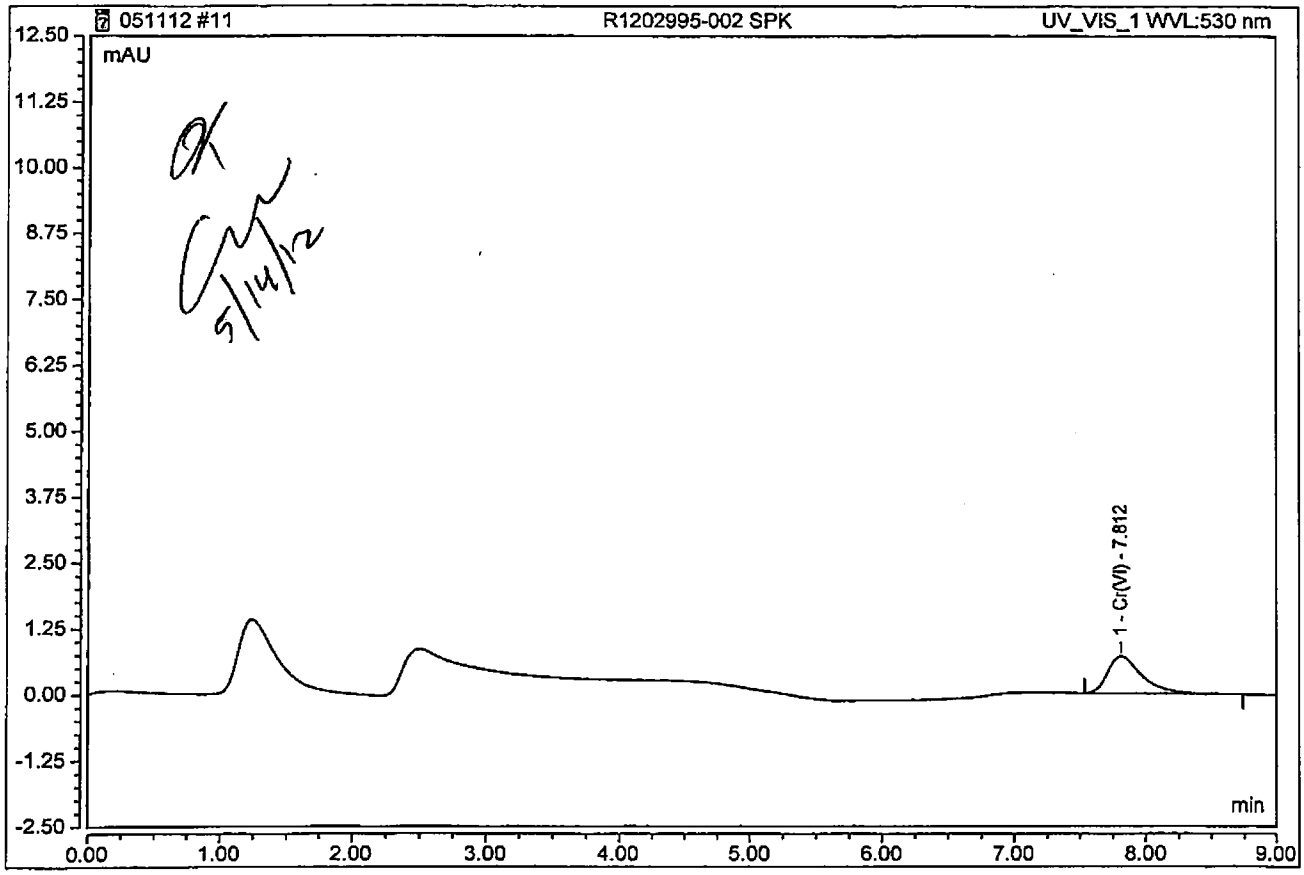
	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	291394	RQ1205043-06	5/11/12 11:02	0.010	0.020	0.020	U
CCB2	291394	RQ1205043-08	5/11/12 14:30	0.010	0.020	0.020	U
CCB3	291394	RQ1205043-07	5/11/12 15:56	0.010	0.020	0.020	U

Sample MSA-MW31D-051012 matrix spike rep result 0.198 ug/L

Peak Integration Report

Sample Name:	R1202995-002 SPK	*Inj. Vol.:*	1000.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Processing Method:	8-051112	*Program:*	Cr(VI)
Inj. Date / Time:	11-May-2012 / 12:30	*Injection Number:*	11

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.81	Cr(VI)	BMB	0.215	0.705	0.1983
TOTAL:				0.22	0.71	0.20



OK 5/14/12

Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

X-VALUE	Y-VALUE	CORREL	SLOPE	
0.02	0.0364		**0.999868093**	**0.980204557**
0.2	0.2292	**Y-INTERC**		
1	1.0027		**0.024150147**	

MW31D matrix spike	
0.194704107	0.215

Calibration Batch Report

Sequence:	051112	*Injection Volume (uL):*	1,000.00
Processing Method:	8-051112	*Calibration Type:*	Lin, WithOffset, 1/A
Corr. Coefficient:	99.955	*Instrument Method:*	Cr(VI)

Calibration Summary

Injection Name Cr(VI)	Ret. Time min Cr(VI)	Area mAU*min Cr(VI)	Height mAU Cr(VI)	Amount ppb Cr(VI)
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
STANDARD 1	n.a.	n.a.	n.a.	n.a.
STANDARD 2	7.840	0.0364	0.104	0.019
STANDARD 3	7.842	0.2292	0.710	0.212
STANDARD 4	7.842	1.0027	3.233	0.989
Average	7.841			
Rel. Std. Dev.	0.012 %			

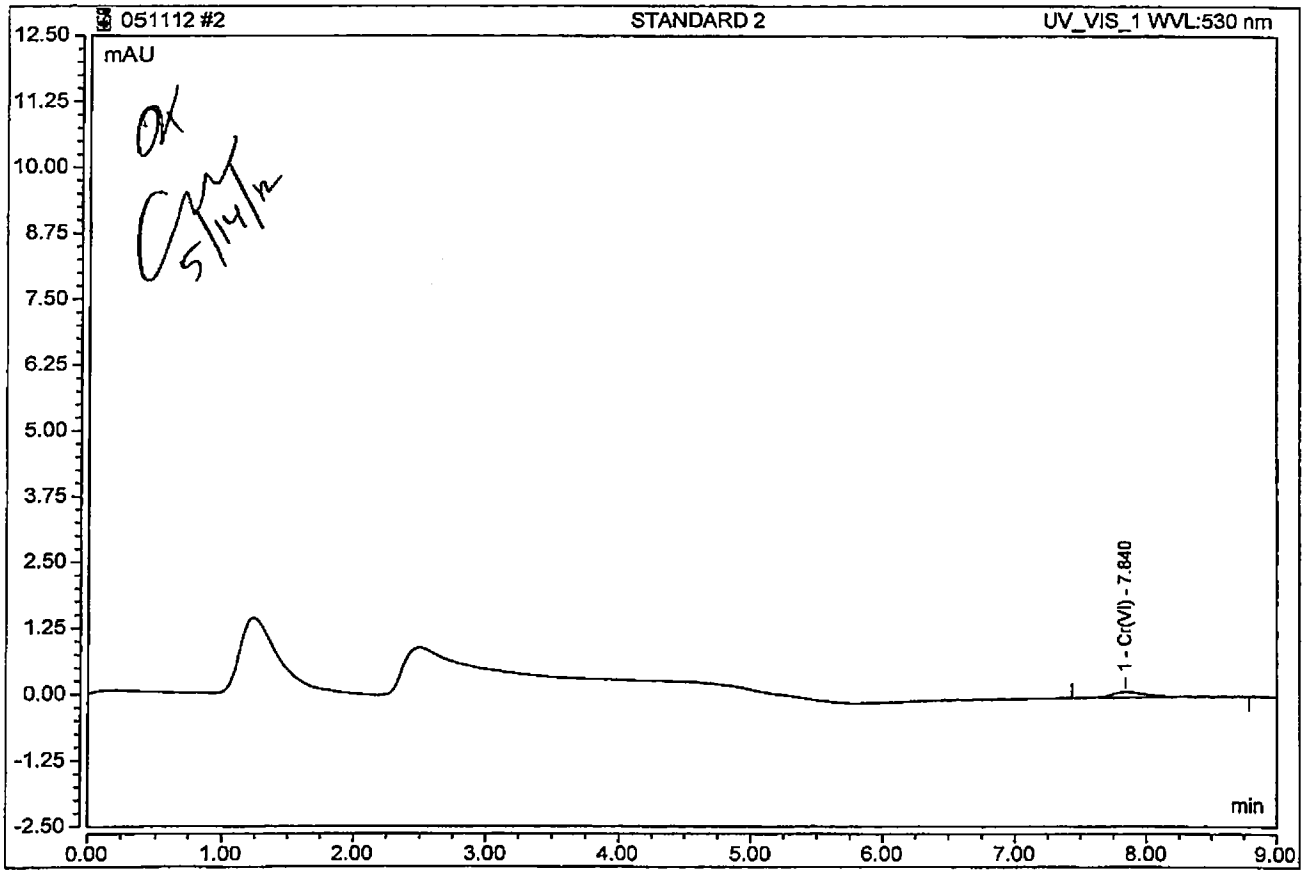
Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Inhibit Integration	On	Any	All Channels
7.000	Valley To Valley	On	Any	All Channels
7.000	Inhibit Integration	Off	Any	All Channels
7.000	Minimum Area	0.0002 [Signal*min]	Any	All Channels
7.000	Minimum Height	0.050 [Signal]	Any	All Channels
7.000	Peak Slice	7.00 [s]	Any	All Channels

Peak Integration Report

Sample Name:	STANDARD 2	*Inj. Vol.:*	1000.00
Injection Type:	Calibration Standard	*Dilution Factor:*	1.0000
Processing Method:	8-051112	*Program:*	Cr(VI)
Inj. Date / Time:	11-May-2012 / 09:53	*Injection Number:*	2

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.84	Cr(VI)	BMB	0.036	0.104	0.0190
TOTAL:				0.04	0.10	0.02

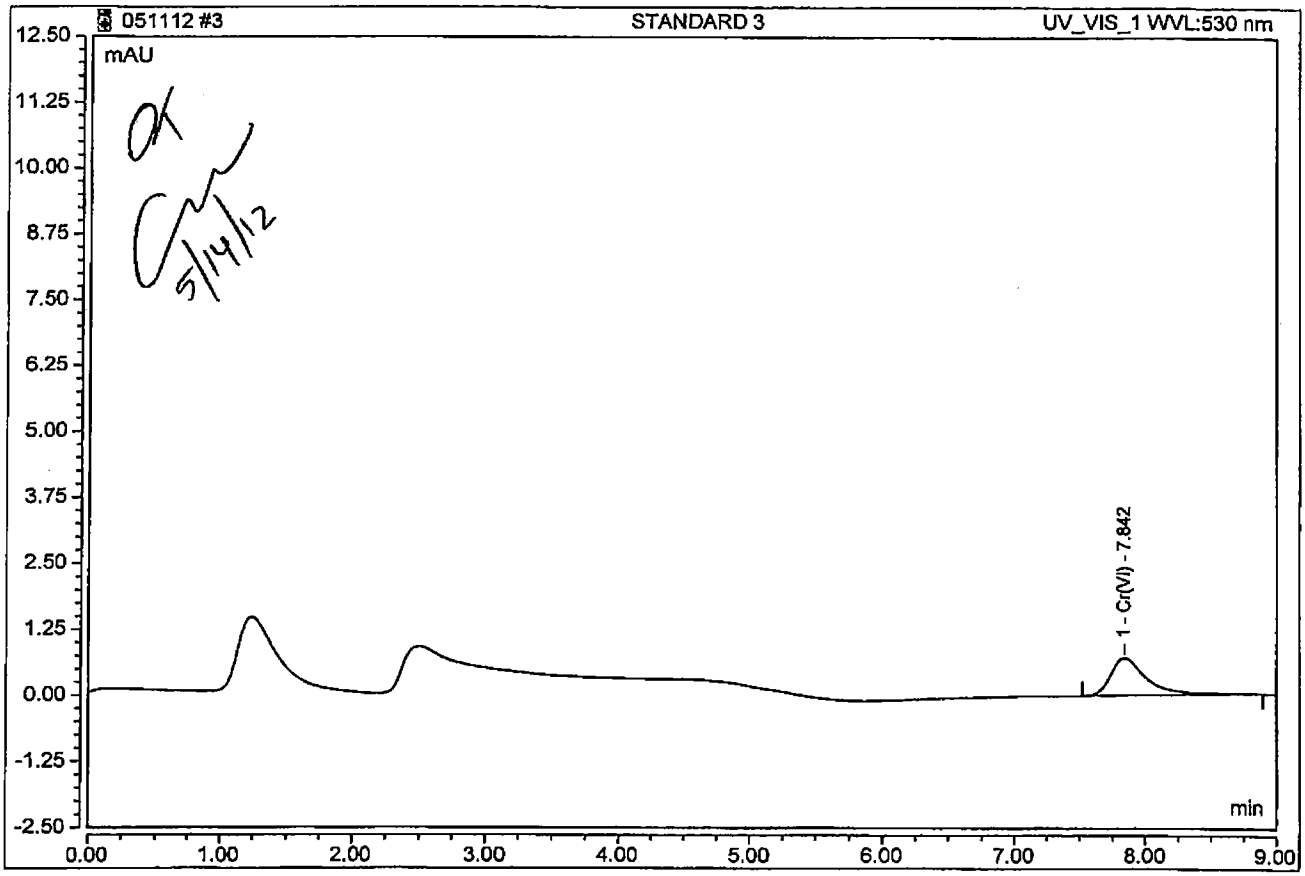


OK
5/14/12

Peak Integration Report

Sample Name:	STANDARD 3	*Inj. Vol.:*	1000.00
Injection Type:	Calibration Standard	*Dilution Factor:*	1.0000
Processing Method:	8-051112	*Program:*	Cr(VI)
Inj. Date / Time:	11-May-2012 12:10:10	*Injection Number:*	3

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.84	Cr(VI)	BMB	0.229	0.710	0.2124
TOTAL:				0.23	0.71	0.21

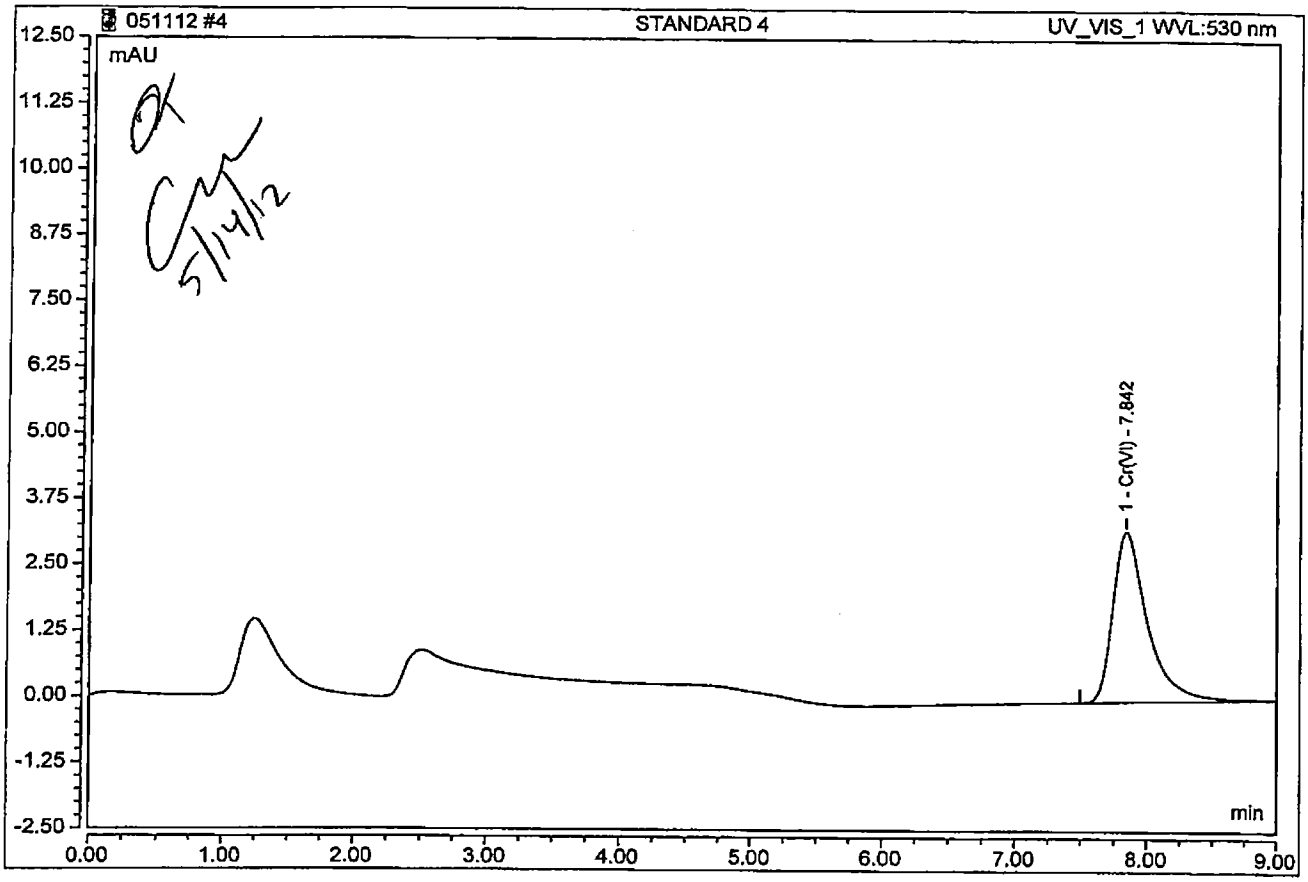


OK
5/14/12

Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol.:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051112	Program:	Cr(VI)
Inj. Date / Time:	11-May-2012 / 10:27	Injection Number:	4

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.84	Cr(VI)	BMB	1.003	3.233	0.9886
TOTAL:				1.00	3.23	0.99



OK
5/14/12

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Version 7.1.1.1127

00031

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 11, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1203057

SAMPLES: 8/Aqueous/

MSA-DMW3D-051412	MSA-DMW3I-051412
MSA-DMW3S-051412	MSA-MW11I-051412
MSA-MW11S-051412	MSA-MW23D-051412
MSA-MW23S-051412	MSA-MW5-051412

Overview

The sample set for Martin State Airport – Groundwater, SDG R1203057, consists of eight (8) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 14, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems – None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-DMW3D-051412			MSA-DMW3I-051412			MSA-DMW3S-051412			MSA-MW11I-051412		
SDG: R1203057	LAB_ID	R1203057-008			R1203057-007			R1203057-006			R1203057-003		
FRACTION: MISC	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02			0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW11S-051412			MSA-MW23D-051412			MSA-MW23S-051412			MSA-MW5-051412		
SDG: R1203057	LAB_ID	R1203057-002			R1203057-005			R1203057-004			R1203057-001		
FRACTION: MISC	SAMP_DATE	5/14/2012			5/14/2012			5/14/2012			5/14/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.02	U		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1250
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-DMW3D-051412		
Lab Code:	R1203057-008	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 12:35	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1305
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-DMW3I-051412		
Lab Code:	R1203057-007	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 13:09	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1520
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-DMW3S-051412		
Lab Code:	R1203057-006	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.020**		µg/L	0.020	0.010	1	NA	5/15/12 14:35	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1435
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-MW11I-051412		
Lab Code:	R1203057-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 13:44	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1430
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-MW11S-051412		
Lab Code:	R1203057-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 13:27	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1455
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-MW23D-051412		
Lab Code:	R1203057-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 14:18	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1450
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-MW23S-051412		
Lab Code:	R1203057-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 14:01	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/14/12 1255
Sample Matrix:	Water	**Date Received:**	5/15/12
Sample Name:	MSA-MW5-051412		
Lab Code:	R1203057-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 12:52	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1203057
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/15/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/14/12 and received at CAS in good condition at a cooler temperature of 1.9 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Eight water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

0126

Columbia Analytical Services- CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA GW Sampling	Project Number: 112IC04021
Project Manager: Tony Apgarvage	Report CC:
Company/Address: Tetra Tech 20251 Century Blvd Ste 200 Germantown MD. 20874	
Phone #: (301) 528-5552	E-mail: Tony.Apgarvage@tetratech.com
Sampler's Signature:	Sampler's Printed Name: Stuart Cameron

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's 8260 ☐ 624 ☐ CLP	GC/MS SVOA's 8270 ☐ 625	GC VOA's 8021 ☐ 601/602	PESTICIDES 8081 ☐ 608	PCB's 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hexavalent Chromium	REMARKS/ ALTERNATE DESCRIPTION
MSA-MW5-051412		5/14/12	1255	AQ	1								X	
MSA-MW11S-051412			1430		1								X	
MSA-MW11I-051412			1435		1								X	
MSA-MW23S-051412			1450		1								X	
MSA-MW23D-051412			1455		1								X	
MSA-MW35-051412		5/14/12	1520		1								X	
MSA-DMW3I-051412			1305		1								X	
MSA-DMW3D-051412			1250		1								X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS

Metals Samples must be analyzed within 24 hours of sample time.

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
____ Standard
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report w/
Edata ____ Yes ____

INVOICE INFORMATION
PO #:
BILL TO:

R1203057 5
Tetra Tech NUS,Inc.
MSA Groundwater

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED B	
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Stuart Cameron	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Tetra Tech	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 5-14-12/1600	Date/Time: 5/15/12 0815	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1203057

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW5-051412	R1203057-001	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW4-051512	R1203098-002	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW30I-051512	R1203098-001	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW30D-051512	R1203098-005	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW3-051512	R1203098-003	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW29D-051612	R1203134-001	NM	5/16/2012	5/17/2012	5/17/2012	1	0	1
CR6	UG/L	MSA-MW23S-051412	R1203057-004	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW23D-051412	R1203057-005	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW22D-051512	R1203098-004	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW11S-051412	R1203057-002	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW11I-051412	R1203057-003	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3S-051412	R1203057-006	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3I-051412	R1203057-007	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3D-051412	R1203057-008	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/10/12 1000	R1203008-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1753	Yes No Field	—	—	9.65	—	CMW 5/11/12 1158	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
↓	R1203008-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/10/12 1530	Yes 5/11/12 No Field	—	—	9.59	—	CMW 5/11/12 1159	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
5/12/12 1055	GCGC-EPA-PT-21-BR-178 PH2 @5/12/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 0945	Yes No Field	—	—	9.339	—	@ 5/12/12 1115	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
	GCGC-EPA-PT-21-BR-164	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 1143	Yes No Field	—	—	9.558	—	↓	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
	D-05112012-01	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 0800	Yes No Field	—	—	9.579	—	↓	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
↓	GCGC-EPA-PT-21-BR-154	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/11/12 1320	Yes No Field	—	—	9.539	—	↓	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	—
5/15/12 0855	MW-1 R1203080-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1440	Yes No Field	—	—	6.82	9.41	CMW 5/15/12 1025	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E
↓	EB-1 R1203080-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1650	Yes No Field	—	—	8.95	9.11	CMW 5/15/12 1026	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC112022E

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

000027

H:\SMODOCS\Forms\cr+6SMO log

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/15/12 0815	R1203057-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1255	Yes No Field	Millex HV R4654620K	—	7.03	9.43	CMW 5/15/12 1028	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1203057-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1430	Yes No Field		—	7.82	9.62	CMW 5/15/12 1029	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1203057-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1435	Yes No Field		—	7.60	9.37	CMW 5/15/12 1030	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1203057-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1450	Yes No Field		—	6.65	9.31	CMW 5/15/12 1032	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1203057-005	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 ~~15~~ 08/15/12 1455	Yes No Field		—	6.98	9.39	CMW 5/15/12 1033	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1203057-006	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1520	Yes No Field		—	8.82	9.32	CMW 5/15/12 1035	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1203057-007	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1305	Yes No Field		—	5.48	9.40	CMW 5/15/12 1036	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
	R1203057-008	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1250	Yes No Field		—	5.41	9.51	CMW 5/15/12 1038	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203057
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1203057-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/15/12 11:18	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1203057
Date Analyzed: 5/15/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1203057-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.208	0.200	104	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1203057
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	291788	RQ1205210-05	5/15/12 11:01	0.500	0.507	101	95 - 105
CCV2	291788	RQ1205210-04	5/15/12 15:10	0.500	0.492	98	95 - 105
CCV3	291788	RQ1205210-03	5/15/12 16:36	0.500	0.487	97	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1203057
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	291788	RQ1205210-08	5/15/12 11:18	0.010	0.020	0.020	U
CCB2	291788	RQ1205210-07	5/15/12 15:27	0.010	0.020	0.020	U
CCB3	291788	RQ1205210-06	5/15/12 16:53	0.010	0.020	0.020	U

Sample Calc

X-VALUE	Y-VALUE
0	0
0.02	0.029
0.2	0.223
1	1.051

CORREL	SLOPE
0.999931587	**1.045585815**
Y-INTERC	
0.006846327	

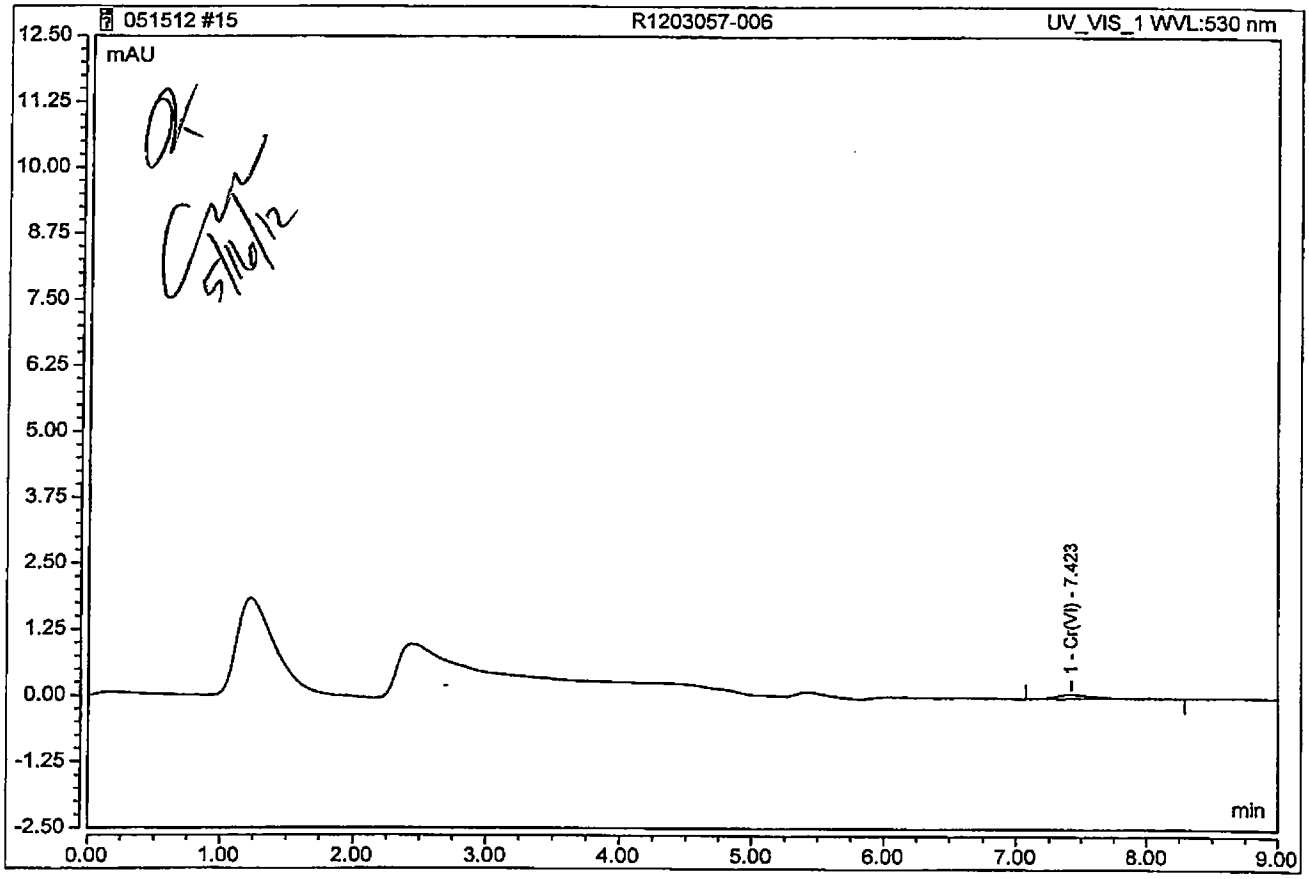


DMW3S	
0.022144212	0.03

Peak Integration Report

Sample Name:	R1203057-006	*Inj. Vol.:*	1000.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Processing Method:	8-051512	*Program:*	Cr(VI)
Inj. Date / Time:	15-May-2012 / 14:35	*Injection Number:*	15

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.42	Cr(VI)	M	0.030	0.082	0.0203
TOTAL:				0.03	0.08	0.02



Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00044

Calibration Batch Report

Sequence:	051512	Injection Volume (uL):	1,000.00
Processing Method:	8-051512	Calibration Type:	n.a.
Corr. Coefficient:	n.a.	Instrument Method:	Cr(VI)

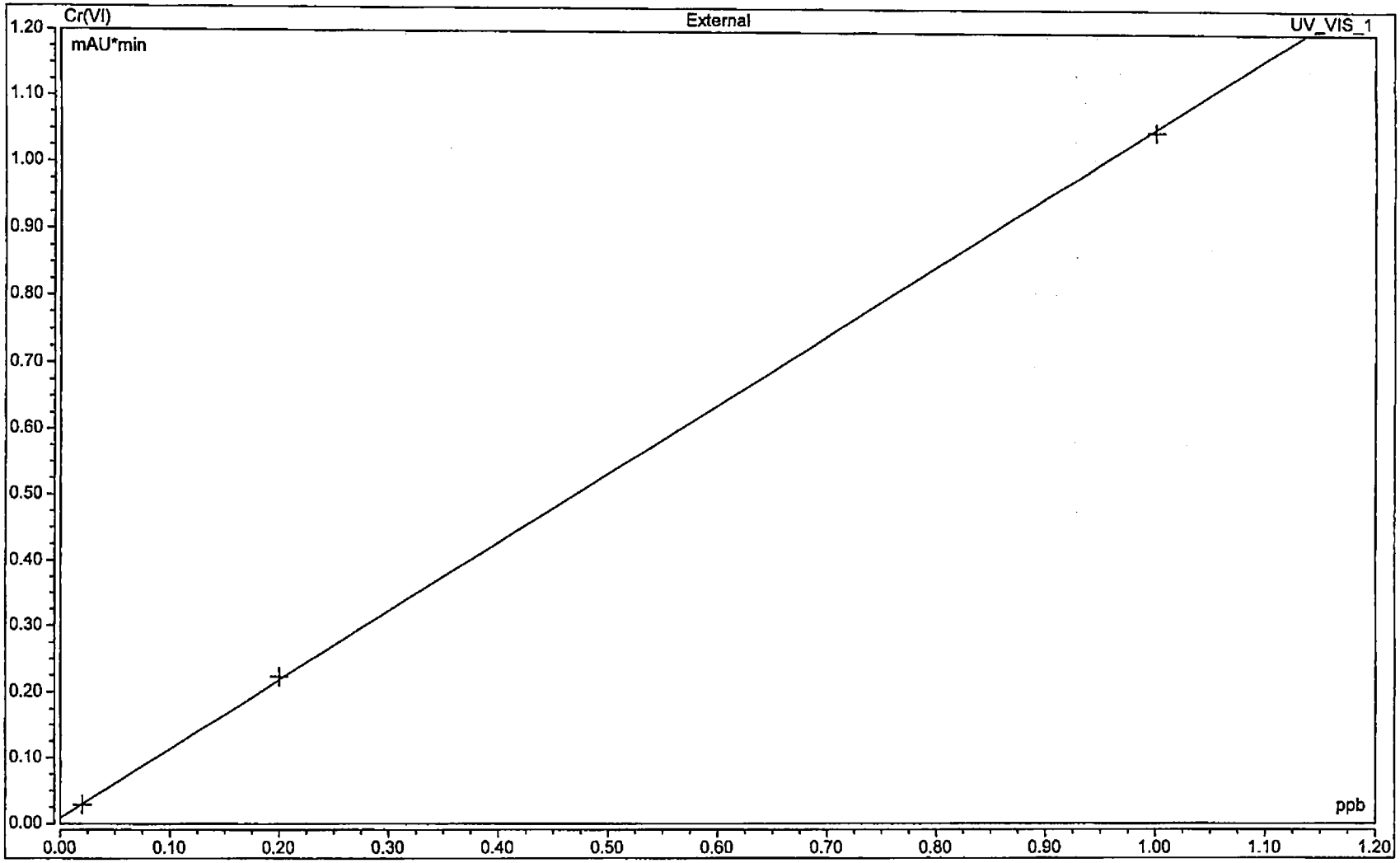
Calibration Summary

Injection Name Cr(VI)	Ret. Time min Cr(VI)	Area mAU*min Cr(VI)	Height mAU Cr(VI)	Amount ppb Cr(VI)
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
STANDARD 1	n.a.	n.a.	n.a.	n.a.
STANDARD 2	7.678	0.0289	0.087	0.020
STANDARD 3	7.672	0.2232	0.707	0.205
STANDARD 4	7.602	1.0512	3.301	0.995
Average	7.650			
Rel. Std. Dev.	0.555 %			

Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Minimum Area	0.0090 [Signal*min]	Any	All Channels
0.000	Inhibit Integration	On	Any	All Channels
7.002	Inhibit Integration	Off	Any	All Channels
9.002	Inhibit Integration	On	Any	All Channels

Processing Method: 8-051512
Correlation Coefficient: 99.993
Calibration Type: Lin, WithOffset, 1/A

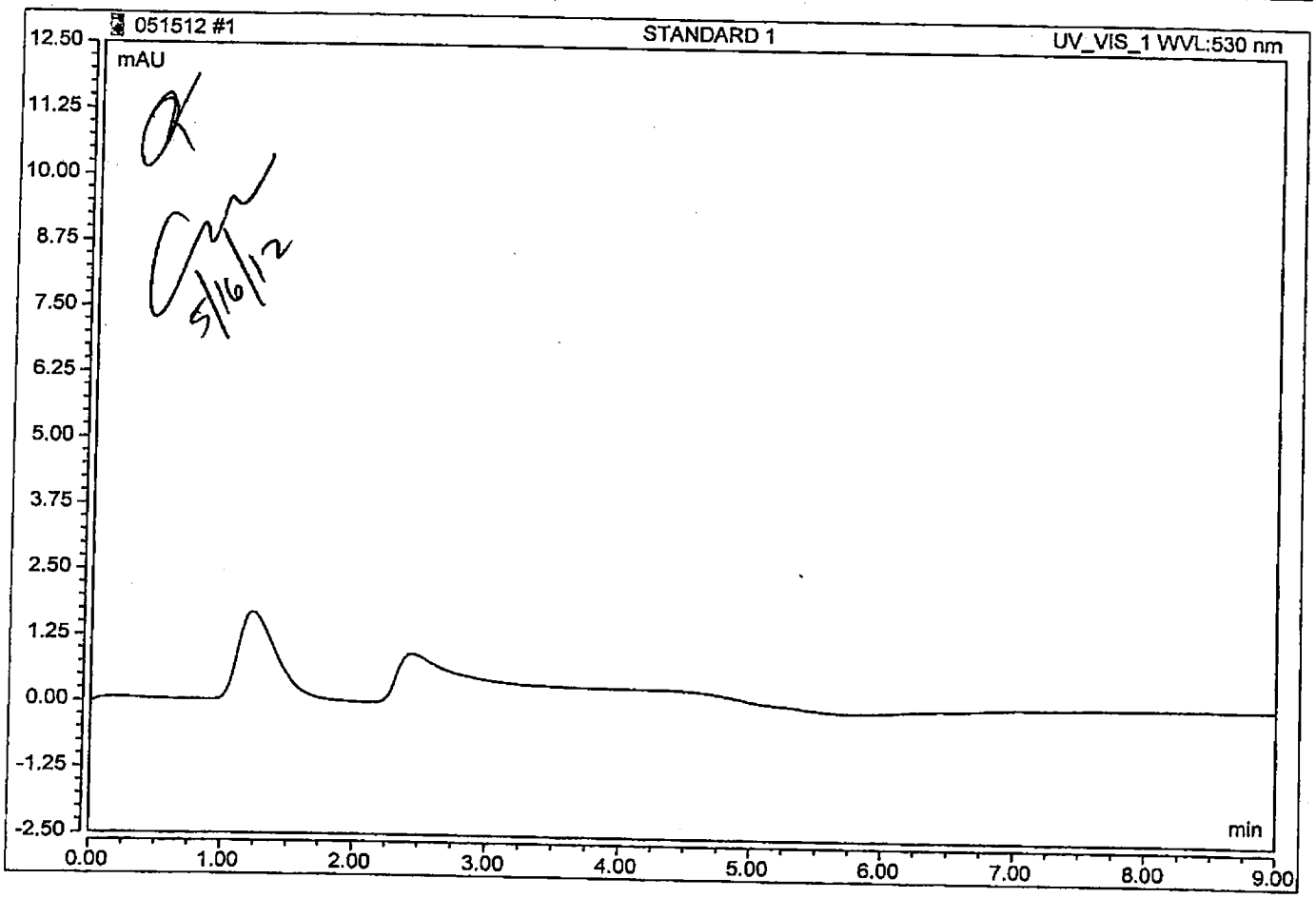


00061

Peak Integration Report

Sample Name:	STANDARD 1	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 09:09:52	Injection Number:	1

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount n.a.
TOTAL:				0.00	0.00	0.00

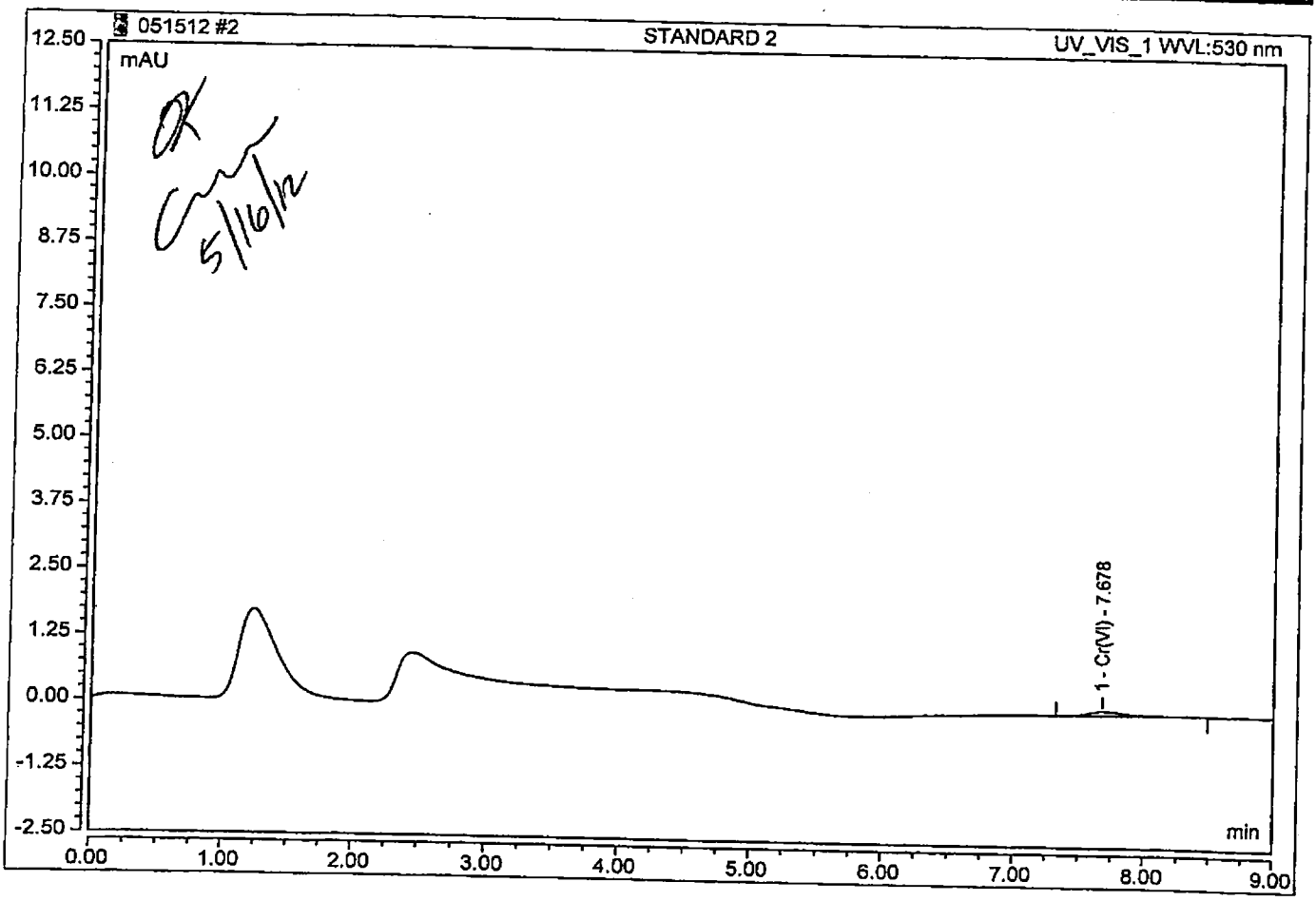


5/16/12

Peak Integration Report

Sample Name:	STANDARD 2	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8:051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:09	Injection Number:	2

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.68	Cr(VI)	M	0.029	0.087	0.0196
TOTAL:				0.03	0.09	0.02

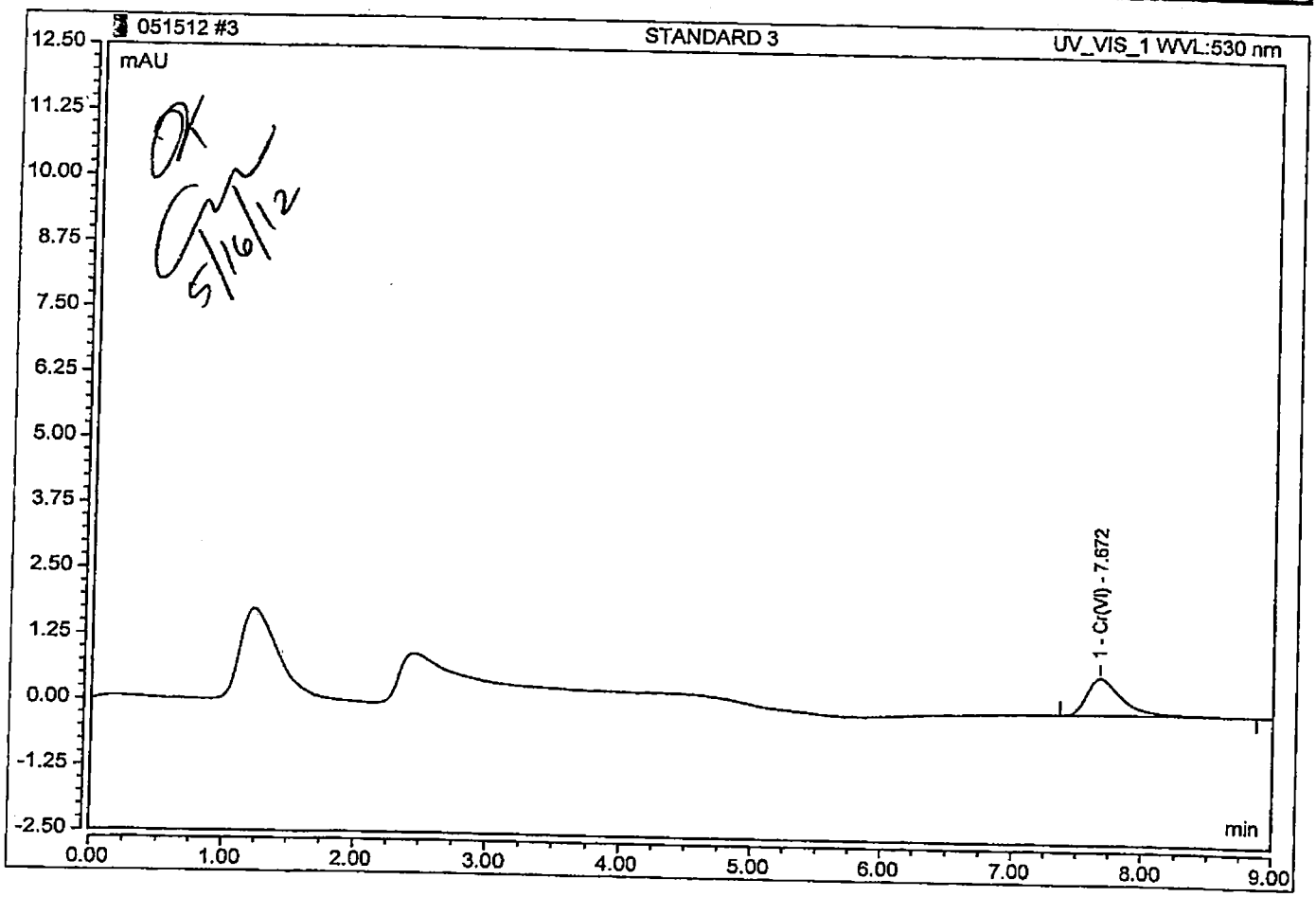


OK
5/16/12

Peak Integration Report

Sample Name:	STANDARD 3	Inj. Vol.	1000.00
Injection Type:	Calibration Standard	Dilution Factor	1.0000
Processing Method:	8-051512	Program	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:26	Injection Number:	3

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.67	Cr(VI)	M	0.223	0.707	0.2050
TOTAL:				0.22	0.71	0.21

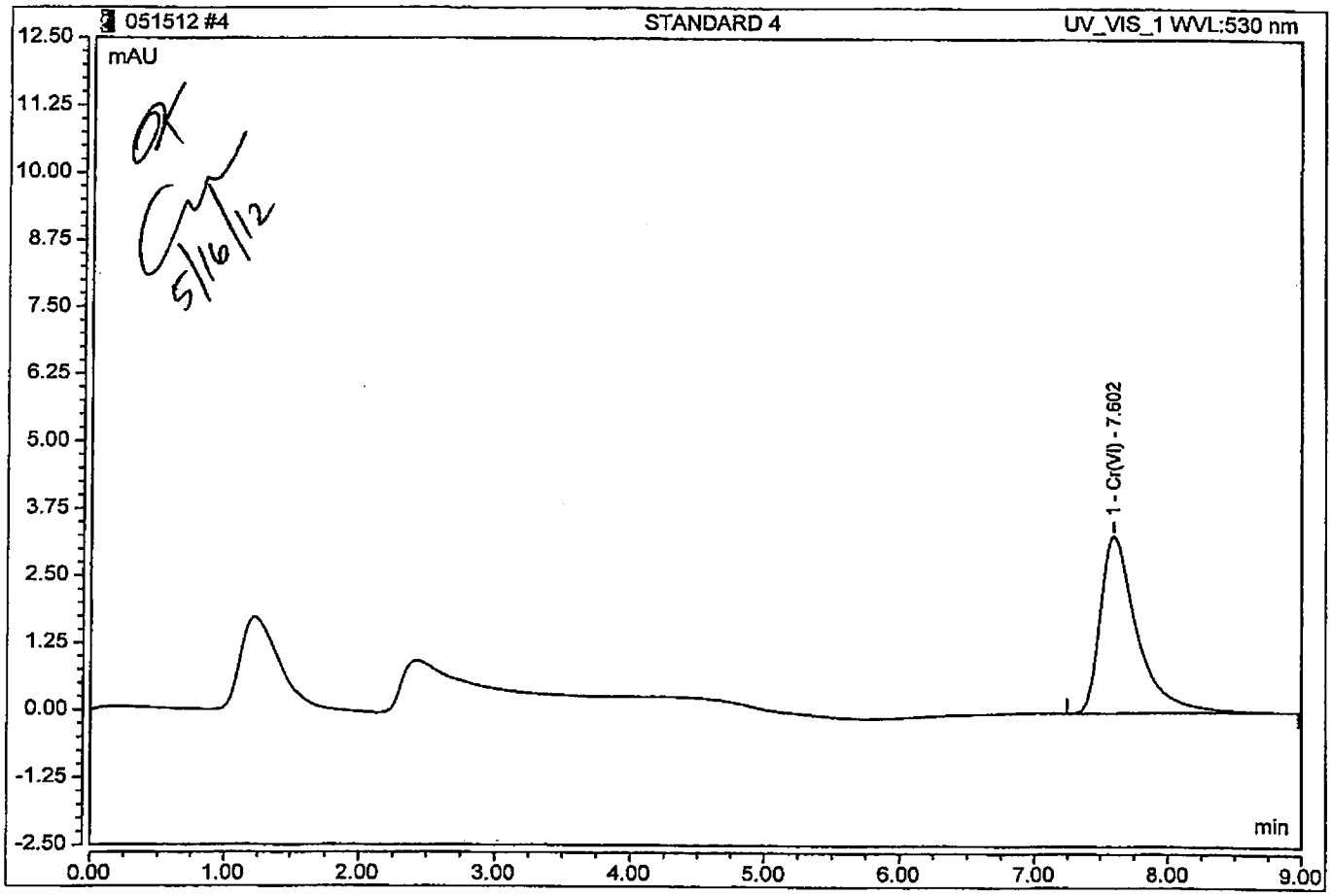


OK
5/16/12

Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:43	Injection Number:	4

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.60	Cr(VI)	M	1.051	3.301	0.9954
TOTAL:				1.05	3.30	1.00



OK
5/16/12

Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 11, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1203098

SAMPLES: 5/Aqueous/

MSA-MW22D-051512
MSA-MW30D-051512
MSA-MW4-051512
MSA-MW3-051512
MSA-MW30I-051512

Overview

The sample set for Martin State Airport – Groundwater, SDG R1203098, consists of five (5) aqueous environmental samples. No field duplicate pairs were included in this SDG.

All samples were analyzed for hexavalent chromium. The samples were collected by Tetra Tech on May 15, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems – None.

Notes

All samples were filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW22D-051512			MSA-MW3-051512			MSA-MW30D-051512			MSA-MW30I-051512		
SDG: R1203098	LAB_ID	R1203098-004			R1203098-003			R1203098-005			R1203098-001		
FRACTION: MISC	SAMP_DATE	5/15/2012			5/15/2012			5/15/2012			5/15/2012		
MEDIA: WATER	QC_TYPE	NM			NM			NM			NM		
	UNITS	UG/L			UG/L			UG/L			UG/L		
	PCT_SOLIDS	0.0			0.0			0.0			0.0		
	DUP_OF												
PARAMETER		RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD	RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U		0.02	U		0.547			0.02	U	

PROJ_NO: 04021	NSAMPLE	MSA-MW4-051512		
SDG: R1203098	LAB_ID	R1203098-002		
FRACTION: MISC	SAMP_DATE	5/15/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.02	U	

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203098
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/15/12 1240
Sample Matrix:	Water	**Date Received:**	5/16/12
Sample Name:	MSA-MW22D-051512		
Lab Code:	R1203098-004	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/16/12 11:08	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203098
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/15/12 1230
Sample Matrix:	Water	**Date Received:**	5/16/12
Sample Name:	MSA-MW3-051512		
Lab Code:	R1203098-003	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/16/12 10:51	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203098
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/15/12 1505
Sample Matrix:	Water	**Date Received:**	5/16/12
Sample Name:	MSA-MW30D-051512		
Lab Code:	R1203098-005	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.547		µg/L	0.020	0.010	1	NA	5/16/12 12:00	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203098
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/15/12 1255
Sample Matrix:	Water	**Date Received:**	5/16/12
Sample Name:	MSA-MW30I-051512		
Lab Code:	R1203098-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/16/12 11:26	

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203098
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/15/12 1500
Sample Matrix:	Water	**Date Received:**	5/16/12
Sample Name:	MSA-MW4-051512		
Lab Code:	R1203098-002	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/16/12 11:43	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1203098
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/16/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/15/12 and received at CAS in good condition at a cooler temperature of 2.6 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

Five water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

0124

Columbia Analytical Services™ CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA GW Sampling	Project Number: 112IC04021
Project Manager: Tony Apanavage	Report CC:
Company/Address: Tetra Tech, 20251 Century Blvd Ste 200	
Phone #: 301-528-5552	E-mail: Tony.Apanavage@tetratech.com
Sampler's Signature:	Sampler's Printed Name: Stuart Cameron

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hexavalent Chromium	REMARKS/ ALTERNATE DESCRIPTION
MSA-MW301-051512		5/15/12	1255	AQ	1								X	
MSA-MW4-051512			1500		1								X	
MSA-MW3-051512			1230		1								X	
MSA-MW22D-051512			1240		1								X	
MSA-MW30D-051512		↓	1505	↓	1								X	

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

SPECIAL INSTRUCTIONS/COMMENTS
Metals Samples must be analyzed within 24 hours of sample time

See QAPP ☐

TURNAROUND REQUIREMENTS
_____ RUSH (SURCHARGES APPLY)
____1 day ____2 day ____3 day
____4 day ____5 day
_____Standard
REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data
Edata ____ Yes ____ N

INVOICE INFORMATION
PO #:
BILL TO:

R1203098 5
Tetra Tech NUS,Inc.
MSA Groundwater

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature:	Signature:	Signature:	Signature:	Signature:	Signature:
Printed Name: Stuart Cameron	Printed Name:	Printed Name:	Printed Name:	Printed Name:	Printed Name:
Firm: Tetra Tech	Firm:	Firm:	Firm:	Firm:	Firm:
Date/Time: 5-15-12/1630	Date/Time: 5/16/12 0755	Date/Time:	Date/Time:	Date/Time:	Date/Time:

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1203057

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW5-051412	R1203057-001	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW4-051512	R1203098-002	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW30I-051512	R1203098-001	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW30D-051512	R1203098-005	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW3-051512	R1203098-003	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW29D-051612	R1203134-001	NM	5/16/2012	5/17/2012	5/17/2012	1	0	1
CR6	UG/L	MSA-MW23S-051412	R1203057-004	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW23D-051412	R1203057-005	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW22D-051512	R1203098-004	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW11S-051412	R1203057-002	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW11I-051412	R1203057-003	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3S-051412	R1203057-006	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3I-051412	R1203057-007	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3D-051412	R1203057-008	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
—	Filter Blank for 5/15/12	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/15/12	Yes No Field	Millex HV R1SA54620K	—	8.43	9.39	CMW 5/15/12 1041	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
5/15/12 1000	BR-122 R1203075-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1155	Yes No Field	—	—	9.88	9.53	CMW 5/15/12 1042	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	EB R1203075-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 0900	Yes No Field	—	—	9.92	9.64	CMW 5/15/12 1044	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	BR-216 R1203075-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/14/12 1650	Yes No Field	—	—	9.84	9.61	CMW 5/15/12 1045	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
5/16/12 0755	R1203098-001	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/15/12 1255	Yes No Field	Millex HV-- R1SA54620K	—	4.16	9.34	CMW 5/16/12 1026	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	R1203098-002	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/15/12 1500	Yes No Field	↓	—	7.45	9.41	CMW 5/16/12 1027	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	R1203098-003	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/15/12 1230	Yes No Field	↓	—	7.10	9.61	CMW 5/16/12 1028	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E
↓	R1203098-004	7199 218.6 RL 218.6 LL 218.7	Water Drinking Water	5/15/12 1240	Yes No Field	↓	—	6.87	9.49	CMW 5/16/12 1029	Buffer 10%H2SO4 10%NH4OH NH4OH(conc)	WC1120222E

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

00922

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/16/12 0755	R1203098-005	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	5/15/12 1505	(Yes) No Field	Millex HV R2SA54620K	—	7.16	9.62	CMW 5/16/12 1031	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 5/16/12	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	—	(Yes) No Field	↓	—	6.65	9.50	CMW 5/16/12 1032	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/16/12 0955	R1203108-001	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	5/15/12 1355	Yes No (Field)	—	—	9.69	—	CMW 5/16/12 1147	Buffer	—
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
↓	R1203108-002	7199 218.6 RL 218.6 LL 218.7	(Water) Drinking Water	5/15/12 1255	Yes No (Field)	—	—	9.62	—	CMW 5/16/12 1148	Buffer	—
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
		7199 218.6 RL 218.6 LL 218.7	Water Drinking Water		Yes No Field						Buffer	
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203098
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1203098-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/16/12 10:01	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02
Sample Matrix: Water

Service Request: R1203098
Date Analyzed: 5/16/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1203098-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.216	0.200	108	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021- 02

Service Request: R1203098

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6

Units: µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	291883	RQ1205238-04	5/16/12 09:27	0.500	0.500	100	95 - 105
CCV2	291883	RQ1205238-03	5/16/12 13:26	0.500	0.487	97	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1203098
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	291883	RQ1205238-06	5/16/12 10:01	0.010	0.020	0.020	U
CCB2	291883	RQ1205238-05	5/16/12 13:43	0.010	0.020	0.020	U

Sample Calc

X-VALUE	Y-VALUE
0	0
0.02	0.029
0.2	0.223
1	1.051

CORREL	SLOPE
0.999931587	1.045585815
Y-INTERC	
0.006846327	

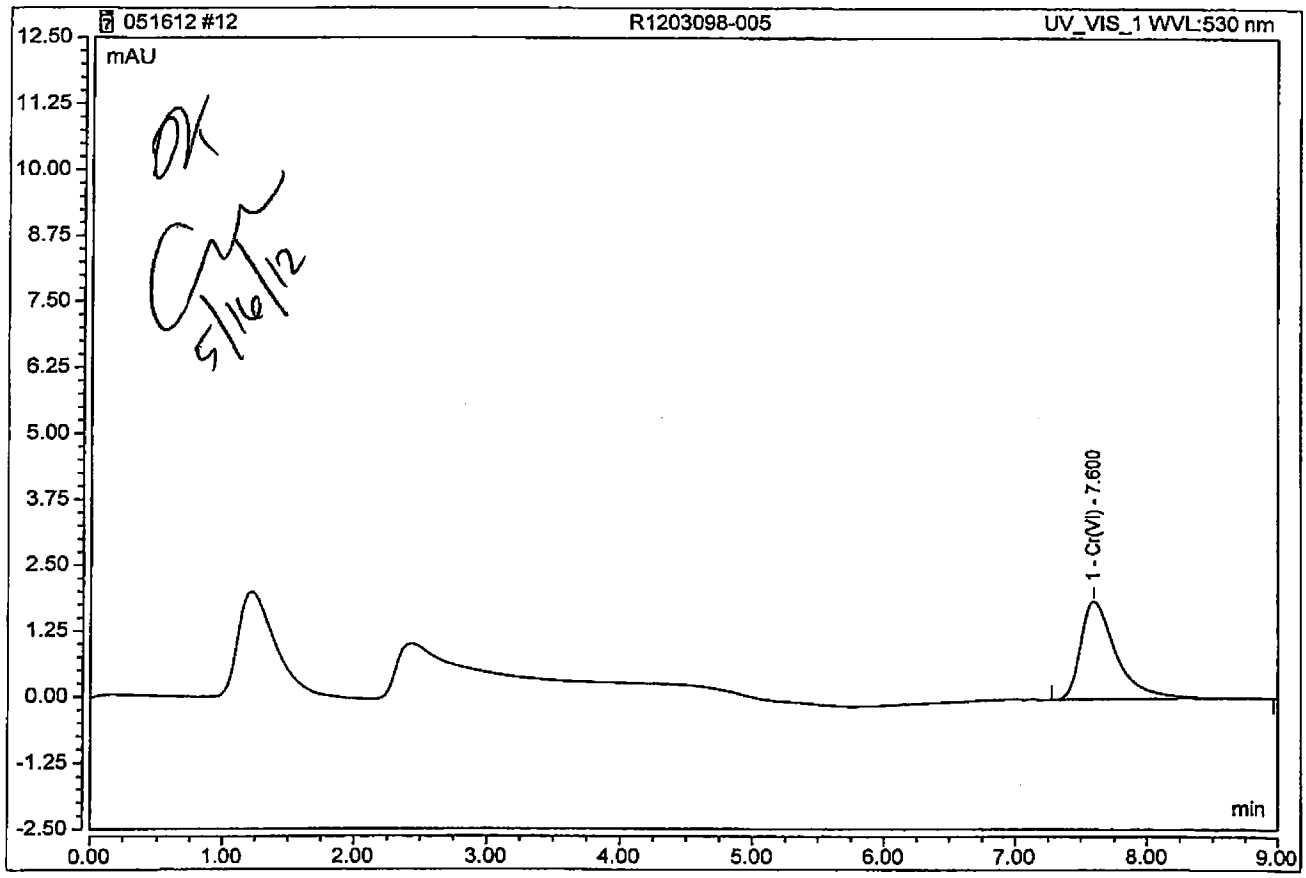
MW30D

0.549121522	0.581

Peak Integration Report

Sample Name:	R1203098-005	*Inj. Vol:*	1000.00
Injection Type:	Unknown	*Dilution Factor:*	1.0000
Processing Method:	8-051512	*Program:*	Cr(VI)
Inj. Date / Time:	16-May-2012 / 12:00	*Injection Number:*	12

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.60	Cr(VI)	M	0.581	1.866	0.5471
TOTAL:				0.58	1.87	0.55



OK
5/16/12

Calibration Batch Report

Sequence:	051512	Injection Volume (uL):	1,000.00
Processing Method:	8-051512	Calibration Type:	n.a.
Corr. Coefficient:	n.a.	Instrument Method:	Cr(VI)

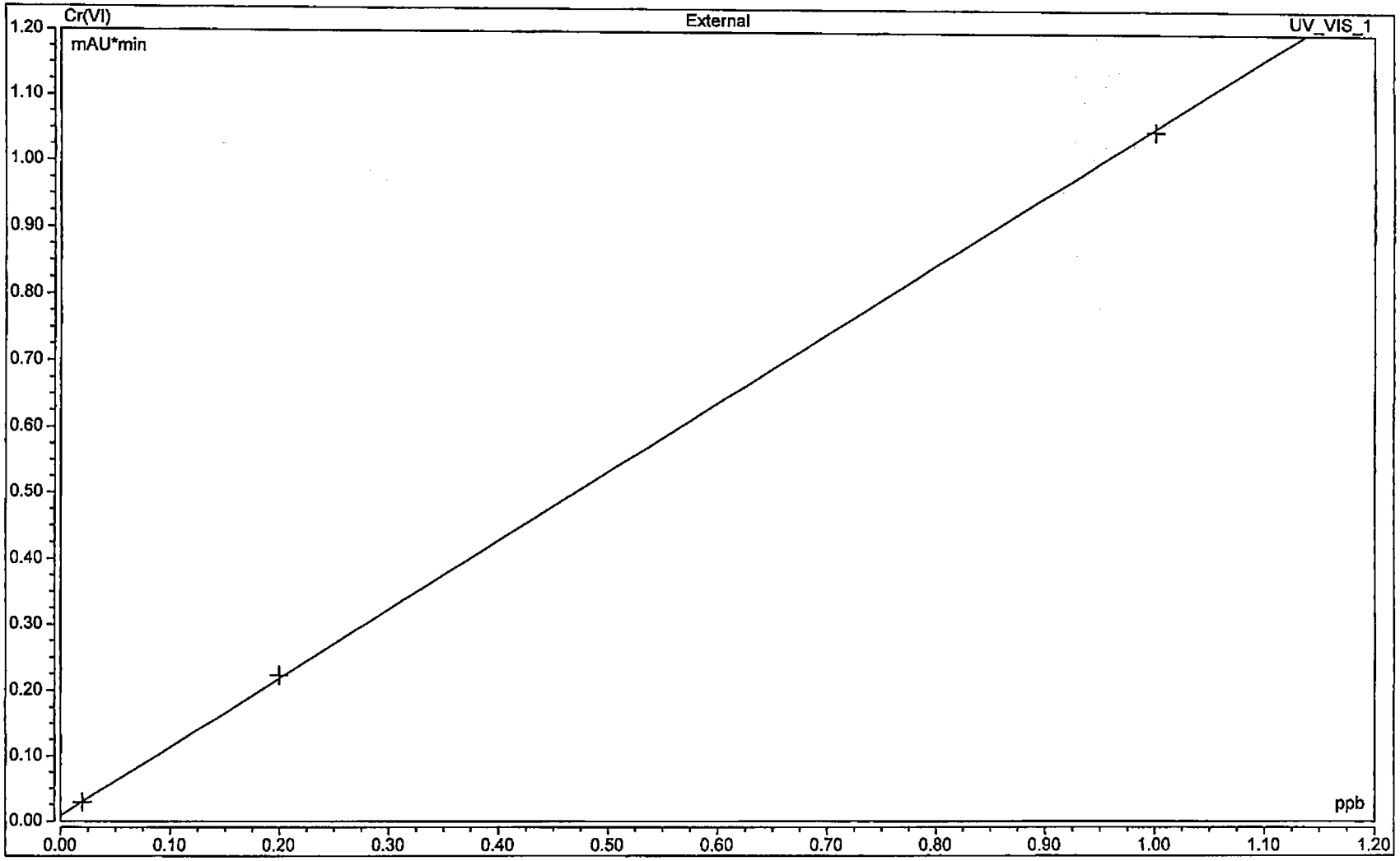
Calibration Summary

Injection Name Cr(VI)	Ret. Time min Cr(VI)	Area mAU*min Cr(VI)	Height mAU Cr(VI)	Amount ppb Cr(VI)
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
STANDARD 1	n.a.	n.a.	n.a.	n.a.
STANDARD 2	7.678	0.0289	0.087	0.020
STANDARD 3	7.672	0.2232	0.707	0.205
STANDARD 4	7.602	1.0512	3.301	0.995
Average	7.650			
Rel. Std. Dev.	0.555 %			

Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Minimum Area	0.0090 [Signal*min]	Any	All Channels
0.000	Inhibit Integration	On	Any	All Channels
7.002	Inhibit Integration	Off	Any	All Channels
9.002	Inhibit Integration	On	Any	All Channels

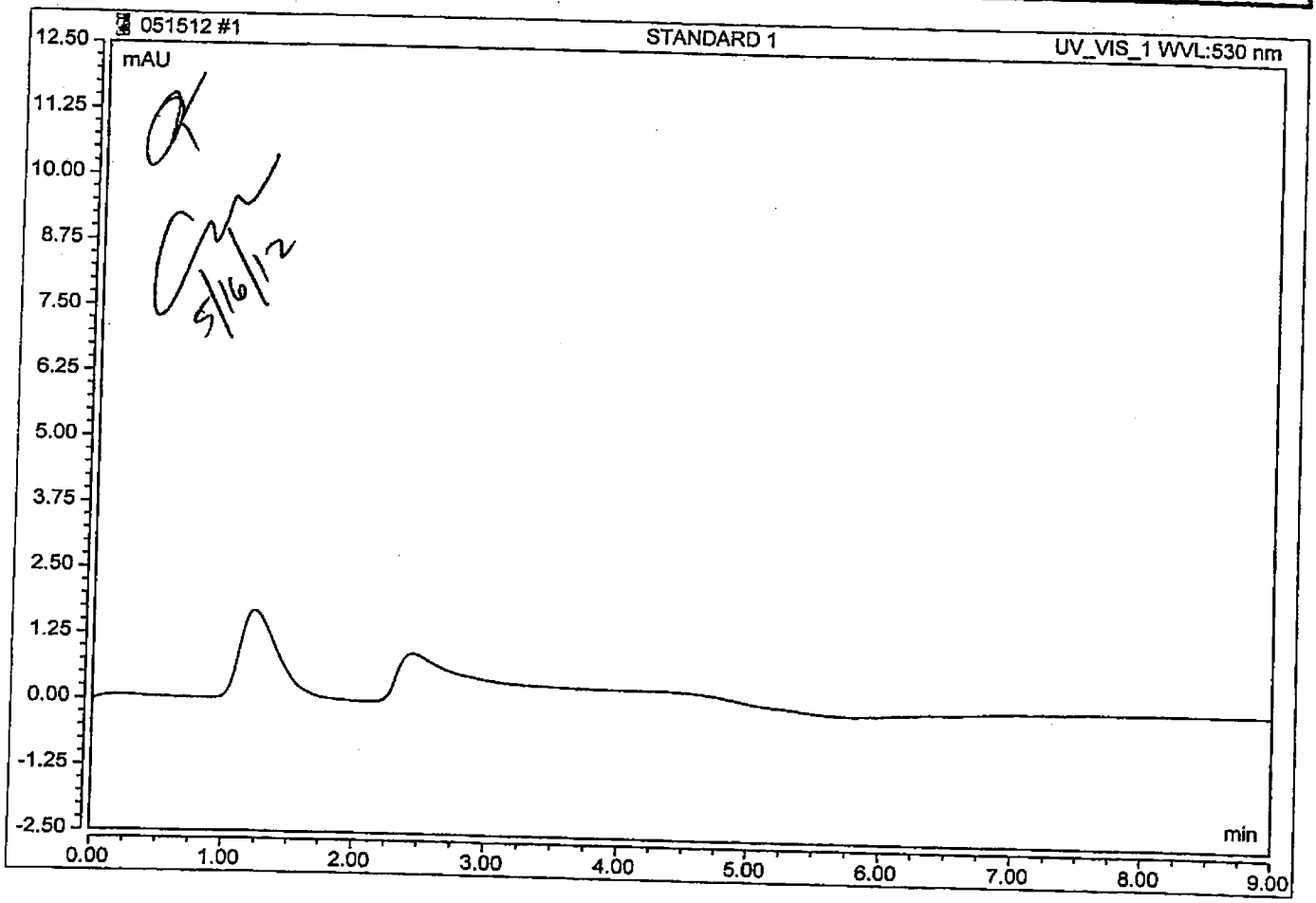
Processing Method: 8-051512
Correlation Coefficient: 99.993
Calibration Type: Lin, WithOffset, 1/A



Peak Integration Report

Sample Name:	STANDARD 1	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 09:52	Injection Number:	1

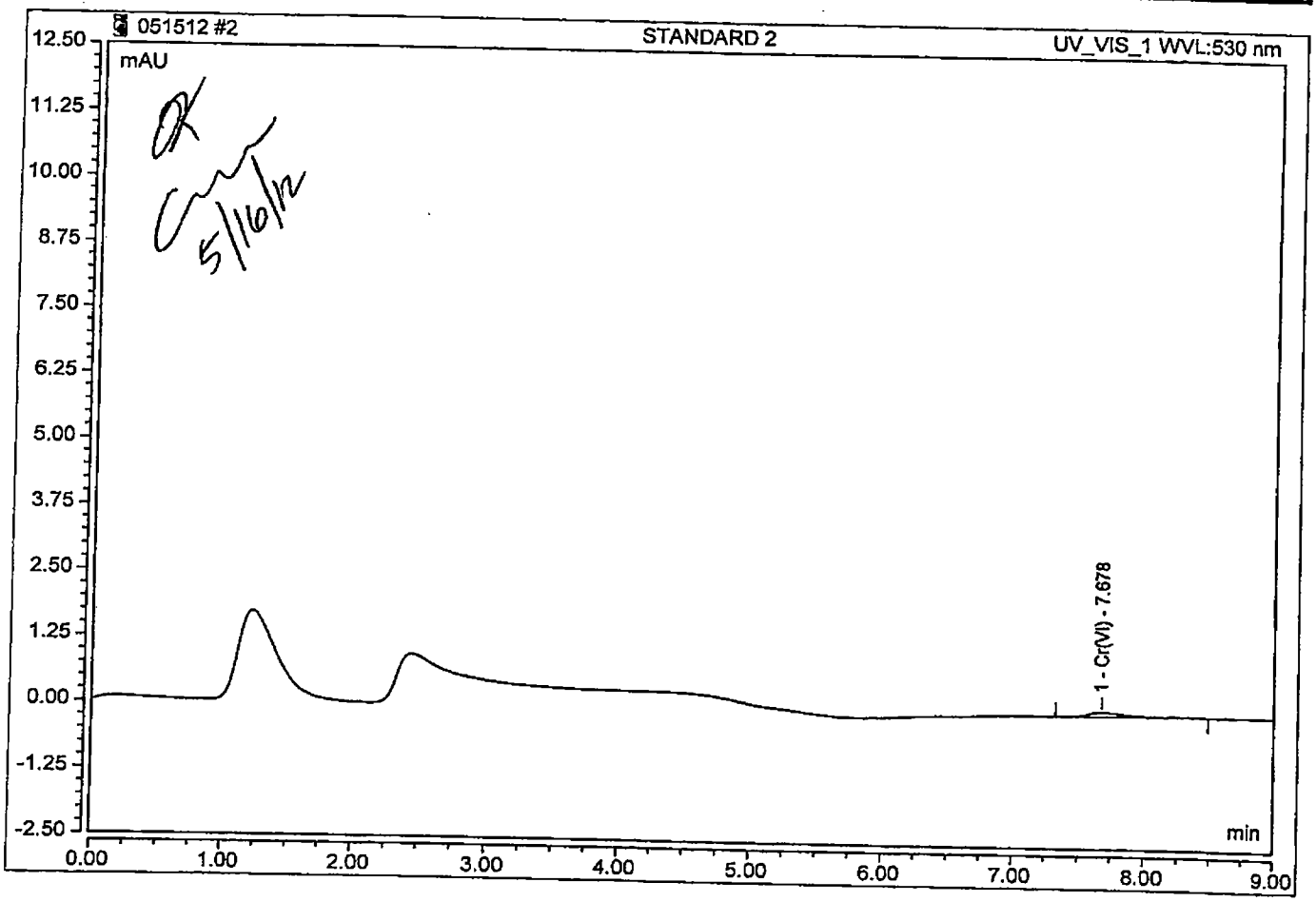
No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	STANDARD 2	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:09	Injection Number:	2

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.68	Cr(VI)	M	0.029	0.087	0.0196
TOTAL:				0.03	0.09	0.02

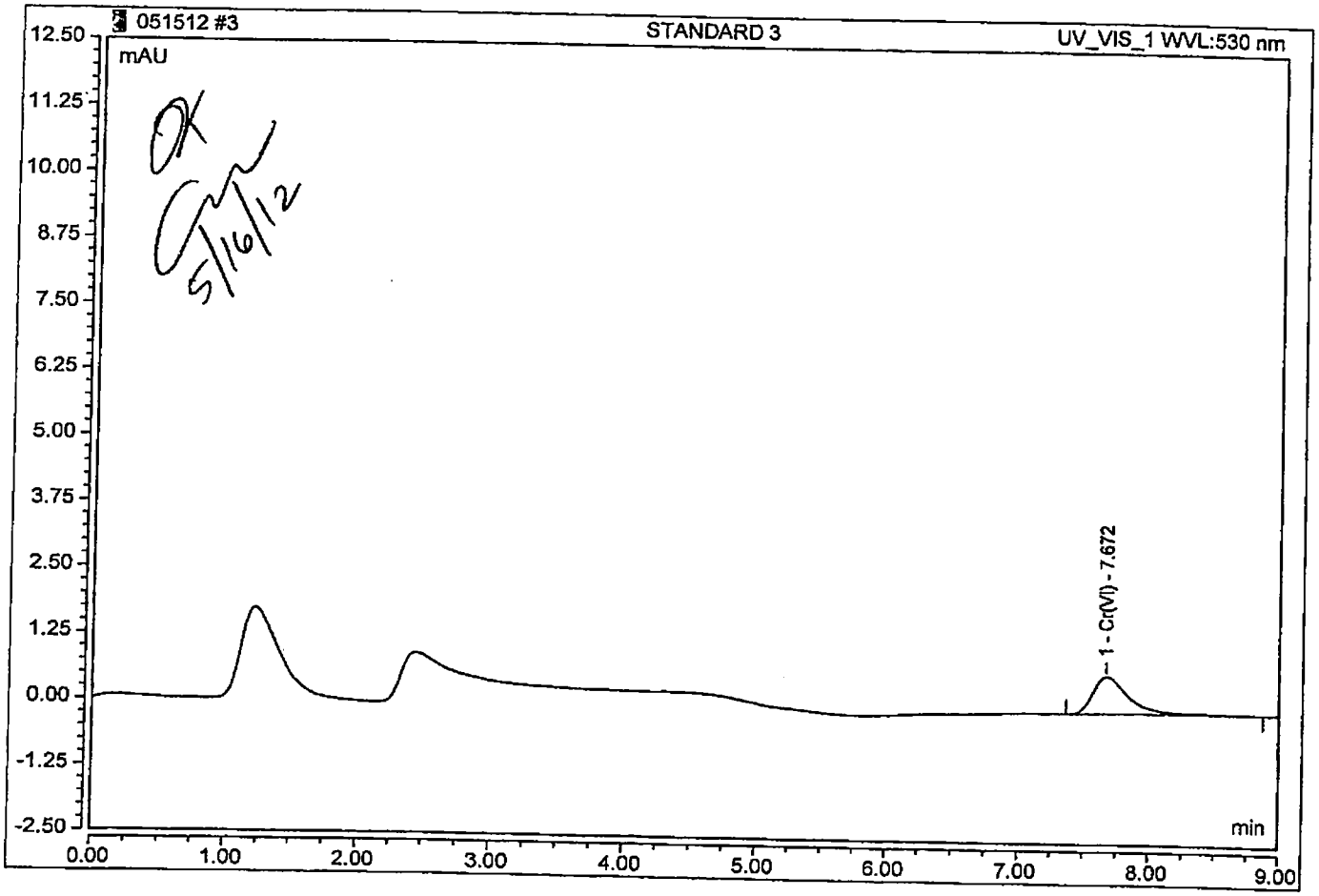


OK
5/16/12

Peak Integration Report

Sample Name:	STANDARD 3	Inj. Vol.:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:26	Injection Number:	3

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.67	Cr(VI)	M	0.223	0.707	0.2050
TOTAL:				0.22	0.71	0.21

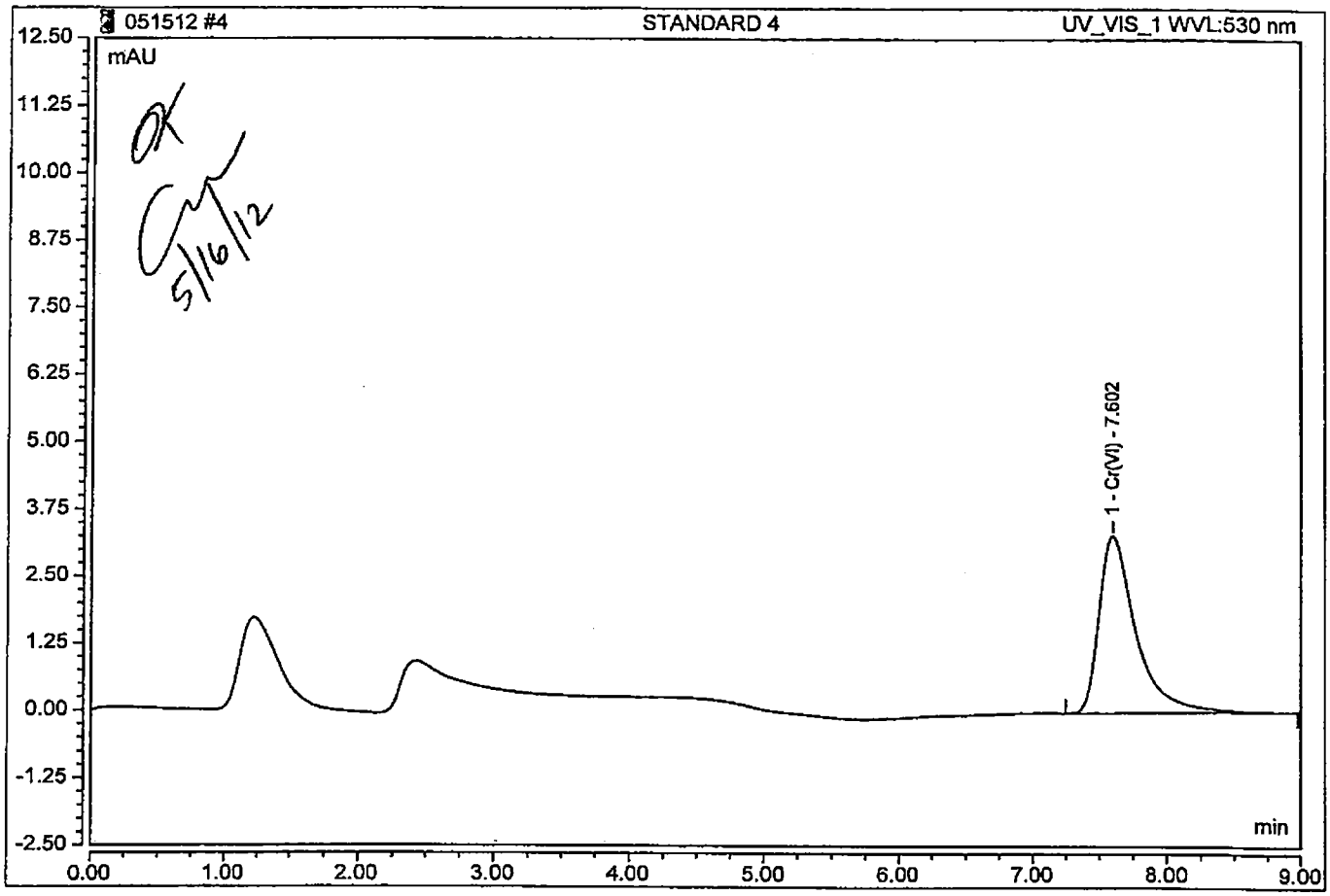


OK
5/16/12

Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:43	Injection Number:	4

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.60	Cr(VI)	M	1.051	3.301	0.9954
TOTAL:				1.05	3.30	1.00



Tetra Tech **INTERNAL CORRESPONDENCE**

TO:	**A. APANAVAGE**	**DATE:**	**JUNE 11, 2012**
FROM:	**TERRI L. SOLOMON**	**COPIES:**	**DV FILE**

SUBJECT: **INORGANIC DATA VALIDATION – HEXAVALENT CHROMIUM**
MARTIN STATE AIRPORT – GROUNDWATER
SAMPLE DELIVERY GROUP (SDG) – R1203134

SAMPLES: 1/Aqueous/

MSA-MW29D-051612

Overview

The sample set for Martin State Airport – Groundwater, SDG R1203134, consists of one (1) aqueous environmental sample. No field duplicate pairs were included in this SDG.

The sample was analyzed for hexavalent chromium. The sample was collected by Tetra Tech on May 16, 2012 and analyzed by Columbia Analytical Services, Inc. Hexavalent chromium analyses were conducted using EPA method 218.6.

The findings offered in this report are based upon a general review of all available data. The data review was based on data completeness, holding times, continuing calibration recoveries, laboratory method / preparation blank results, laboratory control sample recoveries, detection limits and analyte quantitation.

Areas of concern with respect to data quality are listed below.

Major Problems –None.

Minor Problems – None.

Notes

The sample was filtered in the laboratory and preserved by the laboratory to a pH of 9.3-9.7.

Nondetected results are reported to the method reporting limit.

Executive Summary

Laboratory Performance: None.

Other Factors Affecting Data Quality: None.

The data for these analyses were reviewed with reference to Region III modifications to the "National Functional Guidelines for Inorganic Data Validation", April 1993.

The text of this report has been formulated to address only those problem areas affecting data quality.

Tetra Tech
Terri L. Solomon
Environmental Scientist

Tetra Tech
Joseph A. Samchuck
Quality Assurance Officer

Attachments:

1. Appendix A - Qualified Analytical Results
2. Appendix B - Results as reported by the Laboratory
3. Appendix C - Support Documentation

APPENDIX A
QUALIFIED ANALYTICAL RESULTS

Qualifier Codes:

A = Lab Blank Contamination
B = Field Blank Contamination
C = Calibration Noncompliance (i.e., % RSDs, %Ds, ICVs, CCVs, RRFs, etc.)
C01 = GC/MS Tuning Noncompliance
D = MS/MSD Recovery Noncompliance
E = LCS/LCSD Recovery Noncompliance
F = Lab Duplicate Imprecision
G = Field Duplicate Imprecision
H = Holding Time Exceedance
I = ICP Serial Dilution Noncompliance
J = ICP PDS Recovery Noncompliance; MSA's $r < 0.995$
K = ICP Interference - includes ICS % R Noncompliance
L = Instrument Calibration Range Exceedance
M = Sample Preservation Noncompliance
N = Internal Standard Noncompliance
N01 = Internal Standard Recovery Noncompliance Dioxins
N02 = Recovery Standard Noncompliance Dioxins
N03 = Clean-up Standard Noncompliance Dioxins
O = Poor Instrument Performance (i.e., base-time drifting)
P = Uncertainty near detection limit (< 2 x IDL for inorganics and <CRQL for organics)
Q = Other problems (can encompass a number of issues; i.e.chromatography,interferences, etc.)
R = Surrogates Recovery Noncompliance
S = Pesticide/PCB Resolution
T = % Breakdown Noncompliance for DDT and Endrin
U = RPD between columns/detectors >40% for positive results determined via GC/HPLC
V = Non-linear calibrations; correlation coefficient $r < 0.995$
W = EMPC result
X = Signal to noise response drop
Y = Percent solids <30%
Z = Uncertainty at 2 sigma deviation is less than sample activity
Z1 = Tentatively Identified Compound considered presumptively present
Z2 = Tentatively Identified Compound column bleed

PROJ_NO: 04021	NSAMPLE	MSA-MW29D-051612		
SDG: R1203134	LAB_ID	R1203134-001		
FRACTION: MISC	SAMP_DATE	5/16/2012		
MEDIA: WATER	QC_TYPE	NM		
	UNITS	UG/L		
	PCT_SOLIDS	0.0		
	DUP_OF			
PARAMETER		RESULT	VQL	QLCD
HEXAVALENT CHROMIUM		0.151		

APPENDIX B
RESULTS AS REPORTED BY THE LABORATORY

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203134
Project:	MSA Groundwater/112IC04021- 02	**Date Collected:**	5/16/12 1400
Sample Matrix:	Water	**Date Received:**	5/17/12
Sample Name:	MSA-MW29D-051612		
Lab Code:	R1203134-001	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	**0.151**		µg/L	0.020	0.010	1	NA	5/17/12 10:21	

APPENDIX C
SUPPORT DOCUMENTATION

COLUMBIA ANALYTICAL SERVICES, INC.
Now part of the ALS Group

Client:	Tetra Tech NUS, Inc.	**Service Request No.:**	R1203134
Project:	MSA Groundwater	**Project Number:**	112IC04021 - 02
Sample Matrix:	Water	**Date Received:**	5/17/12

CASE NARRATIVE

All analyses were performed consistent with the quality assurance program of Columbia Analytical Services, Inc. (CAS). This report contains analytical results for samples designated for Tier IV deliverables. When appropriate to the method, method blank and LCS results have been reported with each analytical test.

Sample Receipt

Water samples were collected on 5/16/12 and received at CAS in good condition at a cooler temperature of 2.1 °C as noted on the cooler receipt and preservation check form. The samples were stored in a refrigerator at 1 - 6 °C upon receipt at the laboratory. See the CAS CLP Batching sheets for a cross-reference between Client ID and CAS Job # and analyses requested.

Hexavalent Chromium Analysis – 218.6

One water samples were analyzed for CR+6 by EPA method 218.6, low level. Values detected between the MDL and PQL have been flagged with a "J" as estimated.

All samples were analyzed within 24 hours of sampling.

All the initial and continuing calibration criteria were met.

The Blank Spike (LCS) recovery was within QC limits.

The Laboratory Blanks associated with these samples were free of contamination.

No other analytical or QC problems were encountered.

I certify that this data package is in compliance with the terms and conditions of the contract, both technically and for completeness, for other than the details conditioned above. Release of the data contained in this hard copy data package has been authorized by the Laboratory Manager or his designee, as verified by the following signature.

0125

Columbia Analytical Services

CHAIN OF CUSTODY/LABORATORY ANALYSIS REQUEST FORM

1565 Jefferson Rd., Bldg. 300, Suite 360, Rochester, NY 14623 | 585.288.5380 | 800.695.7222 | 585.288.8475 (fax) PAGE 1 OF 1

Project Name: MSA GW Sampling
Project Number: 112IC04021
Project Manager: Tony Apanavage
Report CC:
Company/Address: Tetra Tech
20251 Century Blvd Ste 200
Germantown MD 20874
Phone #: (301) 528-5552
E-mail: Tony.Apanavage@tetratech.com
Sampler's Signature:
Sampler's Printed Name: Stuart Cameron

ANALYSIS REQUESTED (Include Method Number and Container Preservative)

PRESERVATIVE

Preservative Key
0. NONE
1. HCL
2. HNO_3
3. H_2SO_4
4. NaOH
5. Zn. Acetate
6. MeOH
7. $NaHSO_4$
8. Other _____

CLIENT SAMPLE ID	FOR OFFICE USE ONLY LAB ID	SAMPLING DATE	SAMPLING TIME	MATRIX	NUMBER OF CONTAINERS	GC/MS VOA's ☐ 8260 ☐ 624 ☐ CLP	GC/MS SVOA's ☐ 8270 ☐ 625	GC VOA's ☐ 8021 ☐ 601/602	PESTICIDES ☐ 8081 ☐ 608	PCB's ☐ 8082 ☐ 608	METALS, TOTAL (List in comments below)	METALS, DISSOLVED (List in comments below)	Hexavalent Chromium						REMARKS/ ALTERNATE DESCRIPTION
MSA-MW29D-051612		5/16/12	1400	AQ	1								X						

SPECIAL INSTRUCTIONS/COMMENTS
Metals Samples must be analyzed within 24 hours of sample time

See QAPP ☐

TURNAROUND REQUIREMENTS
____ RUSH (SURCHARGES APPLY)
____ 1 day ____ 2 day ____ 3 day
____ 4 day ____ 5 day
____ Standard

REQUESTED REPORT DATE

REPORT REQUIREMENTS
____ I. Results Only
____ II. Results + QC Summaries (LCS, DUP, MS/MSD as required)
____ III. Results + QC and Calibration Summaries
____ IV. Data Validation Report with Raw Data

Edata ____ Yes ____ No

INVOICE INFORMATION
PO #:
BILL TO:

R1203134 5
Tetra Tech NUS, Inc.
MSA Groundwater

STATE WHERE SAMPLES WERE COLLECTED:

RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	RECEIVED BY	RELINQUISHED BY	
Signature: Stuart Cameron	Signature: [signature]	Signature	Signature	Signature	Signature
Printed Name: Tetra Tech	Printed Name: Gudgy LaFrance	Printed Name	Printed Name	Printed Name	Printed Name
Firm: 5/16/12 – 1600	Firm: [signature]	Firm	Firm	Firm	Firm
Date/Time	Date/Time: 5/17/12 0815	Date/Time	Date/Time	Date/Time	Date/Time

Distribution: White - Lab Copy; Yellow - Return To Originator

SCOC Rev. 7/2011

HOLDTIME

SDG R1203057

SORT	UNITS	NSAMPLE	LAB_ID	QC_TYPE	SAMP_DATE	EXTR_DATE	ANAL_DATE	SMP_EXTR	EXTR_ANL	SMP_ANL
CR6	UG/L	MSA-MW5-051412	R1203057-001	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW4-051512	R1203098-002	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW30I-051512	R1203098-001	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW30D-051512	R1203098-005	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW3-051512	R1203098-003	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW29D-051612	R1203134-001	NM	5/16/2012	5/17/2012	5/17/2012	1	0	1
CR6	UG/L	MSA-MW23S-051412	R1203057-004	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW23D-051412	R1203057-005	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW22D-051512	R1203098-004	NM	5/15/2012	5/16/2012	5/16/2012	1	0	1
CR6	UG/L	MSA-MW11S-051412	R1203057-002	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-MW11I-051412	R1203057-003	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3S-051412	R1203057-006	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3I-051412	R1203057-007	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1
CR6	UG/L	MSA-DMW3D-051412	R1203057-008	NM	5/14/2012	5/15/2012	5/15/2012	1	0	1

Date/Time Received	Sample ID	Analysis	Matrix	Date/Time Sampled	Sample Filtered	Filter Lot ID	Chlorine Residual (mg/L) 218.7 only	pH at Receipt	pH Adjustment	Analyst/ Date/ Time pH Adjustment	Solution Used For PH Adjust	Solution Lot ID
5/16/12 0755	R1203098-005	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/15/12 1505	(Yes) No Field	Millex HV R2SA5462OK	—	7.16	9.62	CMW 5/16/12 1031	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank for 5/16/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	(Yes) No Field	↓	—	6.65	9.50	CMW 5/16/12 1032	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/16/12 0955	R1203108-001	7199 (218.6 RL 218.6 LL) 218.7	(Water) Drinking Water	5/15/12 1355	Yes No (Field)	—	—	9.69	—	CMW 5/16/12 1147	Buffer	—
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
↓	R1203108-002	7199 (218.6 RL 218.6 LL) 218.7	(Water) Drinking Water	5/15/12 1255	Yes No (Field)	—	—	9.62	—	CMW 5/16/12 1148	Buffer	—
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/17/12 0815	358B R1203135-001	7199 (218.6 RL) 218.6 LL 218.7	(Water) Drinking Water	5/16/12 1440	Yes No (Field)	—	—	10.79	9.50	CMW 5/17/12 0923	Buffer	
											10%H2SO4	WC112015C
											10%NH4OH	
											NH4OH(conc)	
↓	112C R1203135-002	7199 (218.6 RL) 218.6 LL 218.7	(Water) Drinking Water	5/16/12 1140	Yes No (Field)	—	—	10.30	9.57	CMW 5/17/12 0925	Buffer	
											10%H2SO4	WC112015C
											10%NH4OH	
											NH4OH(conc)	
—	Filter Blank of 5/17/12	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	—	(Yes) No Field	Millex HV R2SA5462OK	—	8.63	9.49	CMW 5/17/12 0926	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	
5/17/12 085	R1203134-001	7199 218.6 RL (218.6 LL) 218.7	(Water) Drinking Water	5/16/12 1400	(Yes) No Field	↓	—	6.21	9.52	CMW 5/17/12 0928	Buffer	WC112022E
											10%H2SO4	
											10%NH4OH	
											NH4OH(conc)	

	Drinking water 218.7	Drinking water 218.6	Non-Pot Water 218.6	Water 7199
Filter	No	Required	Required	Optional
pH	>8.0	9.0-9.5	9.3-9.7	unpreserved - adjust to 9.0-9.5
Res Chlorine	<0.1 mg/L	NA	NA	NA
Holding Time	14 days	5 days	28 days	24 hours

0001T

Client:	Tetra Tech NUS, Inc.	**Service Request:**	R1203134
Project:	MSA Groundwater/112IC04021-02	**Date Collected:**	NA
Sample Matrix:	Water	**Date Received:**	NA
Sample Name:	Method Blank		
Lab Code:	R1203134-MB	**Basis:**	NA

General Chemistry Parameters

Analyte Name	Method	Result	Q	Units	MRL	MDL	Dilution Factor	Date Extracted	Date Analyzed	Note
Chromium, Hexavalent, Dissolved	218.6	0.020	U	µg/L	0.020	0.010	1	NA	5/17/12 09:44	

Client: Tetra Tech NUS, Inc.
Project: MSA Groundwater/112IC04021-02
Sample Matrix: Water

Service Request: R1203134
Date Analyzed: 5/17/12

Lab Control Sample Summary
General Chemistry Parameters

Units: µg/L
Basis: NA

Analyte Name	Method	Lab Control Sample R1203134-LCS Result	Spike Amount	% Rec	% Rec Limits
Chromium, Hexavalent, Dissolved	218.6	0.212	0.200	106	90 - 110

Results flagged with an asterisk (*) indicate values outside control criteria.
Percent recoveries and relative percent differences (RPD) are determined by the software using values in the calculation which have not been rounded.

Client: Tetra Tech NUS, Inc. **Service Request:** R1203134
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Verification (CCV) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	True Value	Measured Value	Percent Recovery	Acceptance Limits
CCV1	292054	RQ1205303-04	5/17/12 09:25	0.500	0.508	102	95 - 105
CCV2	292054	RQ1205303-03	5/17/12 11:29	0.500	0.511	102	95 - 105

Client: Tetra Tech NUS, Inc. **Service Request:** R1203134
Project: MSA Groundwater/112IC04021- 02

Continuing Calibration Blank (CCB) Summary
Chromium, Hexavalent, Dissolved

Analytical Method: 218.6 **Units:** µg/L

	Analysis Lot	Lab Code	Date Analyzed	MDL	MRL	Result	Q
CCB1	292054	RQ1205303-06	5/17/12 09:44	0.010	0.020	0.020	U
CCB2	292054	RQ1205303-05	5/17/12 11:47	0.010	0.020	0.020	U

Sample Calc

X-VALUE	Y-VALUE
0	0
0.02	0.029
0.2	0.223
1	1.051

CORREL	SLOPE	
	0.999931587	**1.045585815**
Y-INTERC		
	0.006846327	

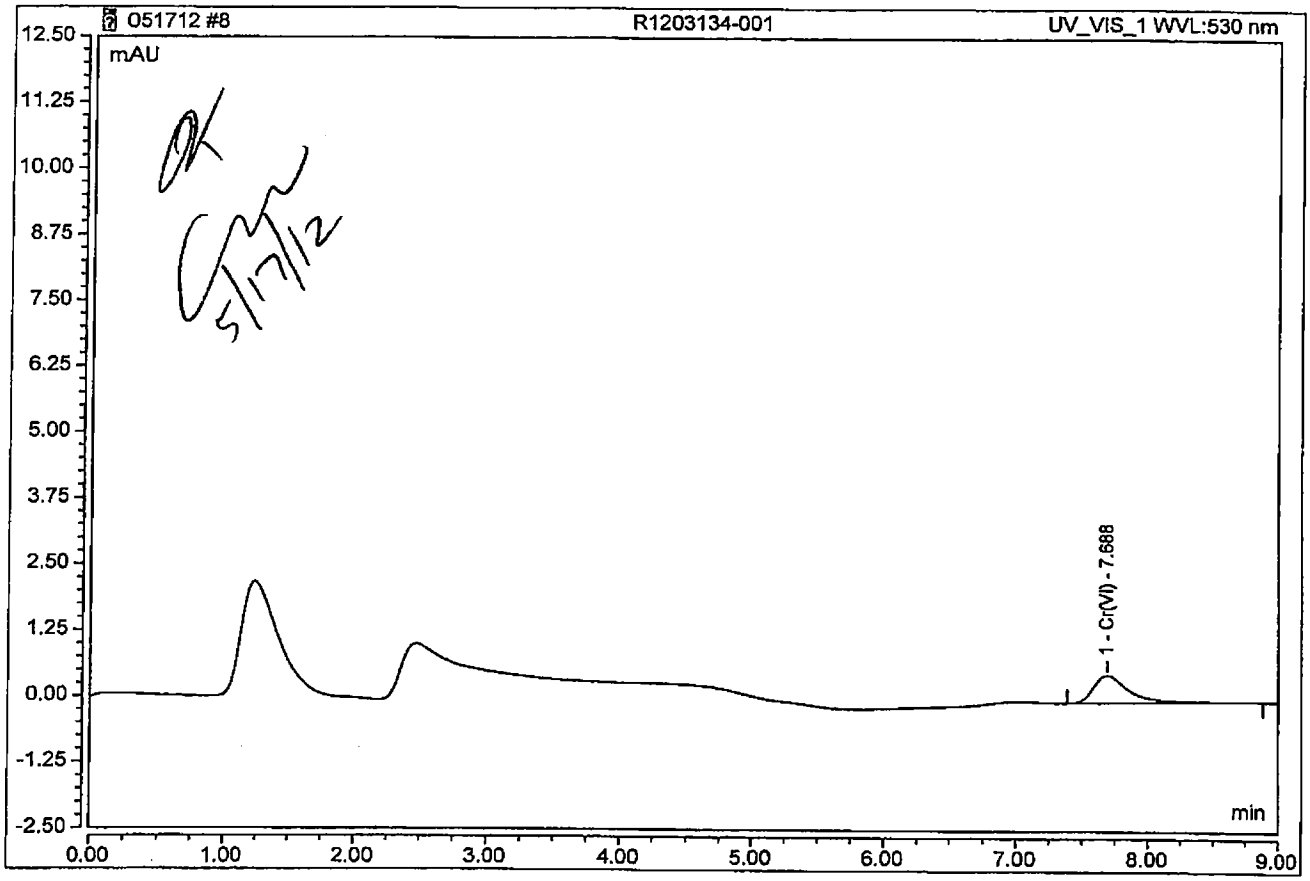
MW29D

0.153171238	0.167

Peak Integration Report

Sample Name:	R1203134-001	Inj. Vol.:	1000.00
Injection Type:	Unknown	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	17-May-2012 / 10:21	Injection Number:	8

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.69	Cr(VI)	M	0.167	0.527	0.1510
TOTAL:				0.17	0.53	0.15



Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00021

Calibration Batch Report

Sequence:	051512	Injection Volume (ul):	1,000.00
Processing Method:	8-051512	Calibration Type:	n.a.
Corr. Coefficient:	n.a.	Instrument Method:	Cr(VI)

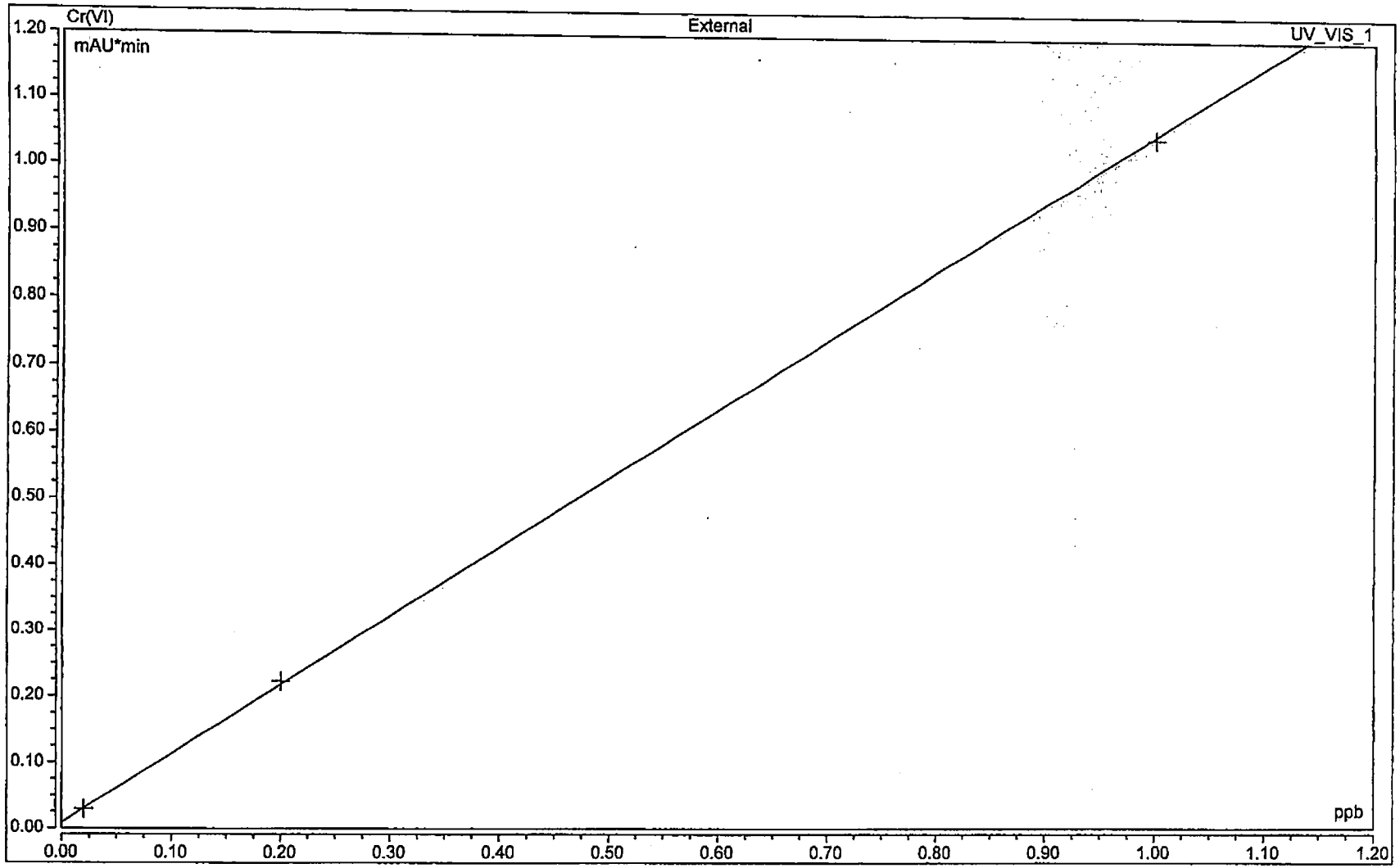
Calibration Summary

Injection Name / Cr(VI)	Ret. Time min Cr(VI)	Area mAU*min Cr(VI)	Height mAU Cr(VI)	Amount ppb Cr(VI)
	UV_VIS_1	UV_VIS_1	UV_VIS_1	UV_VIS_1
STANDARD 1	n.a.	n.a.	n.a.	n.a.
STANDARD 2	7.678	0.0289	0.087	0.020
STANDARD 3	7.672	0.2232	0.707	0.205
STANDARD 4	7.602	1.0512	3.301	0.995
Average	7.650			
Rel. Std. Dev.	0.555 %			

Detection Parameters

Ret. Time min	Param. Name	Param. Value	Inj. Type	Channel
0.000	Minimum Area	0.0090 [Signal*min]	Any	All Channels
0.000	Inhibit Integration	On	Any	All Channels
7.002	Inhibit Integration	Off	Any	All Channels
9.002	Inhibit Integration	On	Any	All Channels

Processing Method: 8-051512
Correlation Coefficient: 99.993
Calibration Type: Lin, WithOffset, 1/A



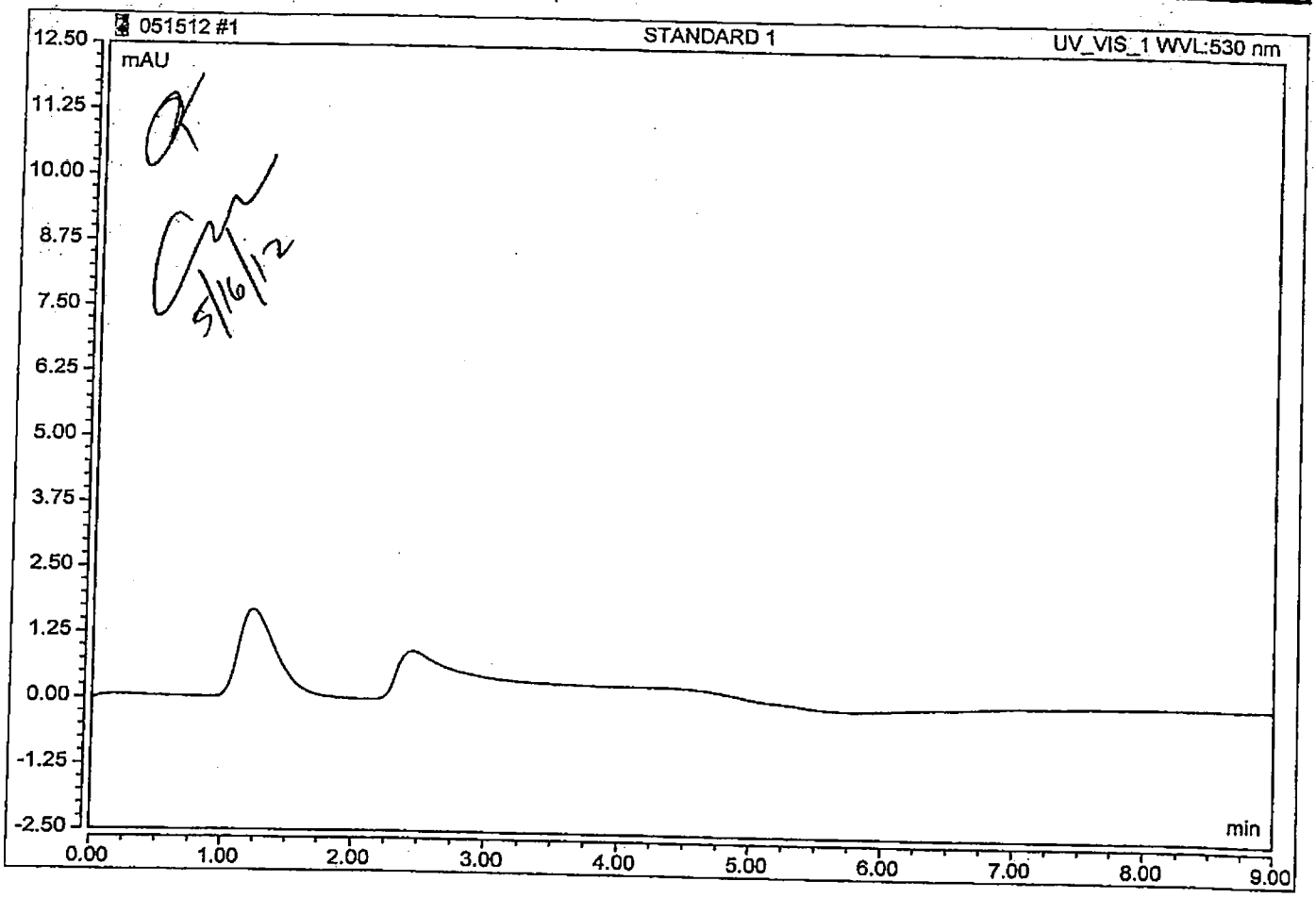
SC0035

Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

Peak Integration Report

Sample Name:	STANDARD 1	Inj. Vol.:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date/Time:	5-May-2012 / 09:52	Injection Number:	1

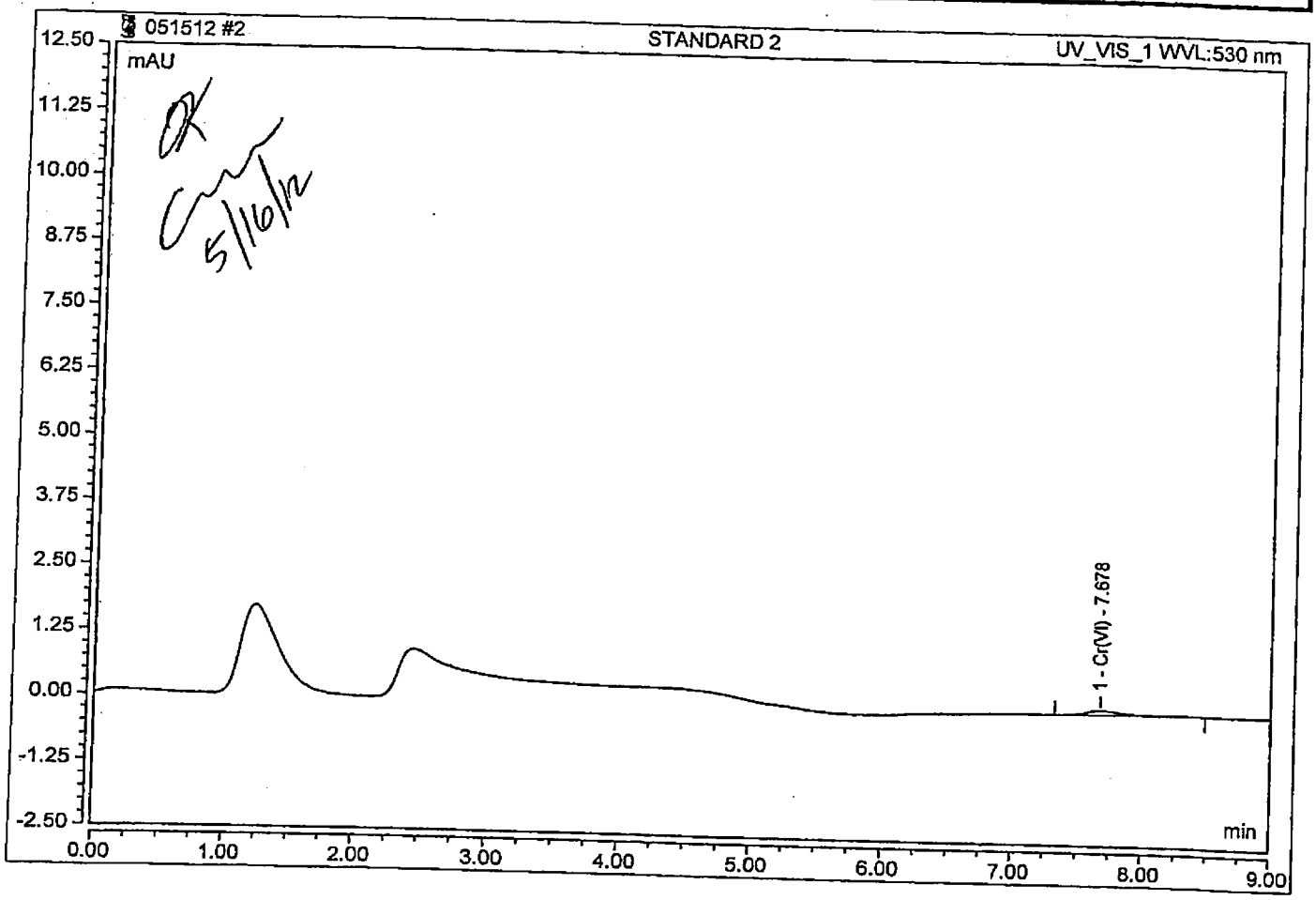
No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount n.a.
TOTAL:				0.00	0.00	0.00



Peak Integration Report

Sample Name:	STANDARD 2	Inj Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj Date / Time:	15-May-2012 / 10:09	Injection Number:	2

No	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.68	Cr(VI)	M	0.029	0.087	0.0196
TOTAL:				0.03	0.09	0.02

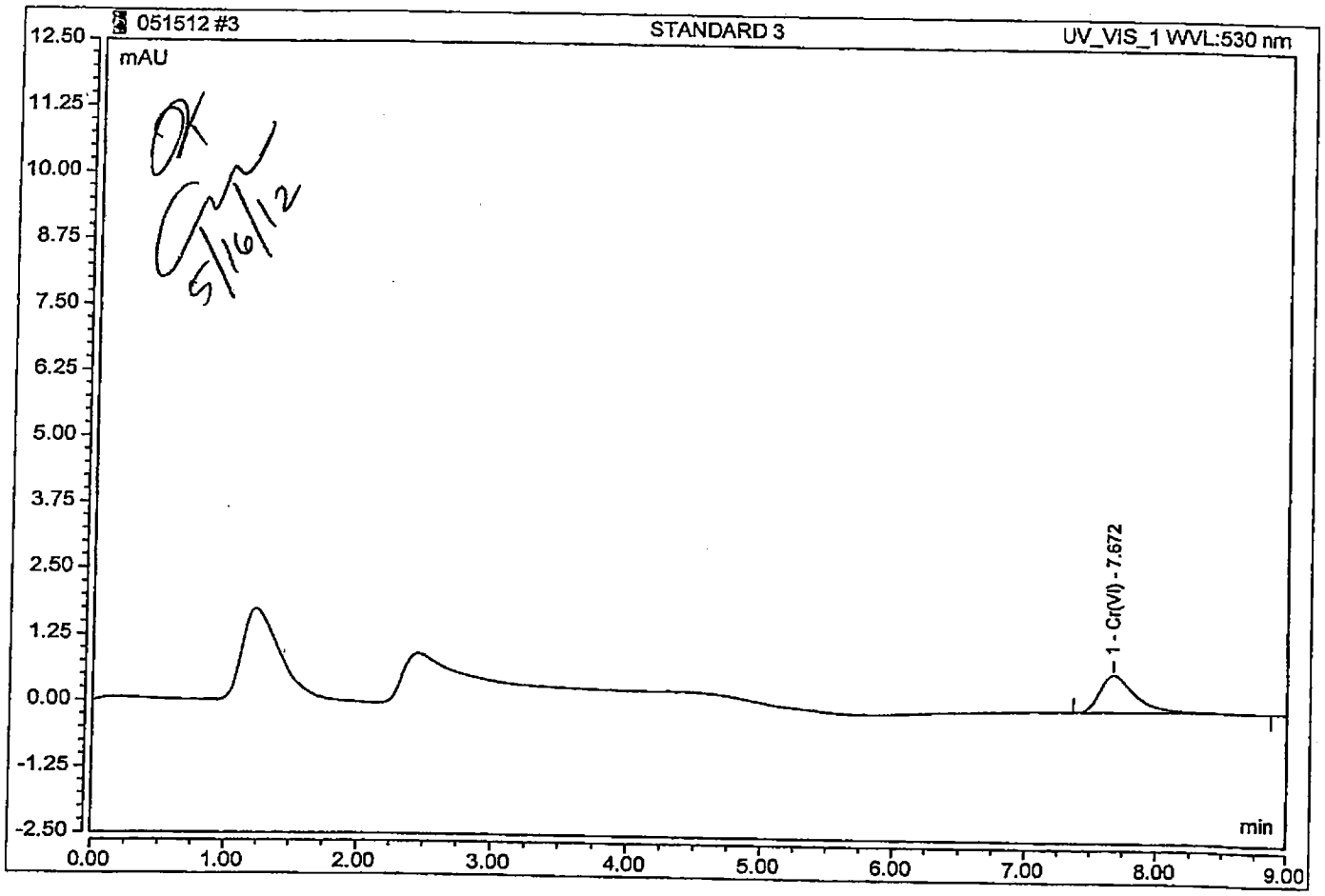


OK
5/16/12

Peak Integration Report

Sample Name:	STANDARD 3	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:26	Injection Number:	3

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.67	Cr(VI)	M	0.223	0.707	0.2050
TOTAL:				0.22	0.71	0.21

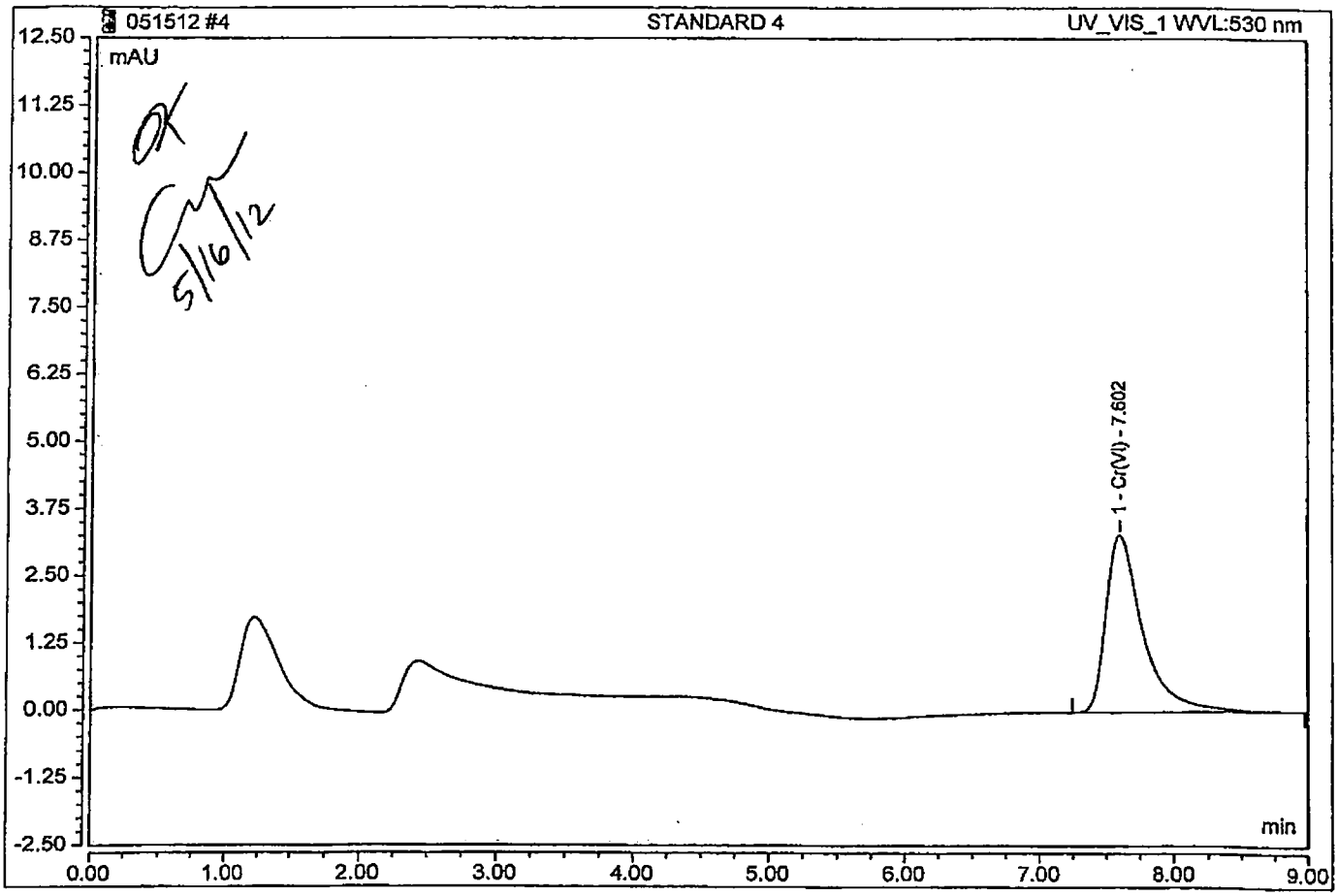


OK
5/16/12

Peak Integration Report

Sample Name:	STANDARD 4	Inj. Vol:	1000.00
Injection Type:	Calibration Standard	Dilution Factor:	1.0000
Processing Method:	8-051512	Program:	Cr(VI)
Inj. Date / Time:	15-May-2012 / 10:43:36	Injection Number:	4

No.	Time min	Peak Name	Peak Type	Area mAU*min	Height mAU	Amount ppb
1	7.60	Cr(VI)	M	1.051	3.301	0.9954
TOTAL:				1.05	3.30	1.00



Chromeleon (c) Dionex 1996-2009
Version 7.1.1.1127

00031

APPENDIX E—WASTE PROFILE AND DISPOSAL RECORDS

Trailer #526369T

Please print or type. (Form designed for use on elite (12-pitch) typewriter.) D44639225 SC PPW 3/3/2011 Form Approved. OMB No. 2050-0039

UNIFORM HAZARDOUS WASTE MANIFEST

1. Generator ID Number	2. Page 1 of	3. Emergency Response Phone	4. Manifest Tracking Number
MDR000518760	1	(800) 483-3718	005563736 FLE

GENERATOR

5. Generator's Name and Mailing Address
Lockheed Martin
195 Chesapeake Park Plaza
Baltimore, MD 21220
Generator's Phone: (610) 656-4012 ATTN: Mike Musheno

Generator's Site Address (if different than mailing address)
701 Wilson Point Road
Baltimore, MD 21220

6. Transporter 1 Company Name: Clean Harbors Environmental Services Inc — U.S. EPA ID Number: MAD039322250

7. Transporter 2 Company Name: Robbie D. Wood Inc. — U.S. EPA ID Number: ACD067138891

8. Designated Facility Name and Site Address
Clean Harbors Env Services Inc
2900 Rockefeller Avenue
Cleveland, OH 44115
Facility's Phone: (216) 429-2402
U.S. EPA ID Number: OHD000724153

9a. HM	9b. U.S. DOT Description (Including Proper Shipping Name, Hazard Class, ID Number, and Packing Group (if any))	10. Containers No.	10. Containers Type	11. Total Quantity	12. Unit Wt./Vol.	13. Waste Codes
	1. NON D.O.T. REGULATED. (NON-HAZ WATER)	~~DD~~ 13 047	DM	~~002~~ ~~00500~~ 28500	P P	NONE
	2.					
	3.					
	4.					

14. Special Handling Instructions and Additional Information
1. CH582926 ~~(13x55)~~ (47x55) (61)
~~D44639225 SC~~

15. GENERATOR'S/OFFEROR'S CERTIFICATION: I hereby declare that the contents of this consignment are fully and accurately described above by the proper shipping name, and are classified, packaged, marked and labeled/placarded, and are in all respects in proper condition for transport according to applicable international and national governmental regulations. If export shipment and I am the Primary Exporter, I certify that the contents of this consignment conform to the terms of the attached EPA Acknowledgment of Consent.
I certify that the waste minimization statement identified in 40 CFR 262.27(a) (if I am a large quantity generator) or (b) (if I am a small quantity generator) is true.

Generator's/Offeror's Printed/Typed Name: Michael Musheno — Signature: Michael Musheno — Month: 10 Day: 12 Year: 12

INT'L

18. International Shipments ☐ Import to U.S. ☒ Export from U.S. Port of entry/exit:
Transporter signature (for exports only): Date leaving U.S.:

TRANSPORTER

17. Transporter Acknowledgment of Receipt of Materials

Transporter 1 Printed/Typed Name: Gregory Andrews — Signature: — Month: 10 Day: 12 Year: 12

Transporter 2 Printed/Typed Name: Anthony T. Kus — Signature: — Month: 10 Day: 15 Year: 12

DESIGNATED FACILITY

18. Discrepancy

18a. Discrepancy Indication Space: All waste has been rejected to OH TSDF. ☐ Quantity ☐ Type ☐ Residue ☐ Partial Rejection ☒ Full Rejection

Manifest Reference Number:

18b. Alternate Facility (or Generator) Spring Grove Resource Recovery 1/E 94 Spring Grove Ave. Cincinnati, OH 45232 — U.S. EPA ID Number: OHD004816629
Facility's Phone: 513 681 6942

18c. Signature of Alternate Facility (or Generator) — Month: 10 Day: 18 Year: 12

19. Hazardous Waste Report Management Method Codes (i.e., codes for hazardous waste treatment, disposal, and recycling systems)

1.	2.	3.	4.
~~H077~~ H082			

20. Designated Facility Owner or Operator: Certification of receipt of hazardous materials covered by the manifest except as noted in Item 18a

Printed/Typed Name: Nicole [illegible] — Signature: — Month: 10 Day: 18 Year: 12

EPA Form 8700-22 (Rev. 3-05) Previous editions are obsolete.

DESIGNATED FACILITY TO GENERATOR

Clean Harbors has the appropriate permits for and will accept the waste the Generator is shipping

Waste Identifcation and Classification Form

Remediation Project	Martin State Airport	**State Generated**	MD
Description of Waste			
Generic Name	Purge Water	**Solid, Liquid, Gas**	Liquid
		Additional Info.	
Date of Waste Generation	April and May 2012	**Ongoing (Y/N)?**	N

Description of Process Generating Waste

5 drums of purge water were generated from the annual groundwater monitoring activities at Martin State Airport.

Listed Waste ? (Y/N)	Y	**F,K, P or U Codes**	D007

Justification for Waste Classification (attached supporting documentation)

The five drums were removed from the site on October 12, 2012 under nonhazardous profile number CH582926 by Clean Harbors.

Form completed by	Tony Apanavage
Date	11/26/2012

Waste Identifcation and Classification Form

Remediation Project	Martin State Airport	**State Generated**	MD
Description of Waste			
Generic Name	Purge Water	**Solid, Liquid, Gas**	Liquid
		Additional Info.	
Date of Waste Generation	April and May 2012	**Ongoing (Y/N)?**	N

Description of Process Generating Waste

5 drums of purge water were generated from the annual groundwater monitoring activities at Martin State Airport.

Listed Waste ? (Y/N)	Y	**F,K, P or U Codes**	D007

Justification for Waste Classification (attached supporting documentation)

The five drums were removed from the site on October 12, 2012 under nonhazardous profile number CH582926 by Clean Harbors.

Form completed by	Tony Apanavage
Date	11/26/2012